BATTLECRUISER 3000Ad_{v2.0}
GALCOM COMMANDERS SUPPLEMENT

NOTE: This preview manual is work in progress and is updated regularly to reflect the state of the final version 2.0 re-release of the game. Therefore, certain sections may be inconsistent with the currently available version of the game which is v1.01D7C released on 11-05-97.

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1. GETTING STARTED

1.0   System Requirements

Battlecruiser:3000AD requires the following 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 133 or higher
Operating System   : MS-DOS 6.0 or higher
Video Card   : VESA compliant graphics card
Hard Drive   : Minimum 100 MB
CD-ROM   : 2x MPC-11 compliant
Memory   : 16 MB
Mouse   : Mouse Microsoft or compatible mouse
Sound card   : Most major sound cards are supported.

Note: *A system with a Pentium 200MHz or higher, 32MB RAM, PCI graphics card with VESA compatibility and a joystick controller is highly recommended.*

Windows 95 Considerations

Once you've installed it, BC3K can also be configured to run under Windows 95 in MS-DOS mode if you have problems running it after installing through Windows 95 as described below. To do this, select the START button, then SHUT DOWN. Once the dialogue menu is displayed, select RESTART THE COMPUTER IN MS-DOS MODE.

Once you are in MS-DOS mode, verify that your CD-ROM and mouse drivers are loaded. You may want to verify their operation by running one of your other DOS games to see if they work.

You can also create a shortcut on your desktop. Please refer to the appendix ***Section 28.0 : Installation Problems*** for help with this.

1.1   Installation

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

DOS
- Place the BATTLECRUISER 3000AD CD ROM in your CD-ROM drive.
- Change to your CD-ROM drive, i.e. CD D: [ENTER].
- Type INSTALL and press [ENTER] to run the install program.

WINDOWS 95

- Place the BATTLECRUISER 3000AD 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 INSTALL icon. The installation program will be displayed.

Follow the on screen instructions and install BC3K to the drive and directory of your choice. If you have any installation problems, please refer to:
Section 30 : Technical Support & Trouble Shooting.

Note: If you choose the PARTIAL install, some files will reside on the CD-ROM. This will result in some reduced access speeds depending on the speed of your CD-ROM drive as the files are retrieved when needed. If you attempt to install to a drive that does not have sufficient disk space, the install program won't allow you to.

1.2   Sound Setup

Once the installation is complete, you will be prompted to configure your sound card. Follow the prompts and select the digitized card you have installed. If you know your card's configuration, you can manually enter them or allow the program to auto detect it for you. BC3K does not support MIDI music, so you should select NO MIDI where applicable. You may want to **test** the card selected to ensure it's operation. Once you have completed this configuration, save the selection and exit.

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.

Once installation is complete you will be returned to the DOS prompt where you can now start BC3K. If the cd-rom contains a readme.txt file with last minute changes which were made after the manual went to print, this file will be displayed. You can later view this file yourself by changing to the drive and directory where BC3K is installed and typing : README **[ENTER]**

1.3   Starting BC3K

To start BC3K from DOS, follow these steps. If you are in Windows 95 and the shortcut you created does not allow the game to run properly, please boot to MS-DOS mode as explained in the 'Windows 95 Considerations' section above and proceed.
- Insert the BC3K CD in your CD-ROM drive
- Change to the drive and directory where BC3K is installed
- Type **BC3K [ENTER]**

Note: If BC3K refuses to start or you get an error message, please refer to Section 30: 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 the game's runtime performance.
- **Digitized Sounds**
  Enable for digitized sound playback.
- **Midi Music**
  Enable for MIDI music playback.
- **Bridge Comms Chatter**

Enable to here background personnel comms while on the bridge.

- **Collision Detect**
  Enabling this causes you to take damage when your ship collides with objects.
- **Explosion Fragments**
  Determines the type of explosion fragments that are generated when an object explodes. A high setting will impact performance but it sure 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 a hint of 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 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 also 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. You can configure this setting to be Low (20km), Medium (40km) or High (60km). A high setting impacts performance. You can also increase/decrease planetary visibility from within the game.

Once you are satisfied with your selections, click on sᴀᴠᴇ to confirm your settings or ᴀʙᴏʀᴛ 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 [ʟᴇꜰᴛ-ᴄʟɪᴄᴋ] 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 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 your 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, [ʟᴇꜰᴛ ᴄʟɪᴄᴋ] on one of the slots and enter the name of the saved game. Click on ᴀᴄᴄᴇᴘᴛ to saved the current 3D world and the player data files. You will then be returned to the Main Menu. You can then select ᴄᴏɴᴛɪɴᴜᴇ 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 [ʟᴇꜰᴛ ᴄʟɪᴄᴋ] on the ʀᴇꜱᴛᴏʀᴇ 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 for more info.

- **ConfiGure**

  This option takes you into the ᴄᴏɴꜰɪɢ 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 have on the game's performance.

- **Quit to DOS**

  Selecting this option exits BC3K and takes you to DOS.

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. That's the simplest explanation that I can offer. As a result of this complexity, you will have to find a method of play which is suitable to your style. The BC3K world is a truly 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. 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, contains 91 self contained space regions, 76 planets and 145 moons, totally populated, belonging to someone and all updated in real time. In short, the BC3K universe never sleeps until you pause the game. Pause the game with a missile up your pipe and it will be there when you un-pause it.

The dynamic and unpredictable nature of the 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 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 actor adversaries may not be scripted within the mission, you can always count on someone making your life a misery and 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 always 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 types of gameplay modes described in the following sections.

2.0   Free Flight

In this mode, you start at Commander rank with a Terran Scientist designation working for Galactic Command. 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 aren't keeping tabs on you, you can pretty much do what you want. You're your own commander left alone to make or break the rules. You are free to explore the game galaxy and render assistance where necessary, exploring new worlds and encountering new alien nations both friendly and hostile. You will need to study the alien nations in BC3K and the sectors that they control. This information is in Appendix H. Failure to do this will most likely end in your destruction if you venture into hostile territory. GALCOM pays you a salary every seven Earth days based on your rank and offers free ship repairs and replacement personnel at the GALCOM headquarters also called GHQ.

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 distribution.

Most commanders playing Free Flight will most likely 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 Scientist. Under this designation, GALCOM ships can pretty much 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, 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

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 the mess they're usually in. This experience is not for the feint at heart. Trust me on this.

ACM is a little more complex and involved, so I'll discuss it in sections to make the experience a little more pleasurable. Each section deals with the difference between Free Flight and ACM. I can just hear you now, "…why would I want to play ACM?" I can't answer that, I don't play it, I just wrote it. I have more sense than that. Besides, GALCOM can find someone else, like you, to do their own dirty work.

GALCOM designation

In ACM your GALCOM designation is set to Terran Military. This simply 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 what your designation is.

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. Now you know why I have no intentions of enlisting.

Rewards

The upside to volunteering for ACM duty is that your weekly salary is 50% higher than in Free Flight but of course you have to live to spend it.

Also in ACM mode, the Experience Points awarded are slightly higher, as high as by 25% in some cases, making promotions within easy reach in a short period of time.

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 friends becoming your worst enemies overnight in some cases. As a Terran commander, you inherit all Terran enemies. This means that if GALCOM blunders in it's 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 a 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 from time to time. These orders are in the form of Tour Of Duty, TOD, mission scenario which make up the ACM scenario you are playing. These TOD missions sometimes have linear or non-linear branches in that a series of missions may occur in a set order whereas another TOD set may branch to another depending on the results of the 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 badly and you will get 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 killed. Naturally, once they start sending you orders it will all begin to dawn on you but of course by then it's too late.

Patrol Zones

In 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 that are in it. 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 with the deduction of Experience Points. This can sometimes lead to your eventual demotion. Once your PZ is cleared, it is no longer your responsibility. Sometimes a TOD mission may occur in 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 a *Mission Order* which tells 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 in order to complete it.

Start Time: indicates when the scenario will commence. It will commence at this time whether you make it there 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 it introduced into the theatre. In most cases, everyone goes back to 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, seek out and beat up that trader who told you about the secure trade route and got you in one hell of a fire fight. You can pretty much do what you want. If you are reasonably secure, you can also 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, GALCOM will send you new orders anyway once this time expires.

An ACM scenario as previously mentioned is a collection of short mission scenario 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 will not shutdown, 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 it's entirety and produce it's own resolution based 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

Xtreme Carnage is a combat simulator shoot 'em up. In this scenario, you are flying an Interceptor after being deployed in 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 levels with increasing difficulty. There are ten levels in XC. Your mission is simply to destroy as many hostile targets as possible and make it to the tenth level. At the end of every level and sometimes during the level and depending on the level difficulty, your ship will be repaired, re-powered and re-armed.

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

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 the like, 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 in the past 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 alike. It became obvious that it was only a matter of time before our planet was again 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 called the Apollo objects. One of these, Eros, was approximately 16km long which is about the size of old New York city. At the 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 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 air in and around the facilities to support life. Gradually, research stations were constructed which then evolved into small colonies consisting of scientific and defense engineers along with 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 or two 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 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 these 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 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. At that time 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 eventually cripple the operations of EARTHCOM forcing the UFN to disband the organization. Most government organizations were eventually infiltrated by the Insurgents. The computer industry itself 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 the organization became more powerful, some high ranking officials were bold enough to defect along with their families 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 then 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 only three years.

Experiments using constructive DNA signatures were more successful. A living organism could now be replicated by using its stored DNA signature. This was adequate for the purpose of cloning biological entities, but useless for extending the life span of the 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 and 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 or 555,000 miles per second.

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 maintained the rift. The Earth was still threatened by a depleting ozone layer and yet UFN had failed to address the problem, instead choosing continued to 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.

As time went by, 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 inadvertently 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 all sorts of 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 they had formed alliances with rebels from alien nations. Even pirates operated under the guise of the Insurgents. EARTHCOM ships were hijacked and bases overrun.

EARTHCOM was hard pressed 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 together with the Empirian and 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, already a 90% military installation, was converted to a fully functional tactical operations center, 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 hostile and others 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 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 was certain 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 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 it's member nations and promising young commanders fresh out of the academy. They are all well armed and confident, and determined to seek revenge.

3.1 Galactic Time Line

2328 : First colony built on Mars. Mostly consisted 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 became 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 then became possible for a body to remain in stasis indefinitely. By further expanding on this technology, it became possible to create a device which would create the proper conditions within an environment, say a ship, that would cause the body's metabolism to progress at its normal rate, relative to the distance traveled. This and the increased speeds of new engines, made space travel far more easier. Vast distances traversed at several times the speed of light, took a matter of months instead of years as was previously the case.

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 was capable of speeds in excess of several times the speed of light. The term light speed, LS, was used in measuring the distance traveled by a spacecraft. Lightspeed was equivalent to the speed of light or approximately. 299,800 km/sec.

2926 : GCV-Seeker is commissioned for deep space travel. It's crew, all veteran astronauts, were hand picked from advanced nations on Earth. The crew was put in stasis condition 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 name after the predominant alien nation.

2993 : The situation in the Terran quadrant grew from bad to worse and the instability in other quadrants threatens to cause 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 has been used to show what each race looks like. 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 as scripted for 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 proved 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, they had plagued Starforce both in space and on their homeworlds. Their sole purpose is to profit from technological advances were 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 so far 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 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 of troops in the region.

The Empirians also allocate huge amounts of resource to defense research and 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. They claim that no one would really 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. They 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 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 and 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 and 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 migrated 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 began to be constructed. At present, the planet is fully populated. In the mean time, 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, they 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. They 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 their 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. They 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 very 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. They 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 quite knows 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 quite 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 it is not quite clear how. 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 either 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.

The race of a caste can be TERRAN, SYRION, KANDORIAN, EMPIRIAN, VESPERON, DROIDAN, FALKERIE, MANDORIAN, GAMMULAN, ZELON, VALKERIE, or CREDIAN.

AGGRESSIVE CASTES

MILITARY	RAIDER	ASSASSIN
EARTHCOM	CRIMINAL	
	MERCENERY	
POLICE	INSURGENT	MARINE

HARMLESS CASTES

WORKER	HACKER	COLONIST
SENGINEER	DIPLOMAT	TRADER
FENGINEER	TOURIST	EXPLORER
COMMERCIAL	PARAMEDIC	
SCIENTIST	JOURNALIST	

AGGRESSIVE CASTES

MILITARY

This type of caste is combat oriented and includes the player. This type will always attack raiders, insurgents and other hostile classes and are responsible for maintaining law and order within the region they're in.

EARTHCOM

The thorn in the side of GALCOM commanders. These guys, like Police, are part of the auto-generate class and are created in close to regions where pirates and criminals are found. An EARTHCOM craft is also automatically created when the player becomes a rebel or the court-martial flag is set. Each time the player destroys one, another is created and dispatched to find him. Once they find him, he must agree to escort them to GALCOM HQ. Once the player accepts, COMMLINK is activated and his career ends if he is found guilty.

POLICE

Every alien nation has it's own police force operating within their regions. This caste attacks raiders and criminals only. Attacking this caste causes you to be attacked by them each time you enter a region controlled by police castes of the alien nation you attacked. In this manner, even if the Terrans are friends of the Empirians, attacking an Empirian police caste will result in your ship being attacked each time you enter the region. To relax the rules a little and address gameplay issues, as long as the player does not destroy the caste, on exit from the region, all will be forgotten and the incident treated as an accident. Police are part of the auto-generate class of castes and are created at random in most all space regions.

MARINE

These guys are used for ground combat and security detail at facilities.

RAIDER

Generic caste which attacks other castes regardless of alliance, for gain. They are part of the auto-generate class and are created at random in various regions. Raiders will usually flee if Police or EARTHCOM castes are detected within the region. Raiders in a region will affect the existence of castes such as traders, commercial, explorers etc and can severely impact the growth of the region.

INSURGENT

This caste is the thorn in GALCOM's side and is found scattered across the galaxy. They are not raiders but will usually either engage in combat with GALCOM or EARTHCOM military ships if detected. Insurgents usually plan precise attacks against Terran assets in space and on planets.

ASSASSIN

These guys are deadly and are usually created in areas where diplomats are found. Once these guys detect a diplomat caste, they will attempt to destroy it. They will also attack ships that contain special guest characters scripted to appear in ACM scenarios. They are part of the auto-generate class and are created five jumps from a recently created diplomat caste. They will then seek out and attempt to capture it. If a diplomat caste containing a special guest character is detected, it will be given the highest priority for attack.

MERCENARY

The typical hired gun. They are part of the auto-generate code and will by default be allied to the nearest fleet which they are created near. Like assassins, they have advanced weapon systems and will attack diplomat and military castes.

CRIMINAL

Anytime you encounter this caste, you should attack them and take them to the nearest friendly station for a reward. Since they have often escaped from prisons, they may sometimes have access to advanced ships that they have stolen from their captors. They are part of the auto-generate class and are created at random in various regions. They will flee from EARTHCOM, Police and GALCOM castes and usually attack defenseless castes for gain.

HARMLESS CASTES

EXPLORER

Due to the vast expanse of space, there are several uninhabited planets and moons. This caste is generated by alien nations at intervals to explore the defined region. It is usually accompanied by colonist and worker castes. All this class does is fly to the region, hang around for awhile, leave a probe and return home. If the planet or moon is uninhabited and not claimed by any other Alien Nation, they will leave the colonist and worker castes behind to cultivate the planet and find another place to colonize. The colonist and worker castes will then automatically start to build cities and structures on the planet on a priority scale. Including military castes in a class with explorers ensures that they can defend themselves in case of an attack.

COLONIST

This caste contains personnel and families for cultivating a planet and is usually found with exploration castes. When created, the population of the planet will increase and colonies, cities etc will start to sprout up all over the planet. This caste determines the population of the planet.

SCIENTIST

This caste is usually part of an exploration class and permits the rapid evolvement of an alien nation's planet. These guys will depart from a world as soon as it has built at least two factories. Scientists being present in a region will boost that region's development by increasing it's class level.

DIPLOMAT

This caste often contains special characters scripted to appear in ACM Missions. They travel from station to station at random. Diplomats containing special characters will normally beam the special character to the player's ship if the diplomat caste is under attack. It is then up to the player to make sure the guest arrives safely at his/her destination.

TRADER

This caste is responsible for the advancement of the galaxy. They travel from region to region at random. Some trader castes containing special artifacts or information about their whereabouts can be created. Most trader castes will deploy mining drones on planet and moons. Once they dock at a starstation or starbase, it will then contain more trade items. They are part of the auto-generate class and are created at random in various regions. They then visit each station or base in the galaxy until they go out of scope. Traders increase the TECH level of a region they're in.

PARAMEDIC

This caste contains advanced medical equipment, which they use to assist other castes during combat. It is a violation to destroy this type of caste even by accident. No alien nation attacks this caste. Having this caste in a class makes the life factor of personnel within the class increase at a high rate and their fatigue factor drops rapidly. They are part of the auto-generate class.

WORKER

Used for structural repairs and construction. This caste being present in an area or class will accelerate the rebuild time of objects.

COMMERCIAL

This caste consists of commercial personnel and operates similarly to traders but in addition are also responsible for the development of new cities.

JOURNALIST

Your typical annoying caste. These guys are part of the auto-generate class and are generated at random in regions of conflict. They are never attacked, by any class but may be caught in the crossfire. If this caste is in an area where a violation occurs, any illegal action the player performs will result in a violation point being levied. Destroying them has the same penalties as paramedics.

TOURIST

This caste is part of the auto-generate class and travel from region to region at random. Anytime this caste reaches a planet, a random number of resource points are added to that planet.

HACKER

These guys are a general nuisance. They have access to advanced computer technology, which they can use to disrupt the systems of craft within their vicinity, leading to systems malfunctioning or even taking damage, until such time as they are out of range or are destroyed. They are part of the auto-generate class and are created at random in various regions.

SENGINEER

These are system engineers who are used for system repairs. They are usually found aboard ships of other castes.

FENGINEER

These are flight engineers used for flight operations. They are usually found aboard ships of other castes.

4. ENLISTING IN GALCOM
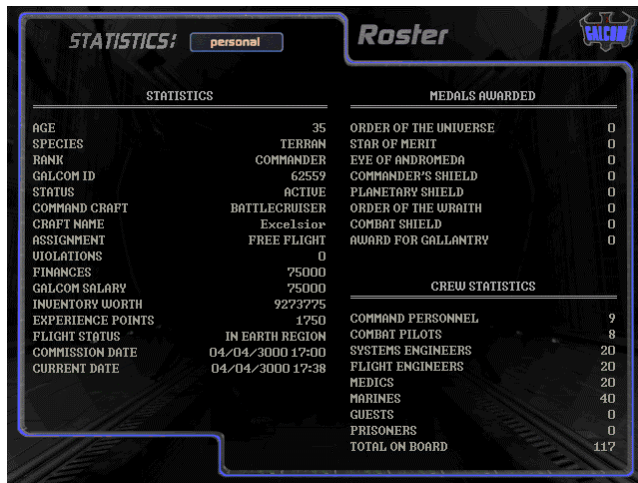
4.0 Tour Of GALCOM HQ starstation

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 usually 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 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 left. If you select an existing one 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, you will be taken to the Mission Control, MISCON, computer where you will select your campaign scenario. Select the displayed scenario title and click on it to display your scenario orders. Once you have read your orders, [LEFT CLICK] on ACCEPT. You entry will then be recorded and your personal stats displayed as seen in the previous screen.

PERSONAL STATS

AGE	Your current age which starts at 35.
SPECIES	Your species which is always Terran.
RANK	Your 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 7 days, GALCOM transfers your salary credits to your cash reserves as payment for your services.
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.

4.3   ENGINEERING   [Repair Operations]
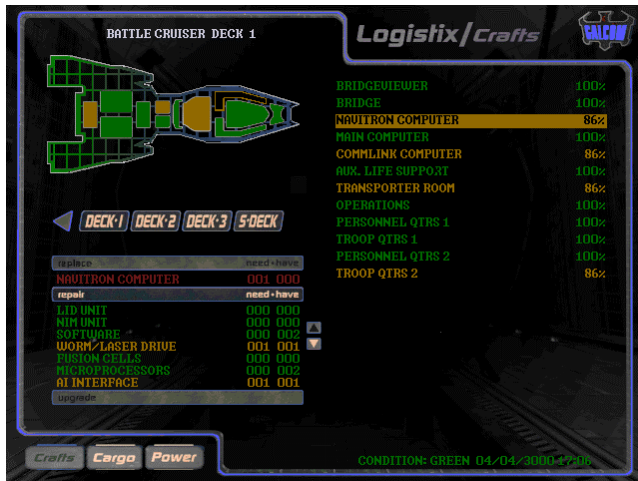
Every star station and star base has facilities which are capable of performing repairs on docked space craft. At these facilities, you have to pay for all repairs performed except at GALCOM HQ where all repairs are performed free of charge. Sometimes, spare parts may not be available and therefore some 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 docked with. If your current docked craft is a Battlecruiser, there will be buttons representing the Battlecruiser and all its support craft currently on board. These 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 deck to perform repairs on. 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 it's 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 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 and how long the repair will take. You will also be presented with a bill for the repair if the current 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 will be fully operational.
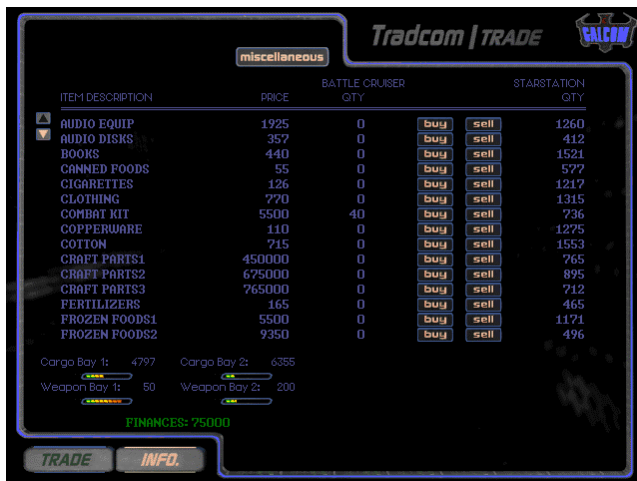
If a system is badly damaged or is destroyed, you can only replace it with a new one. If this is the case, a REPLACE option will also appear. Usually replacements take longer to do and cost more.

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.

Note: Though a considerable amount of time passes during a repair operation, in the interest of gameplay, this amount of time will not elapse when you launch.

4.4   TRADCOM   [Trading Operations]

The TRADCOM computer is used for trading transactions and is only 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 bay depends 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 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 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 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 TRADE.PDF, for a complete list of trade items.

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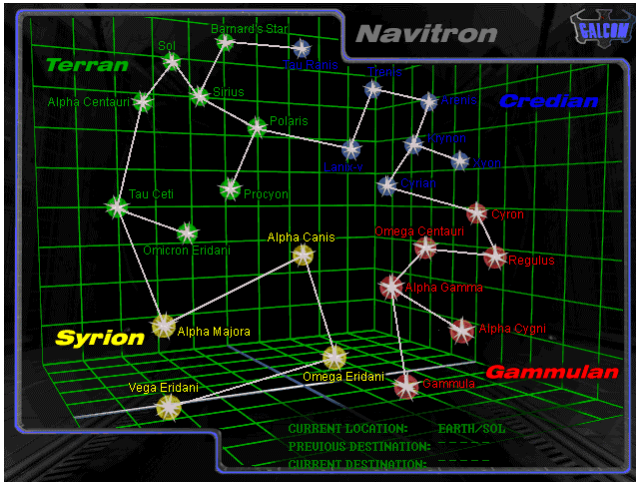
Battlecruiser 3000AD galaxy contains 25 star systems, 75 planets and 145 moons spread out in about 100 space regions. Without a map of this galaxy, you would be virtually lost in space. The **NAVITRON** computer is used to plot waypoints to any region you wish to visit.

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 diagnostics 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 already some auxiliary personnel, ensigns, already going through diagnostic checks as the station launch ops droid 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 shortly 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 gently lower the VR visor over your eyes. The system verifies your identity by scanning your eye 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 felt 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 was 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.
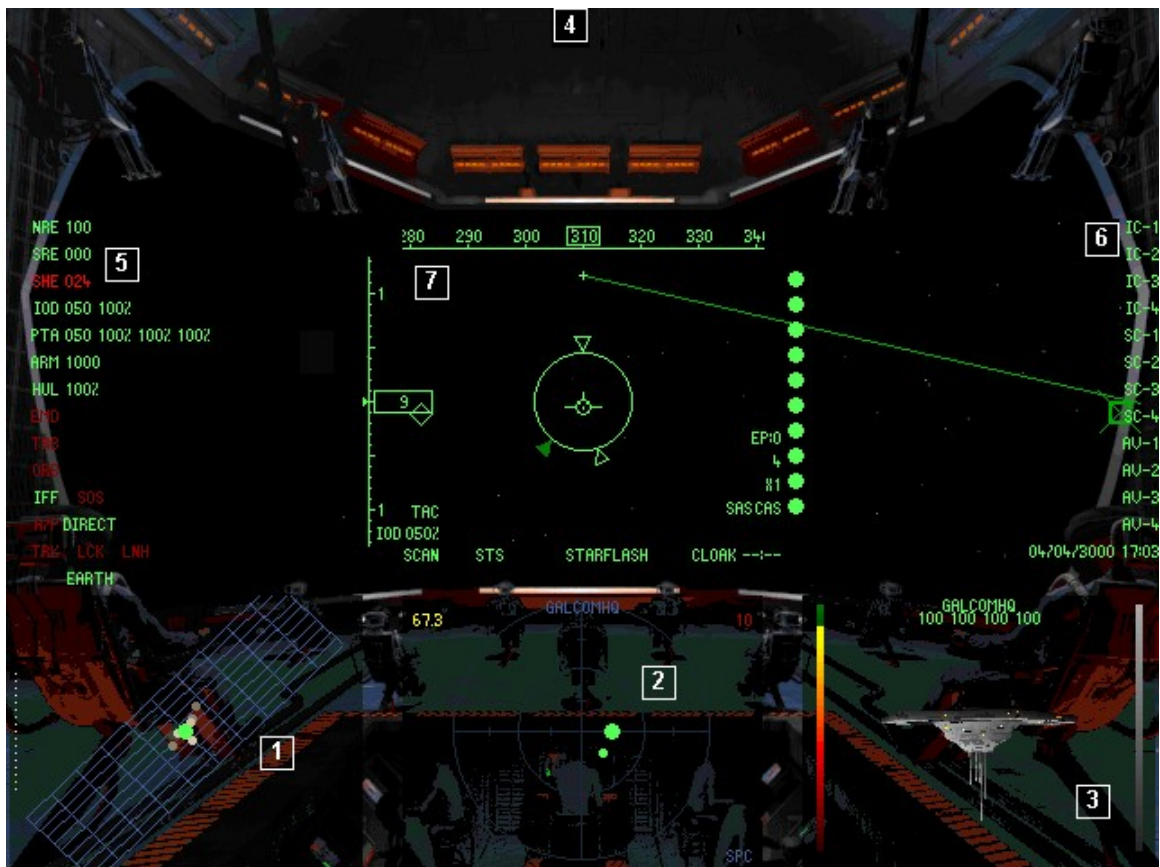
[1]   Navigation Interface Display, NID

This **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 it's 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 it's 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 it's 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 is display for.

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

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 shutdown 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 low power shortage, the internal failsafe system will auto-allocate power to the ship's critical systems, i.e., life support, until the power output reaches it's 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 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. 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 firing rate of the turrets. Activating the PTA system will arm the weapons system, putting the BRIDGEVIEWER in TAC mode. When the PTA system is activated, it displays the current laser intensity setting for the turrets as well the laser charge for each of the three turrets it controls.

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

Armor Protection Status, ARM

This indicator shows the current level of protection that the hull armor is providing. 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 itself. 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 system is an advance radar and missile jamming system used to jam track and lock signals from missiles launched at the Battlecruiser. Though it works 99% of the time, it's operation produces interference on the Battlecruiser's own internal systems.

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 once 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 and use [SHIFT+A] to change modes. You have control of the craft in DIRECT mode and in AI mode, the ship's computer or pilot, takes over.

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

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

The TLM lists the status of all the ship's support crafts and these are color coded based on their status. You cannot manipulate a ship unless it is ready or launched.

RED	Destroyed or not launch ready
YELLOW	Docked and undergoing pre-flight launch procedures
GREEN	Docked and launch ready
WHITE	Launched and operational
BLUE	Docked and undergoing repairs in engineering

To activate the orders for a ship, move the mouse over the ship name and [LEFT CLICK] on it to reveal it's orders menu. The orders vary depending on the type of ship. When the menu is first selected several options are available based on the launch status of the ship.

PRE LAUNCH - INTERCEPTORS

LAUNCH	Sends launch order to interceptor which then launches if its on ready status.
GAG PILOTS	Turns off ship's comms link suppressing pilots message broadcast

POST LAUNCH - INTERCEPTORS

RTB	Sends a **Return To Base** order to the ship
SWITCH TO	Allows you to switch to and fly the ship
ORDERS	Activates the tactical orders menu for the ship. Valid orders:
	Resume Waypoints orders the ship to follow it's **TACOPS** programmed waypoints.
	Fly To orders the ship to fly to a specific target location. You can select from any number of targets that are added to the dynamic menu. The sub-menus are self-explanatory.
	Jump At orders the ship to jump into another space region using the selected jump anomaly, i.e. jump point, wormhole or fluxfield.
	Defend Battlecruiser orders the ship to abandon it's mission profile and defend the Battlecruiser
	Defend orders the ship to abandon it's current mission profile and defend a specific target selected from the dynamic list. The sub menus are self explanatory.
	Attack orders the ship to abandon it's current mission profile and attack a specific target selected from the dynamic list. The sub menus are self explanatory.
TARGET	Selects the craft in the **TACSCAN** and displays it in the **CVD**
GAG	Turns off ship's comms link suppressing pilots message broadcast
UNGAG PILOTS	Turns on ship's comms link enabling pilots message broadcast

PRE LAUNCH – SHUTTLES

LAUNCH	Sends launch order to the shuttle which then launches if ready.
PERSONNEL	Allows you to set mission orders for personnel in the shuttle. The menu options will be different depending on the type of person.
	Evac To orders the person to evacuate to another craft

Strike orders the marine to abandon his current orders and strike a specific target selected from the dynamic list. The sub menus are self explanatory.

Defend orders the ship to abandon his current orders and defend a specific target selected from the dynamic list. The sub menus are self explanatory.

Escort orders the marine to abandon his current orders and escort a specific target selected from the dynamic list. The sub menus are self explanatory.

S.A.D orders the marine to abandon his current orders and search & destroy all a hostile it detects within his vicinity.

POST LAUNCH - SHUTTLES

RTB	Sends a **Return To Base** order to ship
SWITCH TO	Allows you to switch to and fly the ship
ORDERS	Activates the tactical orders menu for the ship. Valid orders:

Resume Waypoints orders the ship to follow it's TACOPS programmed waypoints.

Fly To orders the ship to fly to a specific target location. You can select from any number of targets that are added to the dynamic menu. The sub-menus are self-explanatory.

Jump At orders the ship to jump into another space region using the selected jump anomaly, i.e. jump point, wormhole or fluxfield.

Deploy orders the ship to deploy it's drone, ATV, crew or cargo at the selected destination.

Collect orders the ship to collect a drone, ATV, crew or cargo from the selected destination.

Tow orders the ship to tow the selected target using it's tractor beam.

TARGET	Selects the craft in the TACSCAN and displays it in the CVD
PERSONNEL	Same as Pre Launch options

[7]   Tactical Data Display

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

NAV MODE
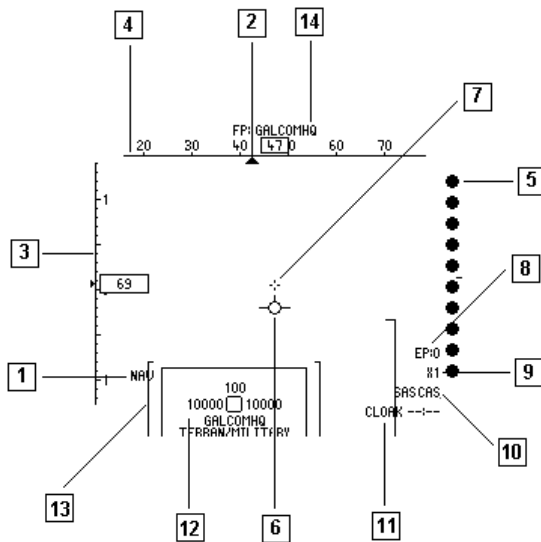
[1]   Operating Mode

Current operating mode. The ship's afterburner **A/B** or retro-thrusters **R/R** indicators are also displayed above when engaged.

[2]   Waypoint Heading Indicator, WHI

Shows the bearing to the current flight path target. It 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. In space there is no defined sense of direction, however, numerous probes and satellites maintained by probes and satellites, 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 about 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.

[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 that the ship is pointing in. The LTD provides a targeting aid when the IOD laser is fired. The LTD is coupled to the ships flight control so that it moves with the ship. It can however be de-coupled from the flight controls so that it moves about 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, life support system breaches while CAS monitors external conditions such as target acquisition and 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 armed, 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, it's name, race and caste is displayed below the box, it's overall damage level is at the top and it's shield and armor are displayed on the left and right sides of the box respectively. During combat, the damage level, shield and armor levels will be updated as the target takes damage or recharges it's shields. Once the target's shields are breached, it's 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. If the target is within the field of view, it's 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 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].

Flight Profile

Though not displayed in the screen shot, 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.

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

TAC MODE
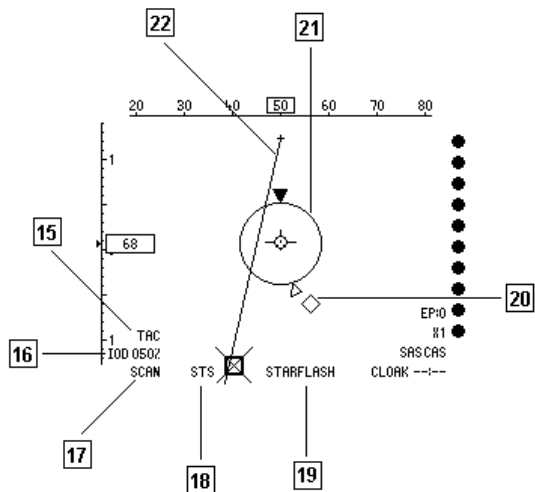
[15] Operating Mode

Current operating mode

[16] 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 firing rate.

[17] 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 it's view and tracking range, the status will change to TRACK and finally to LOCK once the target comes within it's launch range. This is your cue to fire the missile.

[18] 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 instance, arm an ATA missile while in space.

[19] Missile Type

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

[20] 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 it's state will change to 'track' mode. If the target is a friendly or 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.

[21]   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. 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.

[22]   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 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 orders to your own support crafts.

ALL CRAFT RETURN	sends a **Return To Base** 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 RETURN	same as **All Craft Return** but only sends the order to deployed shuttles.
ALL INTERCEPTORS RETURN	same as **All Craft Return** but only sends the order to deployed interceptors.

- **CURRENT TARGET**

Allows you to send orders to your own support crafts affecting the currently selected CVD target. For this to work, a target must be selected in the CVD first. The order is then carried out on the target. If the selected craft is already launched, it will be vectored to the location of the target. If it is not launched, then a launch instruction is sent first and then the ship will proceed to carry out the order. If the ship is not launch *ready*, a diagnostic message will be displayed.

ATTACK	orders the selected interceptor(s) to attack the target
DEFEND	orders the selected interceptor(s) to defend the target
TOW	orders the shuttle to tow the target back to your ship
	Note: you cannot bring any other craft into your ship but you can dock at a starstation where you can deliver the ship in tow. You cannot tow certain objects such as asteroids, stations or units that are in a fixed orbit.

- **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 game.

Note: See Section 1.4 Starting BC3K, for more on saving and restoring games.

- **QUIT/MAIN MENU**

This menu auto-saves the 3D world 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 ships 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 walk 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 those orders.
✓ The bridge systems will malfunction or cease to operate if they take damage. Every system on the Battlecruiser is linked to the main computer which must remain operational at all times.
✓ In addition to the [CTRL+P] key, 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 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.

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]**.

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

This mode tracks navigation related targets on a grid with your ship at the center. Targets are represented by color coded dots with stalks pointing away from the center of the display indicating the relative position. Targets can be selected by pressing **[,]** and **[.]**. When a target is selected, chevrons define which grid edge indicates it's direction. If they are pointing up, the ship is heading toward the target. The selected target can be viewed in the **CVD** by pressing **[V]**.

7.3   Mode 2: Waypoint Tracking System, WTS

When a destination is set in the **NAVITRON** computer, the Navigation Officer then plots a course to the destination and stores these as waypoints in the **WTS**. These can then 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]** . Once the ship arrives at the destination the **WTS** will be cleared.

7.4   Mode 3: Probe Link System, PLS

The Battlecruiser can launch and monitor up to 10 probes at a 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 far and how many waypoint jumps it can make. During a probe's life, it will take some wear and tear and if damaged enough will shut down. A short range probe can make four jumps, a medium range probe can make six and a long range probe can make eight.

Probes can operate in one of two modes. In NAVSCAN mode, it simply orbits a point in space and reports anything which comes into its range. This includes detected planets, moons, ship movements etc. In ORBSCAN mode, a probe will establish orbit around a planet or moon and send reports on surface activities as well as events occurring in space around the vicinity of the planet. Once a probe is launched, its status will change to NAVSCAN or ORBSCAN based on its launch target.

Launching a probe via the keyboard

To launch a probe follow these instructions.

* Select a valid destination for the probe using the NID. This can be a planet, moon or jump anomaly such as a jump point, worm hole or fluxfield. You can also launch it without a destination at times when you want a probe deployed in your current region.
* Press [ALT+L]. This activates the CVD and NID if they are off. It then switches the NID to PLS mode and puts it in command mode. Switches the CVD to VIDLINK mode and the TACSCAN to space scan mode. It then finds the first ready probe and makes it the current one. Use [SHIFT+,] and [SHIFT-.] to cycle through the ready probes if you wish to select a different one.
* After you have selected a probe, press [ALT+L] to launch it. If the NID was already in PLS mode, then [ALT+L] will simply launch the currently selected probe if it is ready.

Once the probe is launched, the PLS will display statistics such as its status, sector location or planet name if in orbit, launch date and time, programming, target sector 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 or comet.

In NORMAL 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, it will announce the name of the planet or moon.

Launching a probe using the NID menu

To launch a probe using the menu, [LEFT CLICK] in the NID to activate the menu. Select the PROBES option and select 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.

Reprogramming a probe using the keyboard

You can re-program a probe to leave its current location and go to another. First, activate the **PLS** and select the probe. With the probe selected, the **NID** will be receiving its data through **TACLINK**. Use the **NID** target selection keys to select the new destination. If you want it to orbit a planet or moon, then select that object. If you want it to go to another sector of space, then select a jump anomaly. You want to have the **CVD** in video mode to see the targets. Once you have selected the new destination, press **[ALT+P]** to send the instructions to the probe. The target location will change to reflect its new destination.

Reprogramming a probe using the NID menu

To reprogram a probe using the menu, **[LEFT CLICK]** in the **NID** to activate the menu. Select the **PROBES** option and select the probe you wish to reprogram. You can only reprogram launched probes. If a probe has 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 on arrival. Selecting a jump anomaly will cause the probe to jump into the other region once it reaches the jump anomaly. If the probe is in **TACLINK** mode, you can select a new destination for it, regardless of where it is in the galaxy.
TACLINK	This mode allows you to link your radar systems to the probe's data link. In this mode, you can use the probe to collect data on a region you are not currently in. In **TACLINK** mode, your **BRIDGEVIEWER**, **TACSCAN**, **NID** and **TACOPS** computers receive their data feed from the selected probe. You will be able to see the probe's broadcasts about objects in it's current region as well be able to target objects in that region from the bridge computers. The **NID**, **TACSCAN** and **CVD** will indicate that they are getting a probe's feed by a flashing white dot in the lower left corner of the displays. In **TACOPS**, the word **TACLINK** is displayed. If you are linked to a probe which then gets destroyed or detached, this will produce static in all displays that are receiving data from the probe. These include the bridge, **TACSCAN** and **TACOPS** computers. To remedy the situation, select another probe or cancel the **TACLINK** by sending a 'normal' command to the probe.

NORMAL	This mode reverts the probe to normal operation and cancels **SILENT** and **TACLINK** 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. You will no longer have access to it nor will it send communications to your ship. This is the same as manually destroying the probe. Once you detach a probe, you can replace it with another.

Operating in Taclink mode

To launch a probe and link all radar systems to it in **TACLINK** mode, launch a probe as described above. Select the probe and using the 'jump at/navigation' commands, select an anomaly which the probe will use to leave it's current region. Once the probe reaches it's destination, select the probe again and give the '**TACLINK**' command. A flashing dot will appear in the top left corner of the **TACSCAN** computer and the location of the **TACLINK** feed will be displayed in the **TACOPS** computer. To cancel this mode, simply send a 'normal' command to the probe.

Detaching a probe

Your Battlecruiser can only track up to ten probes at a time. In order to replace a probe that is declared obsolete, short of manually destroying it, you need to detach it from the tracking system. To do this, select the probe from the **PLS** and press **[SHIFT+X]** command. You can also do this from the **NID** probe menu. Once it gets the command, the probe 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.

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, *taclink, 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 simply shows your location and the current date and time.

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 into a different region.

- Press **[J]** or **[K]** to put the NID or TACSCAN 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.
- 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+1-9]**. The higher the HyperJump setting, the faster the transition to the target and the more power used by the system.
- You can also enable the auto pilot using **[A]** and let the ship fly to the target automatically. If your target is a jump anomaly, you can disable your weapon systems and activate the FPD. This will allow the ship to jump to the new region.

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
✓ The FPD will not activate causing the ship to not jump to a target region if the weapon systems are armed. 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 navigation 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 A/P. To activate the hyperjump engines, press [SHIFT+ 1-9]
✓ 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 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
SELECT PREVIOUS TARGET/WAYPOINT	,
SELECT NEXT TARGET/WAYPOINT	.
SELECT PREVIOUS PROBE	SHIFT+,
SELECT NEXT PROBE	SHIFT+.
PROBE TACTICAL LINK ON/OFF	SHIFT+/
LAUNCH CURRENT PROBE	ALT+L

8.   BRIDGE SYSTEMS - TACSCAN COMPUTER

8.0   System Overview

The TACSCAN computer is the heart of the ship's weapons system. It is capable of tracking targets in space and in interceptors can also scan airborne targets. Within the display are two circles which give an approximate indication of where the target is located in relation to your ship, and its 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 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 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 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 tracks it. . The number above the TTD is the target's damage condition. It's name, race and caste appear below the box while it's 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.

8.2 Mode 1: Space Scan

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

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

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 interceptors, shuttles, ATVs and personnel in space or on a planet 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

✓ You must know the limitations of your weapons. 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. If you find yourself in this situation, first look at the TACSCAN to deduce the missile's heading. Activate the EMD by pressing [E]. This will cause some static interference in the display as long as it is active. With the EMD on, continue to maneuver the ship and turn it into the path of the incoming missile. Failure to change the ship's location may result in some nasty surprise if an coming missile, which has lost it's lock, decides to maintain it's course blindly.
✓ 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.

✓ As a target's shields take hits, it will be depleted and recharge 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 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 shutdown 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 currently is).

✓ 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 and air to surface 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** and to 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

When a target is selected in the **TACSCAN** or NID computers, a video image feed can be displayed in the CVD using [V] when either the NID or TACSCAN is in command mode. Once the target is identified, 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 *engines*, *weapon systems*, *reactor* and *launch bays*. The fields for certain target's, 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

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 it's 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. For more on the **FATAL** weapon system, see *Section 11: Weapons Systems Operation*.

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 a second time. 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 it's current status code below the name. Each interceptor requires two pilots to fly it. Once an interceptor docks, two Flight Engineers are assigned to run diagnostics and systems integrity checks. If it 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 commenced by the Systems Engineers.

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

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 are which 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 and TACSCAN computers. One a target class is removed from the filter, targets in this class will no longer appear in either computer. 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.

INTERSTELLAR	Interstellar objects. Planets, jump anomalies
NAV WAYPOINTS	Navigation waypoints
TACTICAL	High profile targets such as surface bases, fleets etc
CRAFT	Space and air crafts
RADAR	Any target with it's radar activated
FRIENDLY	Friendly targets
ENEMY	Enemy targets
MISSILES/MINES	Missiles and mines in flight
MISCELLANEOUS	Other targets such as asteroids,

9.7 MODE 7 : 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

9.8   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 systems on the ships in this game rely on their condition to ensure peak performance. If a system is damaged it will affect it's 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.

9.9   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. Level 1, 2, 3 & 4. Each level provides an accumulated degree of protection, i.e. Level 1 provides 25% and Level 2 provides 50%, level 3, 75% and level 4, 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 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 shutdown. 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 ship's shields can be upgraded as follows (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 it's 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 it's 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 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 shutdown 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 which it can use to tow ships and other large objects with. Power must first be allocated for 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 colored 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 defeated a hostile target in combat. You can then tow the ship and take it 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 discussion 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 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 are not disabled.

✓ When you cloak your ship, any ship or weapons launch operations will announce 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 announcing 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%. 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.

When the IOD is fired, it must recharge before it can fire again. The higher the laser intensity, the longer it takes to charge 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 patch.

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 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.

When PTA is activated by pressing [P]. You can also [LEFT CLICK] on the PTA symbology on the BRIDGEVIEWER to activate it. The laser turrets, under PTA control, will autofire when a hostile target comes within range. The system automatically selects a low burst setting for the lasers but you can modify them manually.

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 continue to fire. You will have no control until you deactivate the PTA system. 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.

If you have disabled an enemy ship and wish to tow it be sure to deactivate the PTA system first otherwise they will destroy the target.

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, it will be automatically launched by the FATAL system and guided by it's own internal radar guidance system.

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 can 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 it's 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 all variations and differ in acquisition range, lock time, damage factor etc.

In order to launch a missile at a target, you must first acquire and identify the target, select a weapon and 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 one 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 manual from the list by pressing [SHIFT+W]. Once the list of weapons is displayed, press the number of the desired missile to select and 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 it. If you are not using a missile with ATL or ATL/v logic, keep the target in view and locked until the missile hits it. If you are using lasers, you simply have to fire toward the LTD in order to hit the target. Advanced users may want to lead the target by firing in the general vicinity of the TLD.

11.4   Mine Deployment Operations

The Battlecruiser can also arm and launch up to 10 mines from special mine launch bay. Like missiles, these 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.

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. 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.

✓ Remember, the **PTA** system does not select targets based on threat priority. It simply 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 it's 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 them 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 them 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 will 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 or air to surface 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 it's 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 controls 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.

You can stop the ship or cause it to move backwards by applying retro-rockets using the **[TAB]** key. Pressing **[0]** 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 stick 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.

Note: If a throttle axis is available, it has more authority than [`] or [TAB]. For best effect 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.

12.1   Inter-System Course Plotting

You can plot a course to any location or target within the current region or to other regions.

You need to make a note of where you want to go and what method you will use to get there.

The simplest form 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 [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 target.
- Activate the AUTONAV computer by pressing [A] . The AUTONAV system uses this data to program the flight computers which then assume control, orient the ship, program the engines and using hyperspace, automatically fly to the target.

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 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 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 and trade at any friendly or neutral facility as well as perform repairs.

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 with 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 be left behind. To bring it on board, use the Battlecruiser tractor beam. Once captured, you will be prompted to bring it 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 from the target (based on size of target), request docking clearance by pressing **[ALT+D]**. If clearance is granted, your ship will dock and you can log into the facility's CENTCOM unit as normal.

12.4   Orbital Procedures

To establish orbit around a planet or moon, you first target the desired planetary body in the NID and press **[O]** when within 100 clicks from it. The ship's autopilot will assume control of the craft and establish orbit around the planet or moon maintaining a constant orbital speed. Once in orbit, the **[`]** and **[TAB]** keys can be used to alter the ship's altitude above the planet from the orbital plane, while the directional control keys or joystick, can be used to alter the ship's orientation. You will not be allowed to alter the speed of the craft while in orbit.

To leave orbit, press the **[O]** key again and the autopilot will take the ship outside the orbital approach range and restore manual controls.

If a planetary body is the target of a HyperJump transition, since this drops the ship a short distance from the planet, you will have to cruise to the planet in order to enter orbit as described above.

While in orbit, any ships that are launched from the ship will immediately enter the planet if they are within the planet or moon's gravitational pull.

In order to prevent collisions with other objects on the same orbital plane as you, ensure that you constantly monitor that plane in order to avoid a collision with say, a starstation or orbital defense system.

12.5   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 towards it. Continue to fly towards 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 shortly 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 are above 45,000 feet, to engage orbital breach procedures.

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 down 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.

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 and air to surface missiles. If you plan to enter a planet which has an Orbital Defense System 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 blow up from orbit where is 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.

12.6 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, they 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 mission profile.
✓ Don't forget to select a mission profile which includes surface missiles when planning to send an Interceptor to the surface.
✓ You can track the progress of your surface operations from the TACOPS computer. Simply locate one of your own units on the surface and zoom the map to include that unit.

12.7   Quick Reference Commands

ENGAGE ORBITAL ENTRY/BREACH	O
REQUEST DOCKING CLEARANCE	ALT+D
HYPERDRIVE JUMP FACTOR	SHIFT+1-9
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.
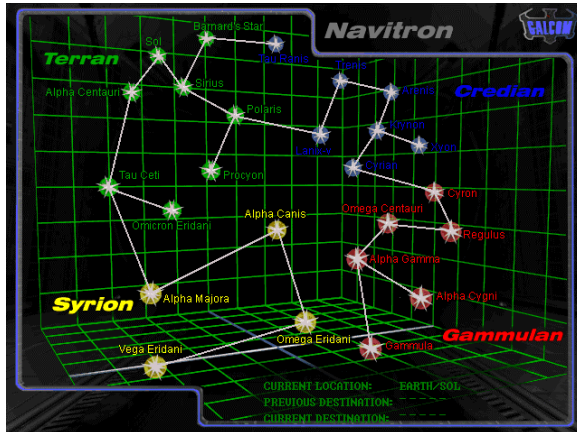
When NAVITRON is activated, it displays the full screen galactic map and a smaller system map based on your Current Location in the galaxy.

It also displays:

CURRENT LOCATION	-	Current REGION/SYSTEM location
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 it. 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. It is easily apparent how the regions are linked within the starsystem.

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 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 for instance, jump from Earth to Pluto region using a jump point and from Pluto to the Centris region in the Alpha Centauri starsystem.

The **NAVMAPS.PDF** file on the cd-rom is a larger map showing all quadrants.

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.
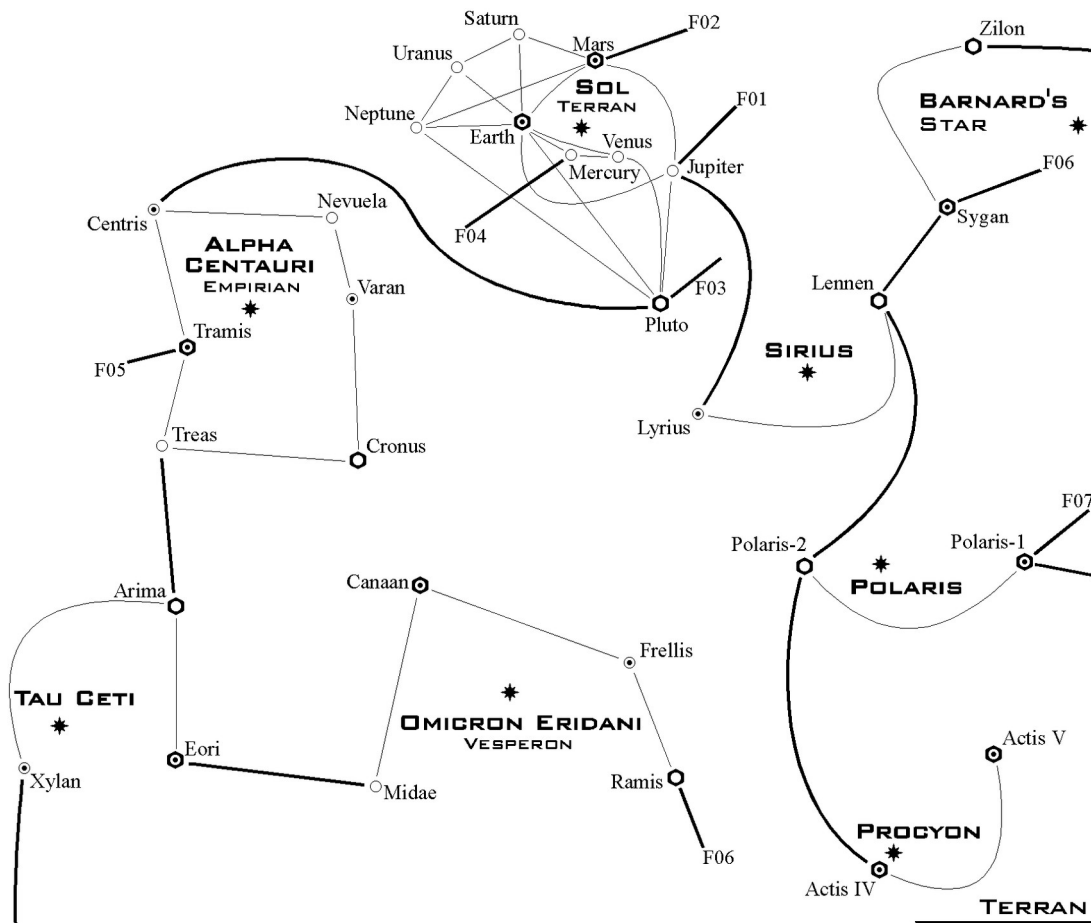
Quadrant Format:

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

Krystar

TAU RANIS

Rebellan

Ronus IV

Scorpia

TRENIS
CREDIAN

Darain

F07

Herin

Antis

LANIX V
ZELON

ARENIS

Zelana

Hadar-9

Khan

Tyrus-2

CYRIAN
MANDORIAN

F08

Capella

KRYNON
KANDORIAN

Lydan

Rinaal

Pravis

F08

Chanis-2

Chanis-1

XYON

CREDIAN

— Jump point
— Wormhole or Fluxfield
✴ Star
◉ Planet with Starstation and Starbase
○ Planet with Starstation
⊙ Planet with Starbase
○ Planet without bases

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 governments 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

GAMMULAN

Gamma-1 Gamma-2   F11
                         LV-115
GAMMULA
GAMMULAN
LV-110
Tyrinis

Chalinis   Kruger

                  LV-184   Otura-9
                          OMEGA   Regis VI
ALPHA   CENTAURI   REGULUS
GAMMA   VALKERIE
GAMMULAN Crystar   Otura-6   F09
                              F10   Regis IV
Mantisi
        F12
  LV-104   LV-105
ALPHA
CYGNI
FALKERIE
              LV-103
  F11

CYRON
Cyron VI

— Jump point
— Wormhole or Fluxfield
✴ Star
◎ Planet with Starstation and Starbase
O Planet with Starstation
◉ Planet with Starbase
○ Planet without bases

Named after the galaxy's most aggressive race, this quadrant is home to their comrades the Valkerie, and also the enslaved Falkerie race, 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 might of the Gammulan/Valkerie Alliance.

SYRION QUADRANT
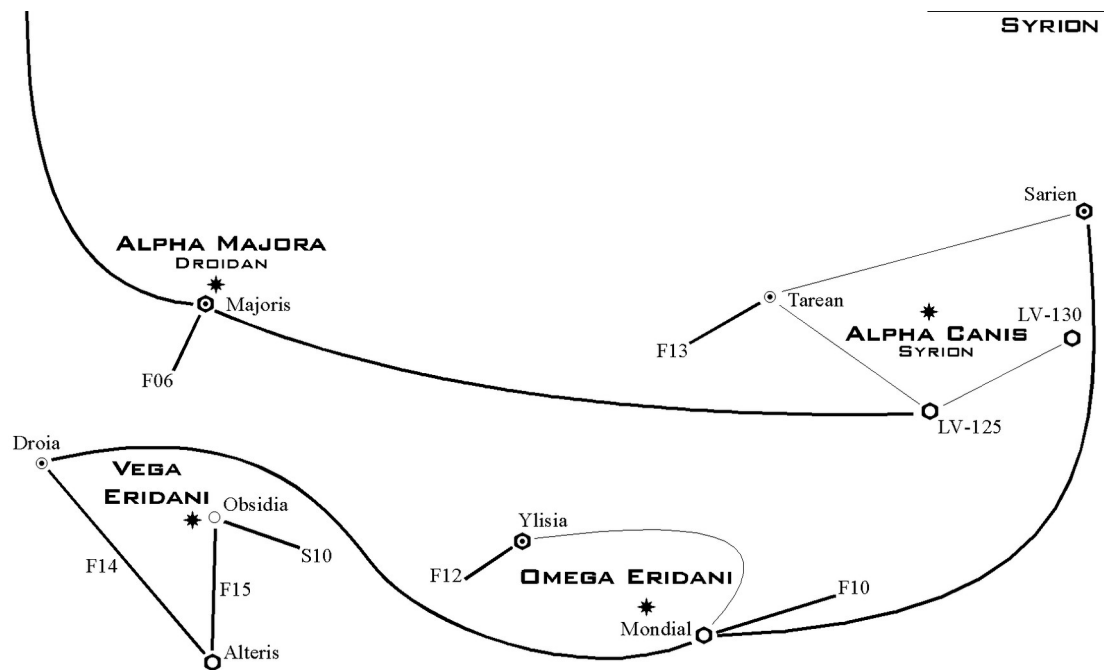
Sarien

Tarean   LV-130

ALPHA MAJORA
DROIDAN

Majoris

ALPHA CANIS
SYRION

F13

F06

LV-125

Droia

**VEGA
ERIDANI**   Obsidia

Ylisia

S10

F14

F12   **OMEGA ERIDANI**

F10

F15

Mondial

Alteris

— 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 alone 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 only have one entry and exit point. Jump point links are displayed as connecting blue lines. If you called 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 on the other hand 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 called 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 can cause 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 did but it may just have deposited you back at the point at which you entered. Some flux fields have end points in black holes which makes 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 to Majoris (Alpha Majora).

WORMHOLES: These anomalies are natural phenomenon which exist in various parts of the galaxy. They are the gateway to other star systems within the galaxy. They are highly unstable and will 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 what system a wormhole originates from. This is displayed at the end of the wormhole hole line. If you called 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 it is located in.

The destination is now programmed into the ship's auto-navigation, **AUTONAV**, system. Once you exit and return to the bridge, activate the autopilot and the flight computer will compute and plot all the routes required to take the ship from its current location to the selected 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

This 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 and 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 not be performed at all.

Activating the LOGISTIX computer displays three options:

14.1   Craft Repair Operations
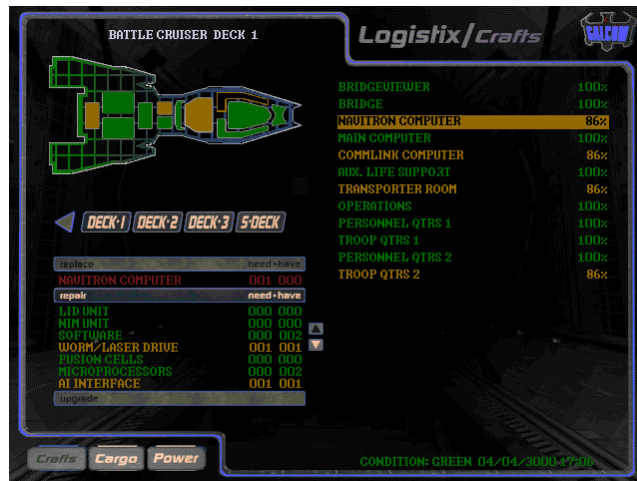
To access this area of the computer, [LEFT CLICK] on the CRAFTS button.

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 to perform repairs on. 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 it's 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 make up the system. The second column lists how many of this component you need to repair the system. The third column lists how many 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 upgrades, then **UPGRADE** will be lit on the bar at the bottom of the screen. If a system is badly damaged or is destroyed, you can 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 do.

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 want to 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 be 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 less time the repairs will take. 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 normal.

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 estimated repair completion time stated. If the engineering lab is destroyed, all the equipment will be lost and therefore 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 it again as normal 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 it.

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 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.

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 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.

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.

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

There are times when you will 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 TRADE.PDF , for a complete trading database.

14.3   Power Allocation Procedures
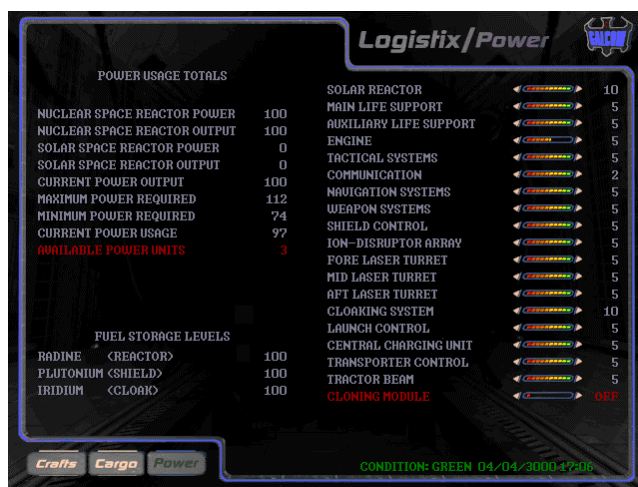
Power management on the BattleCruiser is one of the most important and critical aspects of its operation. Without power, most of the ship's systems will shutdown. The nuclear reactor is responsible for providing power for the operation of all the ship's systems. It uses Radine crystals for fuel. It's 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 it's operation 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 it's cooling system also affect the nuclear reactor's operation. If these systems are severely damaged or destroyed, the reactor will shutdown. 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 shutdown 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, it's fuel storage levels and the power grid itself. The current 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 shutdown immediately taking all systems connected to it, down with it. A system that is shutdown 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

This 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 only 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 are fields that 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 they are on the ship or not.

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

Assignments

Anyone on board 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 simply indicates what they are doing and where they are assigned.

Officers are always on-station to indicate that they are on duty so to speak. This is regardless of their current location on the ship.

Pilots on the other hand are set to either pilot or co-pilot assignments.

Systems Engineers that are not working on a task are listed as on-station meaning they are available for work. The system will show where those are already assigned tasks are.

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 away. Once they are assigned a task, this will be listed.

Guests, ***Prisoners*** and ***intruders***, do not have assignments.

Changing Assignments

You can change the assignment of some of the personnel on the ship is you **[LEFT CLICK]** on the arrow next to the desired person's assignment. The type of assignment varies with the person's profile. For instance, you can assign marines to search the ship for intruders but you cannot do this for officers. You can also assign personnel directly to support crafts.

When you change a person's assignment, i.e. to another location on the ship, you must give that person time to move from the current location to the destination. Sometimes the trip will take longer especially if a direct route to the target location is damaged. The entire ship is linked by a myriad of corridors, turbo shafts and moving walkways and it takes time to plot 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 the **LOCATION**. There are dozens of locations on the ship where people can be. During the normal running of the ship, people move around the ship dynamically around the ship as they go about their business. You cannot change a person's location as you can their assignment.

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

15.2   Launch Operations

To access this 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 only be modified if the craft is on the Battlecruiser.

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

This data is accessed directly from the LOGISTIX computer and is color coded accordingly. The attributes of the combat pilots is 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 which 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, 2 flight engineers are assigned by the Flight Officer to run diagnostics on it and assess it's flight status. During this period, it's status code is set to **READYING** and the completion time displayed. If it fails diagnostics due to damaged systems, it's code is changed to **ENGINEERING**. It is then loaded on a ramp and shuttled down to engineering so that the Systems Engineers can fix the problem. Sometimes it'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 usually updates the status. If an Interceptor is destroyed, cannot be located anywhere in the galaxy or the pilots ejected, it's status will be set to **DESTROYED**. If the ship passes the diagnostics check, it's reactor batteries are then re-charged, armed and it's 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 it will go off-line until you manually assign flight engineers to check it. The pilots themselves will attempt to ready their own craft. This however 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 quicker 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 on, the system will scan the ship's weapons bays and try to arm the craft with the required weapons required by the mission assignment profile. If a required weapon is not found, it will then 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 slots. 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 or not. It is an average of the ship's systems.

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

Pilot Attributes

The pilot attributes is 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 on the screen.

You can also assign pilots to the currently selected craft from this area. To do this, 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, as well as 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.

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 h/she occupies.

Once you assign a person to the transporter, you have to wait until they actually move to that location before you can deploy them. Use the PERSCAN computer to monitor their movement.

Once they make it to the transporter, you can then deploy them on a planet surface using the TACOPS computer.

Note: Marines must have previously been 'prepped for combat' before they can be assigned to the transporter or shuttles for away missions. Once they have grabbed their gear and gone through pre-launch briefing, they will automatically proceed to the designated launch vehicle. Check the PERSCAN computer to make sure they have arrived before launching the craft.

Transporter Operations – Loading Cargo

You can also load cargo items in the transporter.

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

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

This feature was implemented so that you are able to deploy rations, weapons etc to deployed personnel or when you have a mission to deliver items to another party either 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 one. Then again use the ARROW KEYS next to the item to add/remove to/from the cargo manifest.

Once the cargo container reaches the limit of 1500 units, you will no longer be able to add more 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 you put it in. If you encounter a cargo container on the planet surface, you can also bring it back to the ship. You can later unload it using this feature 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.
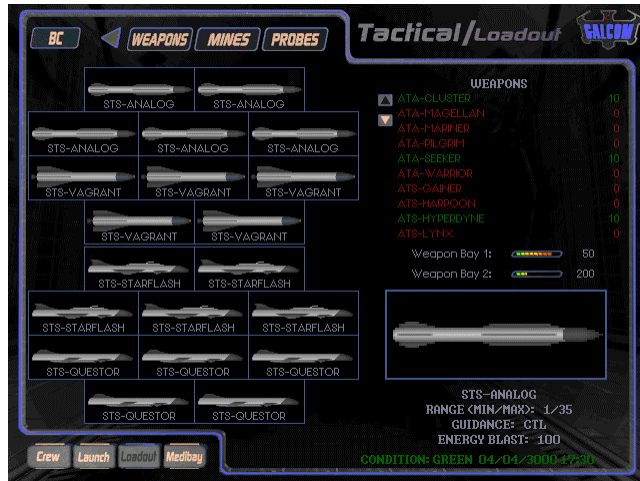
To load missiles in the Battlecruiser, **[LEFT CLICK]** on the **WEAPONS** icon to reveal the weapon loadout screen.

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 each 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 respectively. You cannot launch a missile, mine or probe unless it is loaded into the respective 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 launch slots. To reverse the operation, simply **[LEFT CLICK]** in one of the 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 as desired.

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 it's weapon bays.

An interceptor has two independent weapon launch bays, each capable of carrying 5 missiles each 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. Later, you will be able to deploy a cargo container with the items you have just loaded into the shuttle.

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

The shuttle can also carry one ATV and one mining drone for later 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 then select which vehicle 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, 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 has some new information which includes the drone's current *status*, it's operational *level* and it's *assignment*. You can access any drone from this screen 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, 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

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, 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 or 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 not documented here. Medics are also on hand to assist the **MO** in her assignments. They 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 may be required based on the extent of 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 simply select this option to commence cloning. The percentage completion will also 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, is lost.

RELEASE: Use this option to release someone from MediBay after 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 located at various locations on the ship to locate non-crew members. Guests, prisoners and intruders are located in this manner. It uses a tracking device (part of their neural implant) to locate the ship's own crew regardless of where they are on or off 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 4 or less 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 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 should be 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 is assigned to travel to or 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 in it. Once you assign a person to a location, you have to wait for them to travel through the ship and get there 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 or people from other locations outside 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, is displayed above the message itself. [LEFT CLICK] on the STATS icon to view your current statistics. This information is identical to the one displayed in the ROSTER computer.

The CLEAR icon is used to clear the contents of the log file and create a new one. Use this only if you are running low on disk space or 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, it defaults to space view.
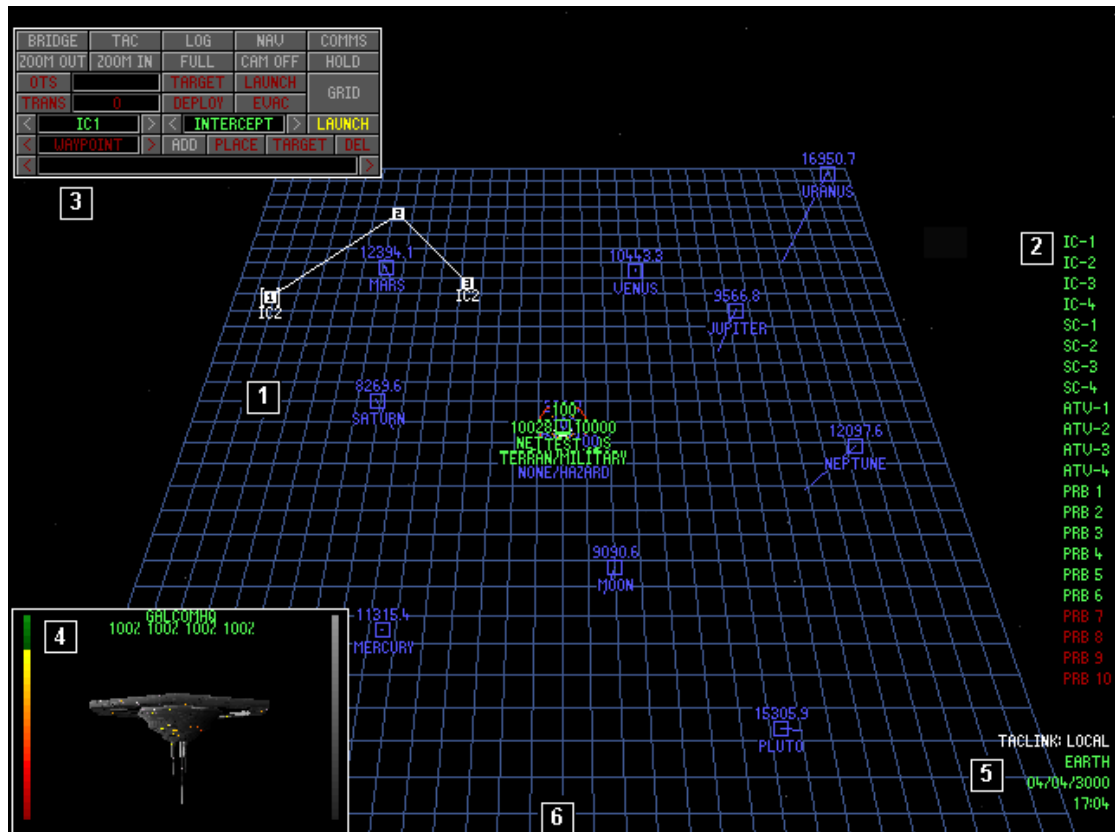
Using this computer, you will be able to control your ship's complement of ships and
troops, launch probes as well as monitor the tactical situation in space and on a
planet surface. It can also be used to launch weapons against planet based targets
from orbit. The computer operates in two modes, surface or space. You can only
perform operations for ships and personnel in the current region. This means that
you will not be able to set waypoints for ships in Mars region if you are in Earth
region. Once you leave a region, all waypoints and mission data are cleared.

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].

An expanded version of the TACTICAL LAUNCH MENU, **[2]**, is displayed on the right side of the display and also allows probe launch operations.

On the lower right side of the display **[5]**, are (a) the TACLINK status (displays LOCAL if not linked to a probe, otherwise displays name of probe region) of the radar system (b) the name of the space or planet/moon region being viewed and (c) the current date and time (set to that of the planet/moon being viewed if applicable). If a target has been selected and is being tracked on the display, this data will also be displayed.

You can also 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.

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 cannot select any of the targets from this list; it simply tells you what's there and it is updated in real time.

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.

Planetary Scan

The TACOPS computer can also scan a planet or moon surface. Locate the desired planet/moon and [LEFT CLICK] on it to display the ZOOM TO dialogue. Select the planet/moon and select OBSERVE to bring up the surface topology. The map is fully zoomed so you will have to [LEFT CLICK] several times to see the surface. As you click, a small patch of land should appear in the center of the display. This is not the entire planet surface but an area being scanned by the computer as it processes it. Due to the various climate zones on the planet, it is not possible to display the entire planet surface in full detail. Continue to click on the land mass until you are fully zoomed in. Depending on the time of day on the planet, the surface map should be fully lit to match the climate and time of day. Once the planet is in view, you can use the normal viewing/zooming controls to manipulate the display.

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
[LEFT CLICK+HOLD BUTTON]	Pan 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

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.
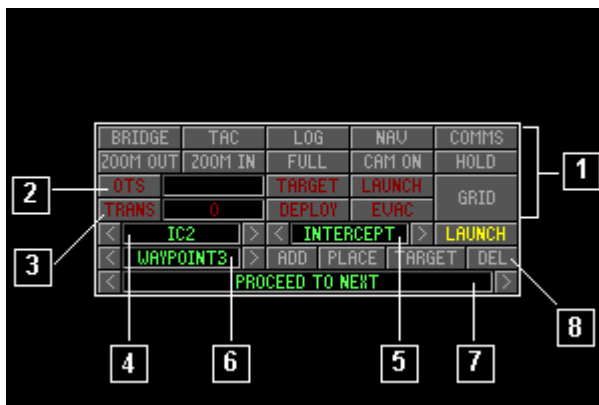
Certain options on the CP are disabled based on it's operating mode. Example, since you cannot launch OTS weapons at a space target, this option will be disabled if TACOPS is in space mode.

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 freeze or update AI processing
	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 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	Unit loadout profile or shuttle personnel
[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 set 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. If it is an interceptor, it's 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 if you like. The loadout should reflect the mission you are about to launch the unit on. It is pointless using a loadout of space weapons if the unit is going on a surface mission. At this point, if the ship is ready to launch, the LAUNCH icon will be yellow and you can launch it without waypoints.

Once you've defined unit parameters, you need to actually create the waypoints for it. You can do this before or after it has launched. Make sure you are working with the desired 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 **8** 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 planet map, **[LEFT CLICK]** on the **PLACE** icon and put the **WAYPOINT DESIGNATOR**, **WD**, at the desired location on the map. 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 it to any location on the map. You can also select it from the map and drag it to any location. If the ship was not previously launched, select the **LAUNCH** icon to launch it.

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

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.

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.

18.4   Deployment Operations

Interceptors

Any interceptor that is launch ready can be launched from **TACOPS** with or without a waypoint.

Select the desired craft, create a waypoint and orders for it if needed, and launch it. Once deployed, the pilots will fly to the assigned waypoints and attempt to carryout the assigned 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 before launching it.

Shuttles

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

Each shuttle requires a crew of at least one in order for it to launch. Shuttles can be used to deploy troops, ATVs or mining drones and for cargo operations. Select the desired craft, create a waypoint and orders for it if needed, and launch it. Once deployed, the shuttle will fly to the assigned waypoints and attempt to carryout the assigned missions. 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, ATV 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 in it. 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 for each of the waypoints you create. 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, it will return to the ship. Personnel are then transferred to the Battlecruiser once the shuttle docks.

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 below.

When selecting personnel for evac, you may want to use the HOLD icon to freeze the AI update to prevent them 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 be completely full though you can retrieve it at any time. Once the drone is back in the Battlecruiser, you can then 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, if any.

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 to the desired location. Activate the CP and select TRANS again. You can then relocate the TDD. The size of the TDD is based on the current zoom level.

To deploy personnel 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.

You can create waypoints for the team of personnel currently in the transporter. If this is the case, then 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 all selected personnel will be beamed back to the ship.

18.6   Launching Orbit To Surface Weapons

Using special Orbit To Surface 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 weapons 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 targets 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 selecting it.

Once launched, the missile will travel to the planet, enter the atmosphere and fly to the programmed location. Once it reaches the area, it will drop to the ground and detonate on impact inflicting damage on or destroying all targets within the selected area.

You can follow the missile's flight from space to planet if you select it from the map and press **[F10]** to activate the target camera. Use **[F1]** to return to **TACOPS**.

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. 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, 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, it will appear on the display near the ship. Now that the probe is launched, you can again select it's orders box to access it's programming codes. To have the probe jump to another space region, you would 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 would select the desired planet or moon from the **PLANETS** or **MOONS** sub-menu. You can also have a probe orbit a planet in a different space region but you would need to first put it in **TACLINK** command mode. If you're in **TACOPS** when a probe jumps to another space region, you can use the **VIEW PROBE REGION** to peek into the space region the probe is at. Use the **VIEW LOCAL REGION** command to revert the display to your current region. These commands are accessible from the probe menu and are only available once the probe has jumped.

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 an 'object orders' menu based on it's type. The object will then be kept within the display as it is tracked on the screen. Once the object orders menu is displayed, you can select orders for your interceptors or shuttles. Direct orders based on object type include:

ATTACK	orders the interceptor(s) to *attack* the target
DEFEND	orders the interceptor(s) to *defend* the target
TOW	orders the shuttle to tow the target
COLLECT CARGO	orders the shuttle to transfer the contents of the cargo pod to it's cargo hold. If there is no space in the shuttle, it will either leave the cargo pod intact or transfer as much as it can leaving the cargo pod behind with the rest of the objects inside.

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 units it is valid for.

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. Interceptors will hold pattern in **VTOL** mode or circle the waypoint to avoid enemy fire. Marines will take cover behind structures away from hostile fire. Units will defend themselves if threatened.

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 mission is used for the defense of a 'wide area'.

Strike   [Interceptor/Personnel/ATV]

This mission requires a valid target. The unit will strike this target only and either return to base or proceed to the next waypoint on completion. If equipped with **ATA/STS** weapons, crew will defend themselves if engaged without requesting weapons release 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   [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 mission is used for the defense of a 'localized area'.

Search & Destroy   [Interceptor/Personnel/ATV]

This is a combination of *Intercept* and *Patrol*. The unit will actively engage and 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 and 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.

Escort   [Interceptor/Personnel/ATV]

This mission requires a valid target. The unit will protect the craft they are escorting from hostile attacks. They 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 mission is used to provide air/space support to other units. The unit will only search for hostile air and radar units to destroy around the vicinity of the waypoint.

Deploy/Extract Team   [Shuttle/ATV]

The unit will deploy/extract the current team as instructed. It will extract all personnel 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 mans. 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. Under normal circumstances, for instance, 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 also depends on the AI level of that person as you will see below.

The list below shows the systems crew members are responsible for. 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 faster 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 it's 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 have switched 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 the Battlecruiser.

You 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 occasionally. Whatever you do, you should never take your Commander alter ego off the ship because then 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.

Flight Officer   **Tommy Brooks**

The Flight Officer, FO, is responsible for flying the ship and is modeled when the ship's autopilot is activated. If a course is plotted by the Navigation Officer, he will use the computed waypoints to take the ship to the plotted destination. The higher his AI the more accurate 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 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 maintains communications with away teams on a planet surface.

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's 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 the 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 systems on a target priority schedule, is also her job.

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 artifacts is first brought on board, you will not be able to use them if the Research Engineer is not on station or unable to analyze it. Each time an artifact is brought on board, it takes a random of 30-60 minutes for the Research Engineer to analyze it based on AI level. When this is complete, the item then becomes available for use and must then 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, he/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 when they have been analyzed. The installed flag for all others is set only when they too 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 dogfighting and bombing accuracy skills.

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 rate at which a pilot's Dog Fighting and Bombing Accuracy skills increase and by what amount. It also determines a pilot's ability to complete a waypoint mission. This attribute, for the co-pilot, determines their 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 pilot can endure. 100% means that this person is perfectly fit condition.   Degradation of this factor is based on how many combat missions the pilot has flown, the length of combat time and the amount of time this person has been on station. The FF will improve when this person is taken off duty and allowed to rest as the FF will start to decrease. 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 also affects a pilot's effectiveness in combat. Once this value reaches zero the person is considered 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 increase 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 more chances the pilot has of predicting an enemy's next move and countering it. 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 earlier 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 get 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 evacuated. 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. Normally, each person can consume one ration of Nutripak a day but this varies depending on the state of the person's health. 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 but 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 and even being located at a badly damaged location on the ship. The Medical Officer and her crew of medics are responsible for treating all forms of ailments 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 otherwise it will spread from deck to deck and 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 of 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 also run into injured personnel and treat them on the spot based on injury or have them transported to the **MEDIBAY** for advanced treatment. 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 injury. Minor injuries and in some cases severe ones, can be treated by leaving the person in the **MEDIBAY** for a length 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 to treat infections only.

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 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 usually take as much gear as marines.

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

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

Once personnel are deployed on the surface, they will either choose to travel on foot or use 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 reduce 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 on jetpacks can be used to soften the target area under *Search & Destroy* orders, 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 some planets. Once 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 is 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 and 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, 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 computer rarely makes mistakes.

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 multiple because now you have a combat situation within. Unlike escaped prisoners who rarely have access to weapons, intruders usually bring their own to wreak havoc in 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 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 them 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 fight to the death as they play cat and mouse with your marines. 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 own 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 very 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 shutdown 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 ship in question can be launched, i.e. on *ready* status. Prisoners rarely kill personnel but usually 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 own crew.

20.3   Guests

From time to time you will bring diplomats, traders, survivors, dignitaries etc, to 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 own 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 hit impact can damage your ship's systems, locations and injure 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 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 worse. If you feel that you have a chance of surviving, then you should load as many personnel on to shuttles, ATVs and interceptors, then launch these craft. The less people on board the ship the things you have to worry about but don't send all your Systems Engineers away or there will be no-one to do the repairs or clear radiation. Once you've evacuated important personnel, you can then go about repairing the ship and taking steps to contain any radiation detected.

21.2   Radiation Leaks & Infectious Diseases

As discussed earlier, radiation can occur from severely damaged systems. Once radiation breaks out on a deck, the only alternative 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.

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 an epidemic breaks out on the ship it will spread like radiation but a little slower 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

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 schedule. Ignoring a 35% breach in an LS unit to repair a 20% breach in your weapons array will usually lead to trouble if the LS unit takes further damage and quits altogether. If an LS unit fails and cannot be repaired, 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 is breached, 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 (no need to launch them) until the Battlecruiser LS units are repaired.

21.4   Evacuation Procedures

There will 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 decompressing of the decks. A breach in the reactor core can cause it to reach it's fusion threshold causing an immediate rupture in the core and an explosion 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 decision 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 and 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 game 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 will probably 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 way out and must evacuate the crew, you have two options once you tap [CTRL+E] and 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 then 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 personally 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 if there is a power failure preventing their operation. Unfortunately if there is no power allocated to the Transporter, then 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.

Finally, if you do not have any support ships with which to evacuate your alter-ego, you will perish when the ship explodes. That event will mark the end of your career and you will be listed as Killing In Action, KIA.

Interestingly enough, if you evacuate you 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 some circumstances when your ship is disabled but not bad enough to warrant an evacuation, you can request a tow ship. This service is handled by independent contractors for a fee. Once the ship arrives, you will be prompted for payment which is then deducted from your finances. The ship will then tow you to GALCOM headquarters or the nearest station that exists.

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 it's 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 less extent, the Vesperon built Violon. Though smaller than it's counterparts and carries less support ships and crew, the Galactan class Battlecruiser is faster and more maneuverable and has a far more 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. However, a supplement entitled **Battlecruiser Technical Specifications** is planned. This supplement 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 a period of four Terran years. Though the ship was designed for military use, several of them currently in the GALCOM fleet are used for deep space exploration and 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. It's 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 and dispensed in specially designed Nutripaks containing an entire day's meal. A hydroponic plant is also available and 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 walk, 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 know 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 for shuttle launch operations.

All crafts are designed to operate in the most severe space and planetary environment 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 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. Both crafts 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 a 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 vertical stack decks and a pair of deck extensions called sub-decks. Each deck hosts a variety of areas as well as 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 only local to the decks they are one and reduce the amount 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 ships 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 various configured levels of up to 100 bursts per second. The faster the configured burst rate, the longer the recharge time.

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 also 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 weapons pod can arm and rapid launch up to 10 missiles each. The weapons bays can store hundreds of missiles based on size and storage requirements. A dedicated computer system called Fʌsт Tʌrget 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 also allows the shields to be upgraded to any class which can be configured to use a planar matrix configuration. All shields 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 for power crystal conversion, 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 distort 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 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 for 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 will shutdown. This would generally spell disaster.

The Battlecruiser can store up to 25000 units of **Radine**, 10,000 units of **Plutonium** and 1000 units of **Iridium**.

The nuclear reactor is responsible for providing power for the operation of all the ship' systems. It uses Radine crystals for fuel and it's operation and ability to provide maximum power is dependent upon it's condition. Hence, if the nuclear reactor is damaged, it will not be able to reach it's operation peak and therefore produce less power units.

The status of the reactor core and it's cooling system also affect the nuclear reactor's operation. If these systems are severely damaged or destroyed, the reactor will shutdown. 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 shutdown the nuclear reactor to prevent overheating. It then attempts an auto power reallocation using available power if any.

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 then is then stored in a battery within the solar reactor. It 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 it's operation. A system is considered off line if it has zero power units allocated.

Power allocation is distributed as follows:

SOLAR REACTOR   10/10

In order to convert solar energy captured by the solar panels to raw power, the solar reactor needs to be activated. It requires 10 ten units of power to do this otherwise the energy will not be converted. Once the solar panels are extended, they will effectively charge the solar reactor with solar power which is then converted to power that can be used by the ship. If there is no power to this system, extracting the solar panels will have no affect and the solar reactor will not be charged.

Once the solar panels are extracted, the solar reactor battery is charged at a constant rate and the power immediately stored in internal battery cells for use. The stored converted power will eventually be depleted.

MAIN LIFE SUPPORT   5/5

This system provides life support for Decks 1,2,3 & the sub-decks. If this system is off-line, the life factor of personnel at any of those locations will be reduced. If the system is not brought back on-line, they will eventually die.

AUXILIARY LIFE SUPPORT   5/5

This system provides life support for all bridge command personnel. If this system is off-line, the life factor of personnel at this location will be reduced. Unless this system is brought back on-line, they will all die.

TACTICAL SYSTEMS   5/5

This allocates power to the TACOPS, CVD and TACSCAN computers.

NAVIGATION SYSTEMS   5/5

This allocates power to the NID, NAVITRON and the BRIDGEVIEWER.

ENGINE   10/1

The amount of power allocated to the ship's engines determines the amount of thrust that it can produce. It also determines the amount of thrust produced by the staged thrust afterburner auxiliary engines. The engines will not start if power is set to zero.

SHIELD CONTROL   5/1

This determines the strength of the shield's energy field. The higher this power setting, the stronger the shield's energy field. If power to this system is shutdown, the shields will also shutdown rendering the ship vulnerable to serious damage during skirmish.

COMMUNICATION   2/2

This allocates power to the internal and full screen COMMLINK systems. Also handles probe launching.

WEAPON SYSTEMS   5/5

This allocates power to all weapon systems. This includes missile launching, mine laying, FATAL and PTA.

ION-DISRUPTOR ARRAY   5/1

The power allocated to the IOD system determines it's recharge rate and energy blast. The more power allocated, the faster the recharge rate and the greater the damage done.

FORE LASER TURRET   5/1

The power allocated to the fore turret determines it's recharge rate and energy blast. The more power allocated, the faster the recharge rate and the greater the damage done to the target.

MID LASER TURRET   5/1

The power allocated to the mid turret determines it's recharge rate and energy blast. The more power allocated, the faster the recharge rate and the greater the damage done to the target.

AFT LASER TURRET   5/1

The power allocated to the aft turret determines it's recharge rate and energy blast. The more power allocated, the faster the recharge rate and the greater the damage done to the target.

CLOAKING SYSTEM   10/10

The ship's cloaking system requires 10 units of power for operation. This allows it to cloak the ship. The amount of Iridium available determines how long the cloaking system will remain on. If power to this system is shutdown, the ship will de-cloak regardless of the Iridium level.

LAUNCH CONTROL   5/5

The launch platform for the Battlecruiser operates as a vertical eject system for rapid deployment and retrieval of Interceptors. In order to be able to launch/retrieve Interceptors, this system must have power otherwise the flight engineers will not be able to operate the ejector system and the Interceptors will not be able to dock nor launch.

CENTRAL CHARGING UNIT   5/5

The system requires power otherwise the interceptor, shuttle and ATV chargers won't work. This means that ships will not be recharged on docking.

TRANSPORTER CONTROL   5/5

The transporter system requires 5 units of power for operation. Without it, deployment of personnel using this system will not be possible. This system depletes 2.5 units of power whenever it is used.

TRACTOR BEAM   5/5

The ship's tractor beam requires 5 units of power for operation. Without it, it would not be possible to operate and capture other space craft. This system uses 5 units of power whenever it is activated. If power to this system is shutdown, it will lost it's lock.

CLONING MODULE   10/10

The cloning module is used to create clones of the ship's important crew members from stored DNA samples. This complex operation is performed in the ship's MediBay. In order for the Medical Officer to clone personnel, this system must have 10 units of power allocated to it. It requires this power to be constant as long as someone is being cloned otherwise the operation will be suspended.

22.5   Primary System Upgrades

The engine, reactor, shields and armor can be upgraded. A higher upgraded results in better performance and in the case of shields and armor, higher protection. Upgrades in the form of artifacts 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.

ENGINE
>STARCRY/S
>CRUMICRON
>DIRINGER
>OMICRON/1
>NUMEGA

REACTOR

>LATTIS/NB
>MEGATRON
>LATTEX/NB
>LATTIS/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 it's own bay, the Battlecruiser can only have 4 crafts on active duty. The main Battlecruiser cargo bay is capable of storing spare Interceptors which can then replace destroyed ones. Repair operations can be performed at starstations and starbases or by onboard systems engineers. All pre and post flight operations are performed by onboard flight engineers.

Personnel

Requiring two pilots at launch, the craft can be piloted from either the pilot or co-pilot seats. If either pilot dies, controls and view will be locked to the surviving pilot station. The ship's on-board computer monitors the vital signs of the pilots 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 it's 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 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 the craft is operating under.

Planetary Operations

For planetfall operations, flying directly into a planet or moon will cause the ship to configure it's 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 reach 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 erupts.

Upon a successful ejection of the module in 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 it's 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 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 field around the craft when activated. Like every system on the craft, the shield draws it's 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 these 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 also 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 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 (triangle) and have a valid lock. The ship is at the center of the display.

[5]   Hull Integrity Display, HID

Monitors the status of the hull armor. A Yellow readout indicates a minor breach while 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 thinking seriously about ejecting from the craft.

[7]   Reactor Power Display, RPD

Displays the current amount of reactor power. A Yellow readout indicates 50% or less power remaining and Red indicates 15% or less power.

[8]   Laser Power Display, LPD

Displays the current amount of photon particle charge for the primary laser system. A Yellow readout indicates 50% or less power remaining and Red indicates 15% or less power.

[9]   Shield Power Display, SPD

Displays the current amount of shield power. A Yellow readout indicates 50% or less power remaining and Red indicates 15% or less power.

[10]   Armor Protection Display, APD

Displays the current amount of armor protection. A Yellow readout indicates 50% or less power remaining and Red indicates 15% or less power.

[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, they 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 then replace destroyed ones. Repair operations can be performed at starstations and starbases or by onboard systems engineers. All pre and post flight operations are performed by onboard 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, 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 it's 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 the craft is operating under.

Planetary Operations

For planetfall operations, flying directly into a planet or moon will cause the ship to configure it's 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 be ejected from the craft which then self-destructs. At high altitudes, personnel will die on impact with the surface if they fall under gravity. Ejecting personnel in space will cause those without space suits to die since they won't normally be suited for a space environment deployment as they would be when going on away missions to planets. 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 erupts.

In the event of a shuttle evacuation, surviving personnel emitting an IFF beacon can be picked up using the **SUL** mode of the **TACSCAN** and evacuated.

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 and ATVs. Deployment is performed by entering the planet's atmosphere, hovering over the desired drop zone and deploying/extracting either personnel, cargo or mining drone by using the deployment menu. Extracted personnel will climb into the main cabin, cargo transferred to the cargo bay and the mining drone and ATV stored in special compartments.

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 field around the craft when activated. Like every system on the craft, the shield draws it's power from the main reactor cell and will automatically deactivate during power loss conditions.

The shuttle is unarmed.

Pilot Cockpit Systems
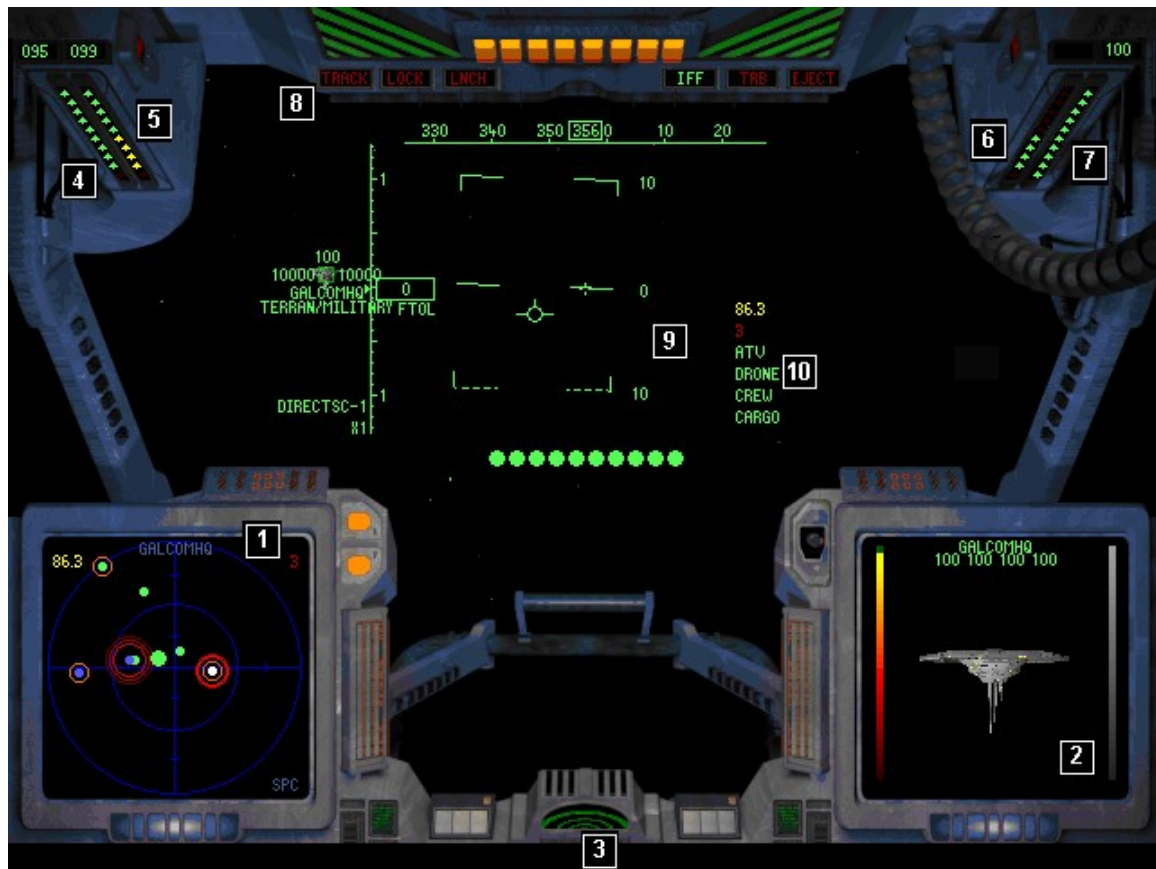
[1]   Navigation Interface Display, NID and Tactical Scanner, TACSCAN

The **NID** and **TACSCAN** computers share this display. The commands to access each one also 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 50% or less power remaining and Red indicates 15% or less power.

[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 50% or less power remaining and Red indicates 15% or less power.

[7]   Armor Protection Display, APD

Displays the current amount of armor protection. A Yellow readout indicates 50% or less power remaining and Red indicates 15% or less power.

[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 as you fly. The faster you are flying, the higher

[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 extract, target the desired vehicle and select **EXTRACT** if the craft is within range of the shuttle.

DRONE   Select **DEPLOY** to drop the currently loaded drone to the surface. To extract, target the desired vehicle and select **EXTRACT** if the craft is within range of the shuttle.

CREW   Once the roster menu is displayed **[LEFT CLICK]** on each person you wish to deploy, then select **DEPLOY SELECTED**. You can also use the **DEPLOY ALL** command to deploy all personnel. To extract, target the desired person and make sure the craft is within close range then select **EXTRACT** from the menu. You can only extract one person at a time.

CARGO   Once the items list is displayed **[LEFT CLICK]** to select the items you would like to transfer to/from a cargo pod, ATV or mining drone, then select **DEPLOY**. To extract, target the desired cargo pod and make sure the craft is within close range and then select **EXTRACT** from the menu.

23.2 Mining Drones

Mining drones are used for mining planet 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 mineral it detects. Once it's filled to capacity, you can then extract it and transfer it's cargo to the shuttle cargo bay or to the Battlecruiser cargo bay once the shuttle docks. A mining drone will usually take about 4 hours to fill to 100% capacity. The Battlecruiser can carry any number of mining drones in it's cargo bay but only 4 can be active at any time and loaded in shuttles.

23.3 All Terrain Vehicle

The Battlecruiser is capable of carrying 4 ATVs used for planetary deployment and extraction operations. They are only suited for surface combat operations as well as 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 then replace destroyed ones. Repair operations can be performed at starstation and starbases or by onboard systems engineers. All pre and post flight operations are performed by onboard 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 it's 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

Driving and navigation controls are identical to those used in the Battlecruiser though the craft behaves differently and operate on the ground. The craft can only operate on the ground.

Planetary Operations

The ATV can only be deployed on the surface by a shuttle hovering at a safe altitude not exceeding 10 feet in order to avoid damage to the craft and it's cargo.

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 be ejected from the craft which then 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 erupts.

In the event of an ATV evacuation, surviving personnel emitting an IFF beacon can be picked up using the SUL mode of the TACSCAN and evacuated.

Deployment Operations

The ATV is primarily used for personnel and cargo deployment and extraction operations. Deployment operations are conducted via the deployment menu. Extracted personnel will climb into the main cabin and cargo transferred to the cargo bay.

Defense & Weapon Systems

The ATV hull is covered with low definition protective armor. It also has a low rating protective shield which creates a 360 field around the craft when activated. Like every system on the craft, the shield draws it's power from the main reactor cell and will automatically deactivate during power loss conditions. The weapon bay can carry up to 10 all purpose Radix stand-off missiles. 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.

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 also 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 50% or less power remaining and Red indicates 15% or less power.

[5]   Laser Power Display, LPD

Displays the current amount of photon particle charge for the primary laser system. A Yellow readout indicates 50% or less power remaining and Red indicates 15% or less power.

[6]   Shield Power Display, SPD

Displays the current amount of shield power. A Yellow readout indicates 50% or less power remaining and Red indicates 15% or less power.

[7]   Armor Protection Display, APD

Displays the current amount of armor protection. A Yellow readout indicates 50% or less power remaining and Red indicates 15% or less power.

[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

[10]   Inbound Launch Display, ILD

Monitors the status of outbound missiles you launch (square) as well as inbound missiles (triangle) that have a valid lock on your ship. Your ship is at the center of the display.

[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 integrity compromise while Red indicates a severe compromise. During a severe breach, the pilots should start thinking seriously about 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.

CREW   Once the roster menu is displayed **[LEFT CLICK]** on each person you wish to deploy, then select **DEPLOY SELECTED**. You can also use the **DEPLOY ALL** command to deploy all personnel. To extract, target the desired person and make sure the craft is within close range then select **EXTRACT** from the menu. You can only extract one person at a time.

CARGO   Once the items list is displayed **[LEFT CLICK]** to select the items you would like to transfer to a cargo pod for deployment, then select **DEPLOY**. To extract, target the desired cargo pod and make sure the craft is within close range and then select **EXTRACT** from the menu.

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, it's simple, do not fire unless fired upon; and if fired upon, 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 both 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 only improve gain medals while playing ACM but you increase in rank in either Free Flight or ACM. Your salary also increases with each rank.

	Rank	Experience Points
Highest	SUPREME COMMANDER	200,000
	TACOPS COMMANDER	100,000
	STRATEGIC COMMANDER	50,000
	FLEET COMMANDER	25,000
Lowest	COMMANDER	0

Medals are awarded based on merit and usually on completion of ACM missions. Some high order medals require some lower order ones 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 and 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 especially, 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 command, as necessary in order to facilitate the smooth and 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 it's 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 as well trading in illegal items and consistently ignoring distress calls within range of your scanners. Stack 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.   THE SMART FEEDBACK

By now, you already know who I am, what Battlecruiser 3000AD is and of course heard about or experienced the 1996 botched release of one of the most eagerly anticipated and hyped title of all time. The abuse, the insults, the finger pointing, the blame etc have all been shoved back and forth since 1996 and to this day, the controversy continues.

What happened to BC3K in September 1996?

Everyone, from the publishers to the Usenet detractors who don't even own the game, has a version of what they believed really happened. The gaming press and general populous at large, have scared up story after story, theory after theory, with no idea of what really happened. Every story, every thread, every flame war reeked of speculation, conjecture and even blatant lies. The Usenet generated in excess of 65,000 posts since the game's release. Everyone has an opinion and unless you are Derek Smart, you won't have a clue as to what it takes to watch a decade of hard work go up in flames. Someone woke up one morning and made a decision that was to change my life forever.

This, is my story.

HOW IT ALL STARTED...

The story of this game's evolution to what it is today and the stuff I had to go through to complete it, would fill volumes. Since this is a game manual, I'll try to cut it short.

I was in London back in 1988-89 when I had the idea for this game. At the time I had no idea what I was in for or where it would take me. The details are pretty sketchy now, but not completely beyond the realm of recall.

The genesis (or perhaps this story is better analogized to the trials of Job) of Battlecruiser dates back to a phone call to Velocity in the US for tech support. I bought a copy of Jetfighter with my brand new top of the line Amstrad computer and I couldn't get it to work. Boy that baby was slick (do I hear you chuckling and does this story sound familiar?). Anyway, I had to make an international call to get the tech support I needed. I spoke to Matt Harmon who was pretty helpful and in no time, I was flying over San Francisco ready to shoot down anything that moved. In the days that followed, I became virtually obsessed with the game (This is beginning to sound very familiar, isn't it?) and since I could find no other meaningful use for my machine, I continued to buy games.

In the months that followed, Matt and I built a relationship during which I expressed the desire to get into the gaming business (Yep, this story is getting very close to home). At the time it was a novel and niche market in which only the elite of the elite prospered, but many fresh from their new Walter Mitty environments dreamed of entering. Was I qualified to undertake such a daunting task? Hell, my programming skills were more geared toward vertical market type applications and other software that one could actually admit in public to be the focus of one's livelihood. Even with my background and education, I didn't even know what would be the first module to write for a game. Notwithstanding these obstacles, my newfound passion for gaming triggered by games such as Jetfighter was not going to be quenched by dreams alone or the work of others. I knew then that I wanted to write a game, not just any game, but **THE GAME**.

After much prodding of Matt in between his tech support calls, I was convinced that this is what I wanted to do for the rest of my life. All I needed was to get in (Opening Hollywood-type scene: "Mr. Mayer, my name is Derek Smart and I'm ready for my screen test now"). Naturally, this conflicted with those mundane facets of life. like working as systems engineer and programmer, going to college at night, dealing with a demanding boss and coping with a new marriage (Now it is becoming crystal clear, this isn't only my story is it? It could be the story of anyone, who, like me, was bitten by the bug of this fantastic form of entertainment).

In between designing the game, bothering Matt and pretty much everyone in the UK who knew anything about the subject, I became much more proficient in programming areas that the ultimate game would require, including graphics, ai processing and data structures. Most of all, I needed a good design for a gaming concept that was largely little more than a general notion residing between my ears. I wanted a game that combined most, if not all, of the elements of existing games. **THE GAME** would be a game that was pretty much immersible and gave the player total control or as much control as the player wanted. **THE GAME** would transcend game genre boundaries such as role playing, simulation, strategic wargaming and other sub-genres of gaming--all gamers would be welcome at Derek Smart's table of gaming delight.

What a nightmare that grandiose vision turned out to be. It wasn't the 60s so I couldn't blame it on drugs and bell bottoms. The long and short of the matter is, I was basically out to lunch to think I could pull this off and plain crazy to even attempt to do so. Now you're beginning to get the picture.

The design of **THE GAME** itself when through several revisions, from a basic planetary flight sim, to role playing, back to flight sim, back to role playing . . . <continue design iteration loop until those men in those nice white uniforms show up at the door to take you to the special game designer's department, which is complete with padding and custom-fitted straightjacket>. Remember, I did admit earlier that I didn't have a clue as to what I was doing? By the time I realized that I was headed nowhere, but doing so with such flair and reckless abandon, I had a library of over twenty games. Ranging from the Infocom classics to titles by Rainbird, Microprose, Cosmi and Interstel. I was drawn more toward the adrenaline pumping action that Microprose titles provided, so my flight sim design aspects constantly went through all sorts of revisions to achieve as close to perfect simulation characteristics as humanly possible. Coming from a scientific and space research background, I decided to blend in a touch of space flight modeling just to complicate my life further.

It was by pure coincidence that I went to a store in downtown London (I think it was the Virgin Megastore on Oxford street) and ran into 'Wild Bill' Stealey, then CEO of Microprose who was showing off either F19 or F15 Strike Eagle, I can't remember (this seems to be happening a lot). Boy, was I excited. I watched and listened as he demonstrated his new toy to the gawking on-lookers. In between doing that, he was narrating a story (for the umpteenth time) about how he and some hot shot (Andy Hollis?) had the idea of doing a game. As the story goes, he had told Andy that if he [Andy] could write it, he [Bill] could sell it. When I had the chance, I introduced myself. He offered to show me his new piece of magic on a floppy.

Not being shy, lacking self-confidence or otherwise reluctant to promote **THE GAME** well in advance of its release date, at the end of the presentation, I told him that I was currently working on an idea for a game which would most likely surpass anything ever developed (yeah right!). He took a long hard look at me and said, "Son, when you do, be sure contact me" and he gave me his card. It was many years before I would see Bill again in the United States.

By the time I decided to return to the States, Battlecruiser:3000AD had evolved from scrambled thoughts and spaghetti code to the basic framework for a game, but it still wasn't **THE GAME**, either in concept or in preliminary design. **THE GAME** would take a bit more time, but little did I know that it would take another five years to complete. I continued to learn 3D programming while honing my ai skills and basically making the transition from business application programming to gaming. No easy task to say the least! Since no publisher in their right mind was willing to give an unknown developer a chance to create **THE GAME** on their nickel, I had to continue financing the development by myself.

Remember good old Matt? Well, I continued to plague him and he continued to provide the best advice he could, since programming assistance was out of the question. Man, I was buying books and games like it was the end of the era of gaming. Wallowing in "research material," I got so confused and side-tracked that I started to seriously consider bringing in some hired help. The question was, what kind of help did I need? Up to that point I wrote every line of code for the game, created every screen image, design specs and every other conceivable task imaginable--what kind of help did I really need and where would I start looking for those to lend a helping hand in finishing the quest for the holy grail of gaming? I created a demo and posted it on the popular on-line services with a message for anyone interested to contact me. The response was enormous, but this did not produce the gathering of crusaders that I needed, so I continued part time development on my own.

In 1991, I contacted one publisher who had just terminated an agreement with another source of games products and who was excited about publishing my game. Consistent with disappointments to be expected at the outset of any new venture, it never panned out. I think someone died and the deal got nixed. In early 1992, negotiations with another publisher never went beyond the non-disclosure agreement stage. Shortly thereafter, I remembered my conversation with Bill Stealey and tried to contact him at Microprose. After several attempts I received a encouraging ding letter from an associate producer that stated a potential conflict between my project and a pending Microprose project. Undeterred, the search for a publisher willing to release the project continued with contacts with yet another major player, but that deal, again, never went beyond the non-disclosure agreement stage. The Strategy Plus did a front cover article in 1992 and all hell broke loose. Interest in **THE GAME** escalated and for once, publishers were actually talking to me - but weren't saying much. Go figure.

I continued development and financing on my own with the idea that if I could enhance the game and fine tune the concept, it would be more attractive to a publisher. Surely, someone in the biz would recognize **THE GAME** in its infancy. Back to the drawing board. Believe me, being a rocket scientist is more fun and is far less stressful.

Later that year, in October actually, 3000AD signed it's first ever publishing contract. Boy, was I excited and I was going to my first trade show with my game that December. CES here I come!

My new publisher terminated my contract at the trade show after I was there for only, say maybe, five hours citing that the press did not think that Battlecruiser had the glitz that other programs of that genre had. This was a thinly-veiled reference to Chris Roberts' latest version of Wing Commander, of course. Ok, what's another disappointment; at least I got to meet some very interesting people, all of whom have stuck with me throughout this development. These include Ed Dille, Mike Weksler and other press contributors who throughout the years have added their own two cents to give me an idea of where the industry was headed and what I needed to do in order to compete.

By January of 1993, I was without a publisher and my assistant 3D developer had departed. That move cost me eighteen months of development time and an unusable 3D black box. **THE GAME** would, however, be completed, so I went searching for a replacement. Was I disillusioned? Absolutely not, I was determined to finish my game regardless of what I had to go through.

In February of 1993, after a providing a demo for another potential publisher, I received another nice letter, of course, turning the project down. Tell me if you are beginning to see a pattern here:

....Your product is quiet impressive and we believe it will do well on the market, but we do not think we are the right publisher due to our staffing and other product commitments. We could not give you the attention, both development and marketing, which your product will require to maximize its market success.

Remember Matt? Yeah, you remember him. Well, I contacted him - again - and told him about my misfortune. He then suggested that I talk to another contact in the game of games to see if they would be interested in doing my game. I did and a few days later had a new publisher. Well the publisher had problems of its own and a few months later, the key players went separate ways. With that split, I decided to stick with one group, Matt and Tom Ptak, who then formed Mission Studios with Battlecruiser:3000AD as the first product. Talk about taking risks with a developer claiming to be the creator of **THE GAME**.

I bet you thought that was the end of the tale. As much as I thought and later wished it was, **THE GAME** was still far from finding its way to those patiently awaiting its release.

I had managed to assemble together a ghost team of one more 3D programmer, an artist, an animator and a support programmer and we continued working . Chasing technology can be a dangerous thing with limited resources and an ambitious objective. This industry creates it's own standards, in part, in response to what you, the ultimate arbiter of what constitutes a quality game, demand. Jumping on the bandwagon of a contemporary marketable concept is as simple as finding the talent and money to do it. In my opinion, technology will no longer cut it, however, in terms of producing something that has the potential to occupy hard drives or CD caddies for years to come. Everyone has the basic tools that technology yields. Texture

mapping, Gouraud shading, 2D/3D graphics manipulation, great soundfx and music, stunning animation etc.

Without being overly critical and in an attempt to avoid sounding arrogant, a game without the 'gameplay' is like a cheap thrill—here today, nothing but fragments of erased files when the next piece of eye-candy or trendy stuff hits the shelves tomorrow. That kind of software pays the bills, attracts many (though it may leave many disappointed) and has some positive gameplay aspects in addition to the "gee whiz" technology, but it is not the heart and soul of any great game, let alone that of **THE GAME**.

For three years I was chasing technology. Great games came and went and Battlecruiser:3000AD was still in development. Review followed review, still no game in sight. By late 1994, the delays, slips and technical difficulties finally put a strain on the limited financial resources of Mission Studios. In the interest of all concerned, we agreed that I would find a new publisher to purchase the publishing rights to Battlecruiser:3000AD.

Several companies expressed an interest, but true to prior form none of the deals panned out. In March 1995, came the next publisher. Invigorated by a recent acquisition of one of those publishers that had already made me the beneficiary of one of those lovely ding letters, my new publisher now expressed an interest in acquiring the same game that the acquired company may have erred in dropping from its stable of titles. This deal fell apart quicker than one would imagine for a project that really was demonstrably close to completion. Two months after the ink had dried on the contract, I was without a publisher again! That stunt cost me two months of development time and attorney fees I did not have to incur (but gladly paid because I'm that kind of guy and my attorney made me say that). In the end, I got my game back. I'm sure you've probably read about the circumstances in one of the computer gaming magazines. I won't go into any details here.

Anyway, one bright afternoon I was buried deep in code (Never say die, Dr. Smart, the Tooth Fairy got your message and will see you immediately!!!) when the phone rang and I found myself speaking to Ryan Brant at Take 2 Interactive Software, whom I didn't know from a hole in the wall. Apparently, he had read about the incident with my prior publisher in the press and expressed an interest in the game. A few days later, armed with what I thought was a top notch support team and a dedicated publisher Battlecruiser:3000AD was finally headed for the shelves. Take Two purchased the rights from Mission Studios and went to work providing whatever assistance the development needed to ensure it's timely completion.

It was the deal that has changed my life and all but ruined my career.

For all of you out there with questions about why this development has taken this long and what has Derek Smart been doing, now you know. The answer to whether it was worth the wait and whether Battlecruiser: 3000AD is anywhere close to the epitome of gaming that I worked so hard to at least *try* to achieve, lies in the box and awaits your judgment. Now that you've opened it, install it, play it and determine whether it is **THE GAME** or any reasonable facsimile thereof. Whatever your conclusion is, I have truly expended all efforts to attempt what may be as impossible as writing the Great American Novel. Most of all, do what I'll be doing post-release, have some fun!!

THE DOWNHILL SYNDROME....

Talking about Take Two's mistake causes me nothing but aggravation and turmoil because I trusted them. When they [Take Two] came calling right after the Intracorp deal fell through, I really knew that this time, the game would reach the shelves. They were more concerned that the project would never get finished and wanted a little 'assurance' that it would not be the case. Of course, they wanted me to pay my own way. Naturally.

I was more concerned that since the inception of my idea in 1989, I had gone though three publishers. Three Sixty Pacific went out of business shortly after a deal was signed. Mission Studios could no longer afford the project due to other project financial commitments. Intracorp had requirements I was not prepared to meet, including the modification of my design specs. With these issues in mind, I was not prepared to lose another publisher and as such, was determined to do whatever I could in my power to make the game happen and complete it once and for all.

Three things happened in May of 1996 as a result of the project not shipping for Christmas 1995 as was suggested. **1.** I was asked to leave Miami and go to Latrobe, PA to 'work with' their team on finishing the project. **2.** Take Two wanted me to give them *release rights* as a guarantee that I would not stifle the final release of the game. **3.** I was to take a royalty cut to pay for their investment which included paying Intracorp and Mission Studios for their expenses and providing me with monthly development funding. That royalty cut meant not being paid for 100,000 thousand units. Think about it. 100,000 units. Most games don't even sell, 50,000 units. Based on the figures that I had been sold, I was confident that indeed the title would sell several hundred thousand units worldwide. Because of this, I didn't care about the royalty cuts especially since, effectively, the game was paying for itself as it always had in the past.

I did #1 as instructed and went up there in April 1996. At the same time my contract was modified to support #2 and #3. It went downhill from there. Now that they had release rights and the project had been brought 'in house', they felt they could chop 'n ship the game. Boy were they wrong on that one. This nonsense people are saying about them not seeing the code, is what it is, utter nonsense. The only code I did not make them privy to, for obvious reason, was my artificial intelligence engine. They had libraries for that. Besides, that engine required no modifications. With an assigned project scheduler, an entire art team, a soundfx team and two programmers, we set to work. It went downhill from there a few weeks later when it became obvious that BC3K would **not** be ready to ship for Christmas '96 though I already knew that it would not happen and had requested more time. The extension was rejected and they set out on tasks aimed at having something to ship. They hurriedly replaced my dynamics engine with some Chase dogfighting code which did not work. The artwork and models done by the artists were fine because let's face it, these guys are all from the art institute in PA, one of the best in the country. I had already done, and paid for all my soundfx, only new MIDI sequences were added. Programming assistance for the core game engine was pretty much non-existent because the gentleman assigned to me spent more time taking orders from the NY head office about what 'he' needed to do, than to listen to me who was the project leader, designer and producer of the title. He spent most of his time figuring out how to merge the Chase engine with my dynamics engine something I told them could not be done.

I told them that dogfighting was part of the things to do and needed to get done right but they felt that it was one less thing for 3000AD to do. Fair enough. The other programmer did a good job in assisting in the integration of the new 2D front end menu graphics into the game, using my pre-existing code. Even then, I had to go back and make several modifications because he simply did not have enough time to get up to speed with over 5 years worth of code.

By August 1996 we were already talking separation, at least they were, because I'd had enough and was thinking divorce with full intentions of taking the furniture, the cutlery, the car, the jewelry and the dog. In the end I did just that. Anyway, the Take 2 producer and his gang, were getting heat from NY. I wasn't getting heat from anyone because I wasn't listening. Period. Every member of the Take 2 team had access to the same task schedule that I did. In fact, it's part of the contract amendment that was done in 1996. There were no hidden agendas and everything that needed to get done, was in there.

By mid September 1996, we still did not have a Beta and in fact, the four Take Two testers were complaining because they had nothing tangible to test as there was no game. The artists, under my supervision, had long since built all the new 3D models and 2D screens. All of which ended up being a remarkable piece of work. As I have said time and time again, I have no problems with this aspect of their assistance because the artists adhered to the design specs for the game's theme and also came up with their own ideas. You've already seen the results.

FURTHER ALONG DOWNHILL....

Then one day it all came to a head when one of the Take Two programmers accused the dynamics engine of causing problems with his Chase engine which made the game run at 2fps. The same version I had was doing in excess of 10pfs under the same conditions. Oh, did I forget to mention that we were working on two code versions? Well, we were. Theirs and mine. Theirs, they were chopping up in order to make their Christmas release. Mine I was working on according to my specs. Anyway, I told them that the anomaly was not in my version simply because I was not using the Chase engine. This erupted into a skirmish of sorts. I took my version and ran it on the machine in the QA directors' machine. I was right. All hell broke loose.

Later after Peter, one of my guys and I researched the problem, we discovered the problem in the Chase engine. I then showed it to the Take2 programmer. It was too late by then because all hell had broken loose.

Anyway, by this time, Mr. Producer was having fits and fights with NY (Take Two head office) He was outside in the main hallway screaming and pounding on things. Anyway, I was never even part of that rampage during which he threatened to call the cops on me if I did not leave the building. He alluded to an incident earlier that week when I was pulled over in the early hours of the morning on my way from work by Latrobe police and questioned for identification, by saying "...I'll call the cops to throw you out and you know what that's like". That incident was later relayed to the press that I had attacked a Coke machine though Take Two denies the story and the incident. A complete fabrication. I was with the QA director the whole time and we walked to the elevator together right after I found out that Take Two had confiscated my work machine while I was in the QA director's office. Everything on it was encrypted anyway, so it didn't matter.

People who know me at a personal level know I'm non violent. Besides, when I set my mind to doing something, I usually do it right. If I was upset then, attacking a Coke machine would've been the last thing on my mind because it would not solve the problem and give me the satisfaction that I would be craving.

At this point, they knew they couldn't ship 'their' version. Take Two, NY called me up and said that they were going to be shipping what they had the following week. At this point, I told the CEO, that it was crazy thing to do and that it would be the biggest mistake he would ever make. He had release rights he said, so the matter was out of my hands. I called my attorney who told me not to leave until I received a performance of contract letter. He was concerned that the incident earlier and my abrupt departure would give them leverage for a breach of contract because I could be sued for abandonment. Take Two, who knew they were going to ship anyway, had no problems with this. They drafted the letter, signed it and faxed it to me. It simply used a lot of legal jargon to indicate that I had successfully provided Take Two with a Beta tested version of the game and that I had satisfied the terms of my contract, that I could pack up and go home, etc. This was accurate because the game had been in Beta since 1995 and was still not finished nor tested.

The next day, I packed and left but not before I uploaded my current version of the code, to the Take Two bulletin board system we used for secure file transfers. That version fixed several things and did not use the Chase engine. They never touched it. I'm assuming that they thought I had sabotaged it somehow to prevent the release. I hadn't.

ROCK BOTTOM....

That week, they mastered the game, **without** notifying me and shipped it and the Take Two 'bc3k team' was given the week off.

The first time I saw a copy of my game was when I went across the street and bought a copy after being told on AOL that the game had shipped. That was when I realized that they had not created a manual from the manuscripts I had provided.

From that point on, I knew that my life as I knew it, was over. The game shipped and it was unplayable out of the box. The first patch I did and released a few days after I returned, was based on the version I had left on the Take Two BBS. It brought some stability to the game. However the damage was already done. I was beaten, broke and out there, there was a game with my name on the box with some poor gamer who bought a game that had been hyped for so many years. How would you feel?

I could have walked away from this title there and then. But I didn't

My friends and I held a meeting and I told them that I had no intentions of quitting. Neither did they. Whatever I needed to do, would get done and whatever time they had for testing, development, support etc, was mine to do as I pleased. That was all I needed.

Take Two could not support this game. The testing department do not know how to play the game. Don't believe me? Call 'em up and ask the most basic question. every tech support call was routed to me. They printed my phone number in the pamphlet they called a manual. I had to field phone calls, respond to email, put out fires, deal with the on-line debacle, deal with my bank who thought that by first qtr 1997 my account should be in the green etc.

In late 1996 to early 1997, I decided to set up a support network of supporters and gamers to help fix the game. I created a mailing list, built a strong testing team and got a web site. To date, those are the only resources I have. Take Two, the publisher, have never participated in this endeavor, leaving the game for dead. Testing and supporting the game was the responsibility of the publisher. My contract says so because I do not have those resources.

DAMAGE CONTROL....

In early 1997, I then decided to sue Take Two for all the breaches in my contract. I'm not going to list them but they include releasing a Beta product with no manual, not reporting sales figures, putting my company at risk, causing me aggravation etc. They decided to negotiate rather than go to court. My attorney spent many, man hours drafting a contract amendment which simply required them to (a) re-release the title (b) provide a printed manual and new cd-rom to existing users (c) accurately report sales/royalty figures (d) pay me from unit #1 of the re-release among other things. I in turn, would lose all claims against them, provide a manual manuscript based on the finished version of the work and a finished version suitable for commercial release. That contract was never signed. Take Two continues to operate under my original contract and it's 1996 amendment as if nothing happened; claiming that the game did not sell enough units to warrant royalty payments. How could a game that was released incomplete and buggy, sell enough units anyway?

Meanwhile, everyone out there was looking up to me to fix this game. Something I've been doing effectively, with what little resources I have, with nothing to show for it but a game that is 99.99% true to my vision. For me, it would be payment enough if it paid the goddamn bills.

MORE CORPORATE DECISIONS…

Take Two did an OEM deal with Gametek UK which they had no rights to do. The first time I got wind of it was when Gametek UK called me and asked what had gone wrong with the game in the US. I told them. They listened and agreed not to master and ship the cd-rom that Take 2 had sent them. They wanted to wait for my version of the completed game. They joined the testing team. They never shipped any of the patches. Take Two continued to ship the dud US units in the US and even to international countries; causing problems for Gametek who were then forced to release v1.01C4 of the game in March in the face of dropped orders - **without** telling me. I was livid. The first time I knew about it was I got a tech support email from the UK. I then asked Peter to go out and buy a copy. Once again, I was not part of the process. The game then entered the top 20 UK charts. I was still livid; it was not **THE GAME**. I then told them that I was not supporting it. They quickly drew up a contract which had them paying me a point for supporting the UK version because they doubted that the game would ever sell enough units to earn me any US royalties and also that they doubted that Take Two would ever pay me. I agreed. The game reached #12 and stayed in the charts for over 8 weeks. I was still upset but it was a small victory at best.

They then contracted me to do the foreign translations for the title due to it's popularity in Europe. That was supposed to be in the C patch. It didn't make it for several reasons. They agreed to wait for the next patch, v1.01D. I sent them the second set of text to translate. I never got it back. I then found out that they were shipping UK version of the game to European countries, with translated manuals. To this day, I have not been paid those royalties.

IT GETS WORSE....

In late 1997, Take Two bought Gametek UK who in turn, stopped talking to me and refused to submit accurate sales figures and didn't pay any royalties as per our agreement. They're now a Take Two company and as far as they're concerned, BC3K and Derek Smart don't exist. This left me to also deal with and provide support for international users who bought the game in Europe and as far away as South Africa. Until I threatened legal action, the Take Two web page did not promote the game, made no mention of it or even posted the latest patches and info. It wasn't even featured in the list of products they were publishing.

WHO STARTED THIS MESS ANYWAY?....

Whose fault is all this? It depends on who you ask and whose side you're on. BC3K has always been a huge, complex and ambitious project. There was no way to chop up the game, absolutely no way. Everyone seems to think I have something against making money. Why would I not want to trim down the game and release it if it meant making some money? Does anyone have any idea how huge and complex this game is? Take Two knew and knew this all along. I have been in millions of dollars in the red for this project with no hope of ever turning a profit. This is why, BC3K was not designed to be a one off title. All the engines it has, were written from the ground up and that's where my investment lies. To this day, the core of BC3K does not even use 50% of what the engines are capable of. You could sit down and write a full blown space flight sim, planetary flight sim, strategic sim, arcade shooter (all the things BC3K has) and have room left to do it all over again in a different fashion.

Anyway, once word got out that the game was almost fixed, people started finding places to buy it. Some places would sell it for a low price and the gamer had to locate and spend hours downloading the patches to make the game work

NOW WHAT?....

So, BC3K was released in Beta form by the publisher. The whole mess got dumped on my lap. I've 99.9% fixed it. The game was a hit in Europe because it was playable out of the box and C5.3 was already available. Why aren't I happy? Because my publishers are selling a game that should've been a hit, and not paying me a penny for it. Eight long years of hard work and this is the ninth year I've been doing this. They blame me for taking too long. I blame them for not releasing it incomplete. All they had to do, and in fact my contract says this, was to terminate my contract and I would owe them their expenses. They could then have taken out a lien on the product, ensuring that they got their money if I ever finished it. No, instead they opted to ship a Beta and cause these problems. I don't think anyone doubts this for a second, that if it were up to me, this game would never have shipped until it was finished. Even if it took another decade. All business ventures are a risk. We all took the risk and why the hell should I be sorry for them? I'm only sorry for those guys who keep coming to me for help, knowing that I would keep my word when I said that I would not sleep until they had a game that works.

My commitment is to patch this game and bring the development to a conclusion. I would have, against all odds, fulfilled my obligation to the very gamers I designed and developed this game for. Those who bought it, hopefully, when they see a game on the shelf with my name on it, will remember.

Back in April 1997, I realized that patching the game to completion would most likely take it into the holiday season and that, once again, graphics technology would pass me by. I did not believe that you folks would want to wait an entire year to play a game that sported old technology considering the recent crop of advanced games currently on the market. Some of you, disappointed, had already stopped playing and shelved the game for that day when it would be completed. My thoughts led me to sanction the upgrade of the graphics technology in order to keep up with recent trends. You have already seen the advancements since v1.01D patch variations which were released between October and November 1997.

This technology comes at a price. I have been releasing patches for free with no financial support whatsoever. I feel that the small price that I am charging for the final v2.0 Developer's Edition upgrade is just that; a small price to pay for a game that, when compared to the original, could well have been a sequel. Is it fair to charge the gamer for a game they already bought and paid for? It depends on how you look at it.

As far as I'm concerned, the 1996 generation of Battlecruiser 3000AD is over and done with. Like every product, it lived a normal, albeit troubled, life span and sold more units than some completed games out there. The new generation you will see in Battlecruiser 3000AD v2.0 – The Developer's Edition, will no doubt enforce your faith in me, in my work and in the title. You have been a part of these developments. You have seen all the work put forth. Most of all, those of you who sought help, received it. Today, you are playing and talking about a game that was DOA in September 1996. The fiasco surrounding this title will be remembered for years to come. Many more articles and reviews will be written. Many more Usenet wars will be fought. There will be casualties. Once the praise comes, I don't want it. All I want to be remembered for is the fact that I had a dream that I could never give up on. You, the gamer, are the one to praise for sticking with the game because after all, without you, I wouldn't be here.

Regards and see you among the stars

Derek K. Smart, Ph.D.
President – Lead Developer
3000AD, Inc.

26. CREDITS

PROGRAM CONCEPT & DESIGN
PROJECT MANAGEMENT
LEAD DEVELOPMENT
PRODUCER   Derek K. Smart

3000AD DEVELOPMENT TEAM   Derek K. Smart
                                                H. P. Rushworth
                                                Jim Marinis
                                                Gerhard Skronn

3D WORLD OBJECT DATABASE,   Jack Snyder   James Dargie
2D SCREENS & ANIMATIONS   Tory Paradise   Jodi DeGeorge
                                                Henry Borasso   Phil Robb

MUSIC & SOUND/FX   Sound Planet   Mike Goodis
                                                George Sanger   Dave Govet

QUALITY ASSURANCE   Derek K. Smart

MANUAL   Derek K. Smart

MANUAL FORMAT ASSISTANCE   Paul Cooper

These people are 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 it's thanks to them for their time and dedication to this project. Especially to Robert Hentschke, a.k.a. Pandora, for all those bugs that none of us thought ever existed. If it was in there and was missed, he's the one most likely to find it.

Aaron Leiby	Kenneth Riehle
Andre Frey	Kevin Hart
Anthony Kenitzki	Lawrence Smith
Bill Bradley	Mano Faber
Bill Waldheim	Marc Gagnon
Bruce Durham	Marc Ward
Bud Wacaser	Norman Wanzer
Cato Dolvik	Paul Cooper
Chris Snowden	Philip Hansen
Dara Gault	Ralph Hilton
Darryl Coombs	Rick Gridley
Doug Blue	Robert Baldwin
Eric Pinnel	Robert Curran
Giancarlo Lenzi	Robert Hentschke
Hector Socas Navarro	Ted Saint
James Cobb	Thomas Slone
Jerry Masty	Todd Hyland
John Anderson	Travis Oates
John Bach	
John Howell	
John Minton	
John Stegenga	
Jon Ballinger	

27. TECNNICAL SUPPORT & TROUBLE SHOOTING

27.0 Installation problems

If you have problems installing the game, you can try these alternate methods

Method 1

If the graphical install fails for any reason, you can try the text version by changing to the cd-rom and typing **INSTALL T [ENTER].** The procedure is identical to the default graphical one except that it does not use graphics.

Method 2

1. From DOS or from MS-DOS mode under WIN95 create a directory on your hard drive for the game, i.e. **MD C:\BC3K** and press **[ENTER]**

2. Copy the entire cd-rom contents to the install directory, i.e. Here, I assume that **Z:** is your cd-rom and **C:\BC3K** is the install directory, enter the command **COPY Z:*.* C:\BC3K /S** and press **[ENTER].** You can also use the WIN95 Explorer for this copy function but you have to make sure that in the **OPTIONS** configuration, the 'Hide MS-DOS file extensions for file types that are registered' option is **not** ticked.

3. From a DOS prompt, change to the install directory in step 2 and configure your sound card typing **SETUP [ENTER]** to run the sound setup program.

   WARNING: Be sure to test your sound card's digital and MIDI functions.

4. Back in DOS, you must now create a config file required by the game. The file should be a plain text file like the one created by Notepad. Type these lines in the file **exactly** as you see them. with **no** spaces! Substitute the **cd-rom** and **home** parameters to suit your environment. Do **not** put a colon after the cd-rom parameter. Save the file as **BC3000AD.INI** and it must reside in the install directory. This example uses the sample install directory and cd-rom letter.

   [BC3000AD]
   cdrom=z
   home=c:\bc3k
   version=1.00
   install=full
   ptefiles=bc3lib3.res

5. You can now type **BC3000AD [ENTER]** to run the game. If the game refuses to start, ensure that you have performed all the previous steps properly. If you have and the game still won't run, you may have a video problem.

27.1　Video problems

If after you install the game you get a General Protection Fault or a blank screen when you try to run it, you may have to configure BC3K to use your video card. You may also have to force BC3K to use your card in native mode if it fails to detect it and instead defaults to either an incorrect card or VESA mode. You can tell which mode it's using when it starts to load.

BC3K requires a VESA capable card to run if it cannot support your card in it's native mode. If your card is not support or does not have VESA support built-in, you will need to install the VESA driver that came with the card. This is usually installed in your **autoexec.bat** file. You can also download the SCI-TECH Display Doctor from www.scitechsoft.com if you don't have a VESA utility for your graphics card.

To find out whether your card is supported in it's native mode, go to DOS and type the following command in the install directory, **BC3000AD /V?** and press **[ENTER].** A list of supported graphics cards will be listed. If yours is listed, make a note of it's entry number and then repeat the command, this time replacing the **?** with the number of your card. Example : **BC3000AD /V21**

If your card is not listed, then it is not supported in it's native mode. You will then have to load a VESA driver and start the game in VESA mode by typing **BC3000AD /V1**

27.2　Sound problems

Most sound problems are related to incorrect configurations. BC3K is a DOS program and 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 DOS and running the **SETUP.EXE** program. If you know your sound card's parameters, then you should manually select and configure the card because sometimes the auto-detect feature will cause the program to hang and lock-up your machine, especially when run under WIN95. If you have a card that is not listed, you can select the closest emulation mode for it. This will usually be Sound Blaster 16. Be sure to test your card before saving the configuration. If the test works in this program, then the sound configuration will work with BC3K. Once you are back in BC3K, you can go to the **CONFIG** menu and enable the desired sound options.

27.3　Controller Problems

Though BC3K supports a variety of joysticks, it does not support all of them. If you have a plain joystick, go to the **CONFIG** menu and configure it to use a plain joystick. Several controllers from CH Products and Thrustmaster are supported in their native mode.

Sometimes if you start the game and you get a blank screen, it may be caused by an improperly configured joystick or one that is no longer attached to the joystick port. If this happens, connect the joystick and see if the problem goes away. If it does not, you can go to DOS and delete the **JOYSTICK.SET** file that resides in the BC3K directory. If BC3K detects your joystick at startup, it will ask you to re-configure it and create a new configuration file.

Configuring your joystick in WIN95 has little or not effect on BC3K. If your joystick starts to drift during gameplay, you can use the **[CTRL+J]** command from the cockpit, to calibrate the stick.

27.4   Windows 95 Configuration

Though BC3K is not supported under Windows 95 except in MS-DOS mode, you may be able to get it to run by creating a desktop shortcut using the following settings.

Refer to your Windows 95 manual for details on how to create a shortcut.

Create the shortcut on your desktop. Make sure the command line and working directory both point to the BC3K install directory. If you will be forcing a video mode using the /V parameter, then remember to add this parameter at the end of the command line. An icon file called **BC3K.ICO** is located on the cd-rom.

You can also create a batch file, i.e. BC3K.BAT and put all your parameters in there. You can then use the batch file in the shortcut command line area.

Once you've created the shortcut, open it up and make the following changes to it's settings in the **properties** tab. If you decide to run in MS-DOS mode if running from Win95 using this shortcut doesn't work, then you can configure MS-DOS mode by clicking on the **advanced** tab.

Note: ON = tick mark

OFF = no tick mark

Program	Close on exit	ON
Memory	Total	AUTO
Initial Environment		AUTO
EMS memory		AUTO
XMS memory		AUTO
Uses HMA		ON
DPMI memory		16384
Screen	Full Screen	ON
Dynamic Memory Allocation		OFF
Misc.	Allow screen saver	OFF
	Always suspend	OFF
	Idle sensitivity	LOW (all the way to the left)
	Mouse exclusive mode	ON

28. APPENDICES

APPENDIX A   KEYBOARD TEMPLATE

JOYSTICK CONTROLS

NOSE DOWN/VTOL UP	FORWARD
NOSE UP/VTOL DOWN	BACK
YAW LEFT/VTOL YAW LEFT	LEFT
YAW RIGHT/VTOL YAW RIGHT	RIGHT
INCREASE/DECREASE THRUST	THROTTLE
FIRE LASER	BUTTON 1
ROLL LEFT/RIGHT	BUTTON 2 (HOLD)
SELECT CLOSEST ENEMY TARGET	BUTTON 3
SELECT MY CLOSEST ATTACKER	BUTTON 4
SELECT CLOSEST ATTACKER TO CURRENT TARGET	BUTTON 5
SELECT NEAREST TARGET IN LINE OF SIGHT	BUTTON 6
SELECT HAT SWITCH MODE, VIEW/TARGET	ALT+J
HAT SWITCH, VIEW MODE:	
FRONT VIEW	FORWARD
LEFT VIEW	LEFT
RIGHT VIEW	RIGHT
REAR VIEW	BACK
HAT SWITCH, TARGET MODE:	
SELECT NEXT WEAPON	FORWARD
SELECT AND IDENTIFY PREVIOUS TARGET	LEFT
SELECT AND IDENTIFY NEXT TARGET	RIGHT
ACTIVATE CVD DAMAGE STATUS MODE	BACK
HAT SWITCH	
FRONT EXTERNAL VIEW	FORWARD
LEFT EXTERNAL VIEW	LEFT
RIGHT EXTERNAL VIEW	RIGHT
TARGET VIEW	BACK

FLIGHT CONTROLS

YAW LEFT	LEFT ARROW
YAW RIGHT	RIGHT ARROW
ROLL LEFT	INSERT
ROLL RIGHT	DELETE
PITCH DOWN	DOWN ARROW
PITCH UP	UP ARROW
SWITCH TO VTOL/HTOL MODE	CAPS LOCK
THRUST FACTOR	1-9
FULL STOP	0 (HOLD)
INCREASE/DECREASE THRUST	+ OR -
AFTERBURNER/VTOL UP	`
RETRO-ROCKETS/VTOL DOWN	TAB
HTOL WINGS LEVEL/VTOL AUTOHOVER (PRESS & HOLD)	NUMERIC 5
HYPERDRIVE JUMP FACTOR	SHIFT+1-9

WEAPONS SYSTEMS

WEAPONS SYSTEM ON/OFF	W
WEAPONS SELECTION MENU	SHIFT+W
RADAR TARGET MASK	SHIFT+M
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+;
INCREASE MAIN LASER INTENSITY	'
DECREASE MAIN LASER INTENSITY	;
FIRE MAIN LASER	ENTER
FIRE MISSILE	SPACEBAR
CYCLE MISSILES AND MINES	BACKSPACE
BATTLECRUISER MAIN LASER DECOUPLE ON/OFF	SCROLL LOCK

NAVIGATION INTERFACE DISPLAY, NID, COMPUTER

NAVIGATION INTERFACE DISPLAY ON/CYCLE	J
NID 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
SELECT PREVIOUS TARGET/WAYPOINT	,
SELECT NEXT TARGET/WAYPOINT	.
SELECT PREVIOUS PROBE	SHIFT+,
SELECT NEXT PROBE	SHIFT+.
PROBE TACTICAL LINK ON/OFF	SHIFT+/

TACTICAL SCANNER, TACSCAN COMPUTER

TACTICAL SCANNER COMPUTER ON/CYCLE	K
TACSCAN OFF	SHIFT+K
DESIGNATE FATAL TARGET	D
VIDEO ID CURRENT TARGET	V
SELECT ACTIVE/PASSIVE RADAR SCANNING MODE	R
SELECT SINGLE/MULTIPLE TARGET ACQUISITION MODE	S
CAPTURE CURRENT TARGET IN TRACTOR BEAM	T
SELECT CLOSEST ATTACKER TO MY CURRENT TARGET	B
SELECT MY CLOSEST ATTACKER	N
SELECT CLOSEST ENEMY TARGET	M
SELECT PREVIOUS TARGET	,
SELECT NEXT TARGET	.
SELECT NEAREST TARGET IN LINE OF SIGHT	/
SELECT NEXT TARGET TYPE IN CURRENT CLASS	>
SELECT PREVIOUS TARGET TYPE IN CURRENT CLASS	<
CLEAR CURRENT TACSCAN/FATAL/FPD TARGET	X
CLEAR ALL FATAL TARGETS	SHIFT+X
MATCH CURRENT TARGET'S SPEED	SHIFT+`

COMPUTER VIDEO DISPLAY, CVD COMPUTER

COMPUTER VIDEO DISPLAY COMPUTER ON/CYCLE	L
CVD OFF	SHIFT+L
VIEW CURRENT PERSON IN VIDEO LINK	V
PERSONNEL VIDEO LINK ON/OFF	SHIFT+V
SELECT NEXT CREW MEMBER	.
SELECT PREVIOUS CREW MEMBER	,
CYCLE PREVIOUS OFFICERS AND PILOTS	SHIFT+,
CYCLE NEXT OFFICERS AND PILOTS	SHIFT+.

VIEWS

FORWARD/CLEAN SCREEN	F1	
LEFT	F2	
RIGHT	F3	
CO-PILOT (INTERCEPTOR ONLY)	F4	
FORE BATTLECRUISER TURRET	F5	
MID BATTLECRUISER TURRET	F6	
AFT BATTLECRUISER TURRET	F7	
Locked/Tactical/Floating/I-tactical	F8	
MISSILE CAMERA ON/OFF	F9	
Locked/Tactical/Floating/I-tactical view of target	F10	
YAW LEFT	LEFT ARROW	←
YAW RIGHT	RIGHT ARROW	NUMERIC
PITCH DOWN	DOWN ARROW	
PITCH UP	UP ARROW	
ZOOM IN FINE	PAGEUP	
ZOOM OUT FINE	PAGEDOWN	KEYPAD
ZOOM IN COARSE	HOME	
ZOOM OUT COARSE	END	
TILT LEFT	INS	
TILT RIGHT	DEL	
RESET VIEW TO DEFAULT (PRESS & HOLD)	5	↓

LAUNCH COMMANDS

SWITCH TO BATTLECRUISER	ESC
LAUNCH/SWITCH TO INTERCEPTOR 1 - 4	ALT+F1-F4
LAUNCH/SWITCH TO SHUTTLE 1 - 4	ALT+F5-F8
LAUNCH/SWITCH TO ATV 1 - 4	ALT+F9-F12
Launch current probe	ALT+L

GENERAL COMMANDS

INTERCEPTOR INFRA-RED HUD ON/OFF	\
AUTOPILOT ON/OFF	A
AUTOPILOT DIRECT OR AI MODE	SHIFT+A
ENGINE ON/OFF	SHIFT+E
REACTOR ON/OFF	SHIFT+R
ASSIGN FPD TARGET	F
HUD COLOR CHANGE	H
HUD DECLUTTER	CTRL+H
TARGET TRACKING DESIGNATOR, TTD TOGGLE	SHIFT+H
ENGAGE ORBITAL PROFILE	O
INCREASE SHIELD PROTECTION	]
DECREASE SHIELD PROTECTION	[
FULL SHIELD PROTECTION	SHIFT+]
SHIELD OFF	SHIFT+[
REQUEST DOCKING CLEARANCE WITH TARGET	ALT+D
EVACUATE SHIP	CTRL+E
REQUEST SOS TOW SHIP	CTRL+S
COMMLINK COMMUNICATIONS COMPUTER	ALT+C
LOGISTIX ENGINEERING COMPUTER	ALT+E
MISCON COMPUTER	ALT+M
NAVITRON NAVIGATION COMPUTER	ALT+N
CONFIG CONFIGURATION COMPUTER	ALT+O
PERSCAN computer	ALT+p
ROSTER COMPUTER	ALT+R
TACOPS TACTICAL/STRATEGIC OPERATIONS COMPUTER	ALT+S
TACTICAL COMBAT OPERATIONS COMPUTER	ALT+T
REQUEST NEW ACM MISSION	CTRL+ALT+C

MISCELLANEOUS

QUIT TO DOS	ALT+Q
INCREASE SURFACE VISIBILITY (20-100 M)	CTRL+W
DECREASE SURFACE VISIBILITY	CTRL+Q
SVGA/VGA GRAPHICS MODE	CTRL+SHIFT+V
SVGA DISPLAY MODE	CTRL+ALT+V
DISPLAY FRAME RATE COUNTER/DISPLAY MODE/VERSION	CTRL+V
CALIBRATE JOYSTICK	CRTL+J
PAUSE GAME (ANY KEY TO UNPAUSE)	CTRL+P
CAPTURE SINGLE PCX IMAGE	CTRL+G
FRAME BY FRAME PCX CAPTURE	CTRL+SHIFT+G
ACCELERATE TIME 2X, 4X, 8X	CTRL+A
DECELERATE TIME /2, /4, /8	CTRL+SHIFT+A
INCREASE MIDI VOLUME LEVEL	CTRL+SHIFT+.
DECREASE MIDI VOLUME LEVEL	CTRL+SHIFT+,
OS/2 ONLY: ATTEMPT TO RESTART SOUND IF LOST	CTRL+ALT+SHIFT+S

COMMAND LINE OPTIONS

BYPASS INTRO	/N
QUERY CONNECTED JOYSTICK	/J
QUERY SUPPORTED VIDEO CARDS	/V?
FORCE USE OF SPECIFIC VIDEO CARD (# = 0-69)	/V#

APPENDIX B   EXPERIENCE POINTS

If GALCOM HQ is destroyed when Earth is your Patrol Zone: -250000
If GALCOM HQ is destroyed when Earth is not your Patrol Zone: -100000
For destroying the Gammulan HQ, starstation GAMMULA: +250000
If a diplomat ship (any race) is destroyed in your Patrol Zone: -5000

DESTROYING THIS TARGET TYPE

	GAMMULAN	INSURGENT	HOSTILE	FRIENDLY OUTSIDE PATROL ZONE	FRIENDLY INSIDE PATROL ZONE
Starstation	5000	3500	2000	-2000	-3000
Carrier	1000	750	650	-650	-975
Cruiser	250	175	150	-150	-300
Starbase	250	250	200	-200	-225
ODS	150	100	75	-75	-115
Naval Ship	75	75	65	-65	-100
Fighter	25	15	10	-10	-30
Transport	25	20	20	-20	-25
Enemy Air Defense (Sam/Sal)	25	25	10	-10	-25
Ground Target (ATV/Mechs etc.)	25	25	15	-15	-25
Marine	15	10	10	-10	-15
Launchpad	15	15	15	-15	-15
Light Aircraft	15	15	10	-10	-15
Radar Site	10	10	15	-15	-15

Experience Points and GALCOM Credits, GALCREDS, for

DELIVERING THIS TARGET TYPE

	GAMMULAN		INSURGENT		OTHER HOSTILE		DISSABLED FRIENDLY	
	EP	CRED	EP	CRED	EP	CRED	EP	CRED
Carrier	500	150000	350	100000	250	75000	250	100000
Cruiser	100	15000	65	10000	55	7500	100	15000
Transport	50	2500	35	1500	25	1000	50	2500
Fighter	35	1000	25	750	20	500	50	750

APPENDIX C   ARTIFACTS DATABASE

There are artifacts scattered all over the galaxy but can only be obtained when playing the ACM scenario. The ship's Research Engineer is responsible for the analysis of all artifacts and supervise their installation with the assistance of the Chief Engineer and his crew.

HYPERION SUB-SPACE DEVICE

Use

> This device provides a means of traversing the galaxy without using any power or resources. Once installed on your ship, the Navigation Officer will use it to make intra-galactic jumps. This device breaches the space/time continuum, therefore no time will elapse during the transition. Having this device will allow you to use the HSD when plotting waypoints in Navitron. It creates a menu of regions on the Battlecruiser Bridge and in tacOPS where the desired destination can be selected.

Required to operate

> ✓ Research Engineer must have an AI of 75 or above.
> ✓ Flight Officer, Research Engineer and Navigation Officer must be on-station.
> ✓ Engine requires 10 units of power.
> ✓ Navigation System requires 5 units of power.

ENHANCED NAV MODULE

Use

> This device enhances the ship's hyperjump engines. Normally, the Battlecruiser will use fuel for hyperjumps. Once this module is installed, hyperjumps will require no fuel for operation. It also displays the current end-point of the targeted flux field in the CVD so that blackhole end-points can be avoided. This artifact does not affect the HSD operation, which uses no fuel.

Required to operate

> ✓ Flight Officer or Navigation Officer must have an AI of 50 or above.
> ✓ Flight Officer and Navigation Officer must be on-station.
> ✓ Engine requires 5 units of power or greater.
> ✓ Navigation System requires 5 units of power.

CELESTIAL ORB

Use

> This artifact has very powerful healing properties. It cures the injuries and ailments of anyone who is exposed to it. It increases the life factor (LF) of personnel on the ship and their fatigue factor (FF) will never increase. Does not use Medpaks or Vacpaks.

Required to operate

> ✓ None.

TACYON ANAGRAM SHIELD

Use

This unit is a shield upgrade. It provides a maximum of 5000 units of protection. Requires 85% less Plutonium (shield fuel) for operation than any normal shield.

Required to operate

✓ Low amount of Plutonium.
✓ Shield control must have at least 1 unit of power.

KARANIAN MARK IV REACTOR

Use

This unit is a reactor upgrade. It provides a maximum output of 250 units of reactor power at all times. It also has a very low Radine fuel consumption rate.

Required to operate

✓ Small amount of Radine.

TRANS-MATRIX CLOAKING DEVICE

Use

This unit enhances the ship's cloaking device. It uses a low amount of Iridium for operation. Allows radar detection of cloaked targets in TACSCAN. It has the advantage of not de-cloaking if weapons or ships are launched from the Battlecruiser. It also does not require any power to be allocated to the Battlecruiser cloaking system.

Required to operate

✓ Research Engineer and Chief Engineer require AI of 75 or above.
✓ Research Engineer, Chief Engineer and Tactical Officer must be on-station.
✓ Cloaking only active at intervals of 10 minutes at a time. Remains inactive for 10 minutes after shutdown before it can be activated again.
✓ Low amount of Iridium

PHASED ARRAY ION DISRUPTOR

Use

This unit enhances the ship's main laser system. It has low power consumption. Operates by firing a constant charged particle beam in the pointed direction. Once activated, it will continue to project the beam until the fire button is released. A hit from the PAD causes 50% more damage to the target than a normal Ion Disruptor. Its rate of fire is not affected by the laser intensity setting. Beam is constant. Can operate in auto-fire mode. Once it locks on to a target, it will continue to track the target and fire. Releasing the fire button breaks the target lock. The ship will maneuver (in AI mode) to track the target.

Required to operate

✓ Firing system must be de-coupled to operate the PAD
✓ Weapon System requires at least 2 units of power
✓ IOD requires at least 1 unit of power

RANDOM - RANDOM ACCESS NUCLEAR DISRUPTOR FOR OBSOLETE MATTER

Use

This is a very devastating weapon. It works as a normal orbit to surface weapon, but allows the configuration of any normal OTS weapon to have devastating capabilities. With RANDOM on board, any OTS missile which impacts the surface will destroy everything on the planet leaving it totally barren.

Required to operate

- ✓ RANDOM decoder.
- ✓ Research Engineer, Tactical Officer and Chief Engineer must have AI of 100.
- ✓ Research Engineer, Tactical Officer and Chief Engineer must be on-station.
- ✓ Tactical System requires 5 units of power.
- ✓ Weapon System requires 5 units of power.

RANDOM DECODER

Use

This decoder is required to operate the RANDOM weapon. Allows any normal OTS missile to have RANDOM capabilities.

Required to operate

- ✓ None

JAC - JUST ANOTHER CYBORG

Use

JAC is a cybernetic jack of all trades. It repairs systems without any repair materials. Repairs systems to 100% at the rate of 1 every 10 minutes

Required to operate

- ✓ None.

APPENDIX D   **WEAPONS DATABASE**

WEAPON DESIGNATOR CODES

	*(1)*Space-To-Space *S*TS	
OTS	Orbit-To-Surface	
ATA	Air-To-Air	
ATS	Air-To-Surface	
SAM	Surface-Air-Missile	
SAL	Surface-Air-Laser	
MIN	Mine	
APM	All Purpose Missile (used by ground vehicles)	
FTL	Used by the Fast Target Acquisition & Lock, FATAL system	

GUIDANCE/TRACKING LOGIC

1.   STANDARD MISSILES

CTL   Continuous Tracking Logic
The target must remain locked until the missile hits the target. If the lock is lost, the missile will lose the target and fly aimlessly until it self-destructs.

ATL   Automatic Tracking Logic
Once the missile has acquired a lock and launched, it will continue to track the target until impact. This allows the pilot to select another target once the missile has been launched.

ATL/V Automatic Tracking Logic with Video
Identical to ATL type but the missile also has a camera which allows it maintain lock on the target much longer. This info is also relayed back to the firing system. The camera also reduces the acquisition for the missile.

2.   SURFACE TO AIR MISSILES

ASL   Advanced Seeker Logic
The system uses an advanced seeker guidance mechanism with the receiver in the missile. This missile, can 'burn through' jamming at close range and can conduct multiple attacks. Seriously bad news.

VSL   Visual Seeker Logic
The launch system is guided by a ground controller who must visually track the target prior to launch. The missile, when launched, will fly in the general direction of the launch seeking a valid target. This missile can be fooled by evasive flying or jamming.

3.   SURFACE TO AIR LASERS

LTA   Laser Target Acquisition
Found only in Surface to Air Laser, SAL systems. The radar system first searches for the target, after acquisition, it fires a laser designator beam at it. The firing system then fires a continuous wave of laser bursts along the beam. This firing system can only be evaded by flying at a safe altitude out of the laser designator range. It cannot be jammed.

4.   ORBITAL DEFENSE SYSTEMS

RITL/V Redundant Independent Tracking Logic with Video
This is found only in OTS weapon systems. A camera in the missile's nose cone is used to locate the target on the planet surface. Once the missile is launched, it will continue to track the target until impact. A ship MUST be in orbit in order to fire an OTS missile. There is no range limit, the missile simply flies to its target.

5.   OTHER

VITL   Visual Independent Tracking Logic
Used only on craft mounted laser systems. After a target is identified the pilot must compensate for its orientation and fire when it comes into range. In some systems, the laser mounts are fixed and only fire straight ahead. On more advanced and larger ships, the laser mounts can be independently oriented to track the target's location without changing the craft's orientation.

WEAPON STATISTICS

1. STANDARD MISSILES

Type-Name	Weapon type and name
Max. range (km)	Min. effective range of missile
Min. range (km)	Max. effective range of missile
Guidance Logic	Determines how the missile tracks its target
Blast Energy	Amount of damage weapon will cause on impact
Lock Time (ms)	Length of time missile scans before achieving lock

TYPE-NAME	MIN. RANGE	MAX. RANGE	GUIDANCE LOGIC	BLAST ENERGY	LOCK TIME
ATA-Cluster	01	35	ATL	50	2000
ATA-Magellan	01	50	ATL	75	2500
ATA-Mariner	01	75	ATL/V	100	500
ATA-Warrior	01	100	ATL/V	150	500
ATA-Pilgrim	01	65	CTL	100	1500
ATA-Seeker	01	50	CTL	125	1500
ATS-Spyder	01	25	ATL	75	1000
ATS-Lynx	01	35	ATL	100	1500
ATS-Maverick	01	50	ATL/V	75	750
ATS-Harpoon	01	75	ATL/V	125	750
ATS-Gainer	01	50	ATL	100	1500
ATS-Hyperdyne	01	100	ATL/V	155	500
STS-Vagrant	01	200	ATL/V	1000	15000
STS-Perseus	01	125	ATL/V	125	1500
STS-Questor	01	75	ATL/V	150	1500
STS-Starflash	01	50	CTL	100	1000
STS-Starseeker	01	50	CTL	100	1500
STS-Firestar	01	50	ATL	125	1500
STS-Starchild	01	65	ATL	125	2500
STS-Ralix	01	100	ATL/V	500	10000
STS-Analog	01	35	CTL	100	1500
OTS-Stallion	-	-	RITL/V	Nuke	1500
OTS-Tanix	-	-	RITL/V	Nuke	1500
OTS-Bugnor	-	-	RITL/V	Nuke	1500
OTS-Skyflash	-	-	RITL/V	Nuke	1500
OTS-Sunbeam	-	-	RITL/V	Nuke	1500
APM-Radix	01	25	ASL	100	1500

Note: OTS weapons destroy all targets within their acquisition range.

2. SURFACE TO AIR MISSILE SYSTEMS

Name	Weapon type and name
Min. range (km)	Min. target range at which platform launches a missile
Max. range (km)	Max. target range at which platform launches a missile
Guidance Logic	Determines how the SAM system tracks its target
Blast Energy	Amount of damage SAM missile will cause on impact
Lock Time (ms)	Length of time SAM system scans before firing missile
Platform	Type of SAM launcher employed

NAME	MIN. RANGE	MAX. RANGE	GUIDANCE LOGIC	BLAST ENERGY	LOCK TIME	PLATFORM
TSX1-Limpet	01	35	VSL	50	1500	MOBILE
TSX2-Limpet	01	50	VSL	75	2500	MOBILE
ACM-Rogan	01	100	ASL	100	2500	MOBILE
ADV-Hawkeye	01	75	ASL	125	2000	MOBILE
AX-10 Fireball	01	75	ASL	50	1500	FIXED
AX-21 Firestorm	01	125	VSL	75	3500	FIXED
AX-25 Fireeye	01	100	VSL	100	3500	FIXED
GDN-4 Worm	01	55	VSL	75	2500	FIXED
GDN-7 Worm	01	75	VSL	100	2000	FIXED
MFX2	01	25	ASL	50	1000	PORTABLE
SSN-Starfly	01	25	ASL	50	1000	PORTABLE

3. SURFACE TO AIR LASER SYSTEMS

Name	Weapon name and name
Min. range (km)	Min. target range at which platform fires
Max. range (km)	Max. target range at which platform fires
Guidance Logic	Determines how SAL system tracks its target before firing
Blast Energy	Amount of damage each laser shot causes on impact
Lock Time (ms)	Length of time SAL system scans before achieving lock
Rate Of Fire (ms)	Intervals between laser shots
Platform	Type of SAL launcher employed

NAME	MIN. RANGE	MAX. RANGE	GUIDANCE LOGIC	BLAST ENERGY	LOCK TIME	RATE OF FIRE	(i) PLATFORM
MK1-Pulse	01	35	LTA	10	35	250	MOBILE
MK2-Pulse	01	50	LTA	10	50	350	MOBILE
XP10	01	50	LTA	15	50	500	MOBILE
XP15	01	75	LTA	20	75	750	MOBILE
MK3-Pulse	01	35	LTA	15	35	750	FIXED
MK1-Defender	01	50	LTA	15	50	750	FIXED
MK2-Defender	01	75	LTA	25	75	500	FIXED
MFX1	01	25	LTA	10	-	-	PORTABLE
SSN-Catcher	01	25	LTA	10	-	-	PORTABLE

4.   ORBITAL DEFENSE SYSTEMS

Name	Weapon type and name
Min. range (km)	Min. target range at which platform fires
Max. range (km)	Max. target range at which platform fires
Guidance Logic	Determines how SAL system tracks its target before firing
Blast Energy	Amount of damage each laser shot causes on impact
Lock Time (ms)	Length of time SAL system scans before achieving lock
Rate Of Fire (ms)	Intervals between laser shots

NAME	MIN. RANGE	MAX. RANGE	GUIDANCE LOGIC	BLAST ENERGY	LOCK TIME	RATE OF FIRE
GRAZER	-	125	ATL/V & LTA	250/100	1000/50	350
XTENDER	-	150	ATL/V & LTA	350/100	1000/35	500
PYRON	-	35	LTA	50	35	500
TRANCOR	-	35	LTA	50	35	500
NETSTAR	-	750	ATL/V	250	1000	-

Note: Some ODS platforms have missile launch capability as well as laser turrets. Where Rate of Fire is indicated, it is for the laser turrets. Any field with two values represents the missile/laser turret statistics.

5.   MINES

Type / Name	Weapon type / Name
Min. range (km)	Min. target range at which platform fires
Max. range (km)	Max. target range at which platform fires
Guidance Logic	Determines how Mine system tracks its target before firing
Blast Energy	Amount of damage each laser shot causes on impact
Rate Of Fire (ms)	Intervals between laser shots

TYPE-NAME	MIN. RANGE	MAX. RANGE	GUIDANCE LOGIC	BLAST ENERGY	RATE OF FIRE
MIN-Crab	-	-	LTA	10	1000
MIN-Leech	-	-	-	150	Proximity Blast

Note: Two types of mines are available, Crab mines fire laser blasts at their target, whilst Leech mines detonate upon impact with a hostile object.

6. LASER GUNS & TURRETS

Name	Weapon type
Min range (km)	Min target range at which platform fires
Max range (km)	Max target range at which platform fires
Guidance Logic	Determines how SAL system tracks its target before firing
Blast Energy	Amount of damage each laser shot causes on impact
Lifetime (ms)	Lifetime of dispersed laser shot
Rate Of Fire (ms)	Intervals between laser shots

The range and rate of fire is dependent on the ship's acquisition range as well as the lifetime of the dispersed charge. Since the blast energy of the charge is range dependent, it will have more effect if fired at close range. The lifetime simply determines how long the charge will remain active before it disappears. Firing a laser at a long range with a charge that has a small lifetime will result in no damage to the target or the charge being dissipated before it reaches the target.

NAME	MIN. RANGE	MAX. RANGE	GUIDANCE LOGIC	BLAST ENERGY	LIFE TIME	RATE OF FIRE
Multi-Axial IOD	CRAFT DEPENDANT	CRAFT DEPENDANT	VITL	10	5	CRAFT DEPENDANT
Ion Disruptor			VITL	25	5	
Type 1 Torpedo			VITL	20	5	
Type 2 Torpedo			VITL	25	5	
Type 0 Laser			VITL	10	5	
Type 1 Laser			VITL	10	5	
Type 2 Laser			VITL	15	5	
Type 3 Laser			VITL	20	5	
Type 4 Laser			VITL	25	5	
Type 5 Laser (ODS)			VITL	100	10	

APPENDIX E   **GALACTIC CARTOGRAPHY CHART**

Starstation	Space facility for trade, repairs etc.
Starbase	Space facility for trade, repairs etc.
Satellite	Planetary facility for trade, repairs etc.
Meteoroid	Small planetary body orbiting another planet
Asteroid	Lump of solid particles traveling in space
Asteroid belt	Spaceborne lump of rock of varying compounds & chemicals
Flux Field	Collection of asteroids
Jump Point	Unstable anomaly which facilitates sub-space travel
Wormhole	Manmade structures around stable flux fields
Comet	Natural anomaly which facilitates sub-space travel
Starsystem	Lump of frozen gas and dust which orbit a star
Supernova	Star containing planetary bodies
Neutron Star	Remains of a collapsed star
Blackhole	Remains of a star gone supernova
	Remains of a neutron star with immense gravity

Single asteroids are usually very large, Ceres is about the size of Texas, large enough for a couple of ships to land on. Asteroid belts on the other hand contain a series of smaller asteroids centered around a common orbit.

Jump points are man made structures built around stable flux fields but with a single entry and exit point. Jump points link space regions within a system. For example, there are jump points in Earth region linking it to other regions within the Solar system such as Mars, Jupiter, Pluto etc.

Worm holes only have one entry and exit point. The ship will sometimes take damage based on the strength of the worm hole's gravitational forces. There is no guarantee that the ship will emerge out of a worm hole intact. This is a random factor determined by the ship's shields and armor levels at the time of entry. The ship will definitely take some damage whenever it enters a worm hole. Worm holes link starsystems together making it possible to hop from a space region with in a system to another region in the target system. For example, the worm hole in the Pluto space region in the Solar System links to the Centris region in the Alpha Centauri system.

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 with multiple exits will deposit the ship at one of it's exit points at random. Flux fields appear and disappear at random. It is still not known what can cause 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 did but it may just have deposited you back at the point at which you entered. Some flux fields have end points in black holes which makes 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 to Majoris (Alpha Majora).

A black hole is simply bad news. The ship has no chance of survival. Period. If a ship enters them, it will most certainly be destroyed.

SYSTEM	PLANETS	MOONS	STAR STATIONS	STAR BASES	LOCATION
TERRAN QUADRANT					
SOL	9	61	4	2	D9
ALPHA CENTAURI	6	8	2	3	C8
BARNARD'S STAR	2	4	2	1	E9
SIRIUS	2	3	1	1	D8
OMICRON ERIDANI	4	5	2	2	C6
TAU CETI	3	4	2	2	B6
POLARIS	2	2	2	1	E6
PROCYON	2	1	2	2	D5
CREDIAN QUADRANT					
TRENIS	5	6	3	3	I7
KRYNON	2	2	2	2	I5
LANIX-V	1	4	1	1	G5
CYRIAN	4	9	2	2	H5
TAU RANIS	2	2	2	1	G8
ARENIS	1	0	1	1	J6
XYON	2	2	2	1	J5
GAMMULAN QUADRANT					
OMEGA CENTAURI	4	4	3	2	G2
ALPHA CYGNI	3	3	1	2	G1
GAMMULA	5	11	4	4	F1
ALPHA GAMMA	3	4	2	2	F2
CYRON	1	0	1	1	I3
REGULUS	2	1	1	1	H1
SYRION QUADRANT					
ALPHA CANIS	4	6	3	2	E4
VEGA ERIDANI	3	0	1	1	B3
OMEGA ERIDANI	2	2	2	1	E2
ALPHA MAJORA	1	1	1	1	B4
TOTAL	75	145	48	42	-

STARSYSTEMS	25
SPACE REGIONS	91
PLANETS	75
MOONS	145
BLACKHOLES	5
SUPERNOVAE	10

SYSTEMS FORMAT

NAME   System name
SPECIES   Name of predominant species
ALLIANCE   GALCOM, GAMMULAN or NEUTRAL
LOCATION   Location within galaxy. Format = Quadrant:Sector
PLANETS   Number of planets in system
STARSTATION   Number of starstations
STARBASE   Number of starbases
SHORT CODE   Short name for system

PLANETS FORMAT

NAME   Planet name
SYSTEM   Name of system planet is located in.
OWNER   Predominant species on the planet.
TYPE   Primary planet composition. M=Mineral W=Water G=Gas B=Biological
SIZE   On a scale of 1 - 10, 10 being the largest.
O.V.   Planet's Orbital Velocity in k-units/sec
O.P.R.   Orbital Plane Reference; planet's position from center of the system. The planet closest to the center has an O.P.R. of 1
E.V.   Escape Velocity in km/s.
                The minimum velocity an object within a planet's atmosphere must attain in order to breach the planet's gravitational pull and enter space.
GRAVITY   Gravitational pull in g
WEATHER   Global weather. V=Violent C=Calm M=Moderate
TEMP   Surface temperature. T=Temperate C=Cold H=Hot
MOONS   Moons around the planet
LIFEFORMS   % lifeform content on the planet
MINERALS   % minerals content on the planet
SSTATION   Name of starstation in orbit around planet.
SBASE   Name of starbase on planet surface
TECH LEVEL   Planet's technology level determines its productivity and determines the availability of trade items. * A player will find more items at a planet of Tech Level 5 than on one of Tech Level 2. The Tech Level applies only to planets with a starbase/starstation, otherwise this value is blank, meaning either the planet is barren or extremely poor and therefore cannot afford to build a starbase/starstation.
                0=Normal 1=10% (above normal) 2=20% 3=30% 4=40% 5=50%
CLASS LEVEL   Planet's class level determines it's production specialty. A planet's specialty items are usually cheaper on that planet than on another.   The Class Level only applies to a planet with a starbase otherwise this field is NA (Not Available).
                HT = High Tech Electronics
                RO = Robotics   Spare parts
                AG = Agricultural   Food supplies
                MN = Minerals   Minerals
                AD = Advanced Mixture of the above, including spacecraft
                 e.g. HT type items (see Appendix H, Trade Database) are more predominant on a planet of HT class than on one of MN class. The traders on the HT class planet will pay more for MN class items and sell their HT class items cheaper.
INFL.LEVEL   Planet's trading inflation rate determines the overall price of trade items
                0=Normal 1=10% (higher) 2=20%   3=30%   4=40%   5=50%
SEC. LEVEL   Planet's security level determines whether it deals in illegal items
                0 = Legal   1 = Illegal
CASTE   Station/Base caste

TERRAN QUADRANT

Column key:

SYSTEM		SPECIES			ALLIANCE	LOCATION					PLANETS	STAR STATIONS	STAR BASES	SHORT CODE				
NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE

SOL — TERRAN / GALCOM / TERRAN: D9 / Planets 10 (Inc. Moon) / Star Stations 4 / Star Bases 2 / Short Code SOL

NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE
MERCURY	M	2	47	1	3	0.3	V	H	0	0	10	-	-	-	-	-	-	
VENUS	G	4	35	2	10	1	V	H	0	0	25	-	-	-	-	-	-	
EARTH	B	4	30	3	10	1	C	T	1	15	10	GALCOMHQ	EARTH	3	AD	0	0	0
MOON	B	2	30	1	4	0.1	C	T	1	0	10	GENESIS	-	3	HT	0	0	0
MARS	M	3	24	4	3	0.3	M	T	2	1	25	STARPATH	MARS	2	AD	0	0	0
JUPITER	G	8	13	5	22	2	V	C	16	0	18	-	-	-	-	-	-	
SATURN	G	7	9	6	14	1	V	C	18	0	15	-	-	-	-	-	-	
URANUS	G	6	6	7	12	1	V	C	15	0	32	-	-	-	-	-	-	
NEPTUNE	G	5	5	8	10	1	V	C	8	0	5	-	-	-	-	-	-	
PLUTO	M	1	4	9	3	.3	V	C	1	0	1	GAZER1	-	4	HT	0	0	11

ALPHA CENTAURI — EMPIRIAN / GALCOM / TERRAN: C8 / Planets 6 / Star Stations 2 / Star Bases 3 / Short Code ALPHACEN

NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE
CENTRIS	B	6	36	1	12	1.2	M	T	2	10	3	-	CENTRIS	2	HT	1	0	0
NEVUELA	G	2	31	2	40	2	V	H	1	0	10	-	-	-	-	-	-	-
VARAN	M	4	31	3	10	1	V	H	3	0	15	-	VARAX	3	MN	2	1	0
CRONUS	W	5	18	4	14	1.5	M	C	0	5	1	CENTAURI	-	3	HT	1	0	0
TREAS	G	10	10	5	35	3	C	M	0	0	25	-	-	-	-	-	-	-
TRAMIS	B	1	12	6	16	1	M	C	2	1	5	ALERI	TRAMIS	2	HT	1	0	0

BARNARD'S STAR — MIXED / NEUTRAL / TERRAN: E9 / Planets 2 / Star Stations 2 / Star Bases 1 / Short Code BARNARDS

NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE
SYGAN	W	5	32	1	23	1	C	C	2	1	1	SYGAN	SYGAN	3	AD	3	1	5
ZILON	W	7	22	2	21	1.5	M	C	2	1	2	IDAN	-	2	HT	3	1	4

SIRIUS — MIXED / NEUTRAL / TERRAN: D8 / Planets 2 / Star Stations 1 / Star Bases 1 / Short Code SIRIUS

NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE
LYRIUS	B	10	22	1	25	2	C	T	2	10	1	-	LYRIUS	5	AG	4	1	4
LENNEN	B	8	20	2	20	2	M	H	1	0	5	PIXAN	-	4	AD	2	1	4

OMICRON ERIDANI — VESPERON / GALCOM / TERRAN: C6 / Planets 4 / Star Stations 2 / Star Bases 2 / Short Code OMICRONE

NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE
MIDAE	M	5	10	1	15	1	V	H	2	1	35	-	-	-	-	-	-	-
CANAAN	M	4	14	2	18	1.5	C	T	0	5	25	ERIDANI	BADRAN	1	MN	3	0	0
FRELLIS	M	4	14	3	18	3	M	C	2	5	25	-	FRELLIS	3	MN	3	0	11
RAMIS	G	8	9	4	32	4	V	H	1	0	5	RAMIX	-	4	AD	2	1	0

TAU CETI — MIXED / NEUTRAL / TERRAN: B6 / Planets 3 / Star Stations 2 / Star Bases 2 / Short Code TAUCETI

NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE
XYLAN	B	5	10	1	15	1	C	T	0	5	2	-	XYLAN	5	AD	4	1	4
ARIMA	M	8	14	2	21	2.5	M	T	2	10	10	TULON	-	3	HT	2	1	4
EORI	W	8	14	3	21	3	C	C	2	1	2	ZERIN	CARON	3	MN	3	1	6

POLARIS — MIXED / NEUTRAL / TERRAN: E6 / Planets 2 / Star Stations 2 / Star Bases 1 / Short Code POLARIS

NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE
POLARIS-1	B	5	18	1	12	1	M	T	0	10	25	CENTRON	POLARIS-1	3	MN	5	1	13
POLARIS-2	B	5	18	2	18	2	M	C	2	8	12	VELARI	-	4	MN	4	1	13

PROCYON — MIXED / NEUTRAL / TERRAN: D5 / Planets 2 / Star Stations 2 / Star Bases 2 / Short Code PROCYON

NAME	TYPE	SIZE	OV	OPR	EV	GRAV	WEA	TEMP	MOON	LIFE	MIN	STARSTATION	STARBASE	T LVL	C LVL	I LVL	S LVL	CASTE
ACTIS-IV	M	6	29	1	22	2	V	H	1	1	45	PROCYON	ELTIN	1	HT	5	1	13
ACTIS-V	M	8	28	2	28	2.5	V	H	0	1	32	PROCIN	ACTIS-V	3	AG	5	1	11

CREDIAN QUADRANT

TRENIS | CREDIAN | NEUTRAL | CREDIAN: I7 | 5 | 3 | 3 | TRENIS

RONUS-IV	B	2	30	1	28	1	M	C	2	10	2	VANGUARD	TRENIS	1	HT	4	1	0
ANTIS	B	5	35	2	17	4	C	T	0	10	1	-	-	-	-	-	-	-
HERIN	G	10	15	3	35	4	V	C	3	0	15	BARIN	BELIN	4	AD	3	1	7
SCORPIA	W	1	40	4	18	2.5	C	T	1	5	0	-	SCORPIA	2	HT	5	1	13
DARAIN	M	6	28	5	28	1	V	H	0	5	28	ORUNA	-	3	MN	3	1	13

KRYNON | KANDORIAN | NEUTRAL | CREDIAN: I5 | 2 | 2 | 2 | KRYNON

TYRUS-2	W	5	30	1	15	1.5	C	C	2	2	2	STARON	SIMPIX	5	RO	5	1	0
LYDAN	W	8	25	2	25	3	M	T	0	12	2	STARWIND	KRYNON	4	RO	3	1	11

LANIX-V | ZELON | NEUTRAL | CREDIAN: G5 | 1 | 1 | 1 | LANIXV

ZELANA	B	6	32	1	12	1	V	H	4	5	3	ALLIANCE	LANIX-V	0	AD	4	0	0

CYRIAN | MANDORIAN | NEUTRAL | CREDIAN: H5 | 4 | 2 | 2 | CYRIAN

RINAAL	G	2	28	1	38	3	V	C	4	0	42	-	-	-	-	-	-	-
PRAVIS	W	5	30	2	10	2.5	V	T	2	8	2	ADONIS	CYRIAN	3	HT	2	1	0
CAPELLA	G	7	22	3	52	2	V	C	1	0	15	-	-	-	-	-	-	-
HADAR-9	W	4	30	4	18	1.5	V	T	2	10	4	DABRIS	HADAR-9	3	AD	3	1	0

TAU RANIS | MIXED | NEUTRAL | CREDIAN: G8 | 2 | 2 | 1 | TAURANIS

KRYSTAR	W	3	32	1	35	1	M	T	1	1	2	TORON1	TAU-RANIS	1	HT	2	1	11
REBELAN	B	5	25	2	31	2	M	H	1	5	5	TORON2	-	2	AD	3	1	13

ARENIS | MIXED | NEUTRAL | CREDIAN: J6 | 1 | 1 | 1 | ARENIS

KHAN	G	8	26	1	42	2	V	C	0	0	5	ARENIS	ARENIS	0	HT	3	1	4

XYON | MIXED | NEUTRAL | CREDIAN: J5 | 2 | 2 | 1 | XYON

CHANIS-1	M	2	30	1	10	1	C	T	2	0	24	ELURO	XYON	0	AG	5	0	4
CHANIS-2	M	3	24	2	14	1	C	T	0	0	32	RAGIN	-	1	HT	4	1	6

GAMMULAN QUADRANT

OMEGA CENTAURI | VALKERIE | GAMMULAN | GAMMULAN: G2 | 4 | 3 | 2 | OMEGAC

LV-184	B	4	32	1	14	1.5	M	T	0	10	16	-	OMEGA-9	3	HT	5	1	3
KRUGER	W	5	30	2	18	2	V	H	3	0	20	EXIN	-	4	AD	3	1	0
OTURA-6	M	5	27	3	11	2	M	T	0	5	15	ALIDIS	ALIDIS	3	HT	5	1	0
OTURA-9	B	8	25	4	9	1.5	V	H	1	0	10	AVINO	-	4	MN	3	1	13

ALPHA CYGNI | FALKERIE | GAMMULAN | GAMMULAN: G1 | 3 | 1 | 2 | ALPHACYG

LV-103	B	5	30	1	22	1	C	T	0	5	25	CYGNI	ALPHA-CYGNI	1	AG	4	1	0
LV-104	B	6	30	2	23	1.2	C	T	1	4	28	-	-	-	-	-	-	-
LV-105	W	2	26	3	18	1	M	C	2	1	1	-	LV-105	1	AG	4	1	0

GAMMULA | GAMMULAN | GAMMULAN | GAMMULAN: F1 | 5 | 4 | 4 | GAMMULA

GAMMA-1	B	8	31	1	21	0.5	M	T	0	20	15	HEXAR	GAMMA	5	AD	5	1	0
GAMMA-2	G	8	34	2	28	0.8	M	T	3	10	45	GAMMULA	GAMMULA	3	AD	5	1	0
TYRINIS	G	5	30	3	11	1	V	C	4	0	36	-	TYRINIS	2	MN	5	1	13
LV-110	G	6	32	4	16	1	V	C	2	0	28	SORIUS	LV-110	2	AG	5	1	0
LV-115	G	5	28	5	20	0.9	V	C	2	0	17	PARIX	-	5	HT	5	1	0

ALPHA GAMMA | GAMMULAN | GAMMULAN | GAMMULAN: F2 | 3 | 2 | 2 | ALPHAGAM

CHALINIS	B	2	26	1	23	1	V	H	1	10	36	ROGAN	ALPHA-GAMMA	2	AD	5	1	0
CRYSTAR	G	5	32	2	14	0.3	C	H	3	0	22	-	CRYSTAR	2	AD	5	1	0
MANTISI	G	8	35	3	26	0.2	M	H	0	0	18	SOVAR	-	3	HT	3	1	0

CYRON | VALKERIE | GAMMULAN | GAMMULAN: I3 | 1 | 1 | 1 | CYRON

CYRON-VI	G	5	25	1	5	0.5	V	C	0	0	28	CYCLONE	CYRON-VI	3	AD	3	1	0

REGULUS | GAMMULAN | GAMMULAN | GAMMULAN: H1 | 2 | 1 | 1 | REGULUS

REGIS-IV	G	4	18	1	5	1	V	H	1	0	24	-	REGULUS	2	MN	2	1	13
REGIS-VI	G	7	10	2	10	1.5	M	H	0	0	32	ROCON	-	4	AG	1	1	0

SYRION QUADRANT

ALPHA CANIS	SYRION						NEUTRAL	SYRION: E4				4	3	2		ALPHACAN		
SARIEN	G	2	33	1	22	0.5	C	T	2	0	10	SARIEN	SARIEN	1	RO	1	0	0
TAREAN	G	4	28	2	26	0.8	M	T	1	0	8	-	TAREAN	1	RO	1	0	13
LV-125	G	5	23	3	28	0.8	C	C	1	0	5	LV125	-	2	AD	2	0	11
LV-130	G	2	46	4	33	0.5	C	C	2	0	15	LV130	-	3	HT	1	0	13

VEGA ERIDANI	SYRION						NEUTRAL	SYRION: B3				3	1	1		VEGAERID		
DROIA	G	4	15	1	28	0.3	C	T	0	0	12	-	OLINDA	1	AD	1	0	13
ALTERIS	G	5	28	2	34	0.4	M	C	0	0	8	ALTERIS	-	2	HT	2	0	0
OBSIDIA	G	2	26	3	43	0.9	M	C	0	0	10	-	-	-	-	-	-	-

OMEGA ERIDANI	DROIDAN						NEUTRAL	SYRION: E2				2	2	1		OMEGAERI		
MONDIAL	B	6	13	1	28	1	V	T	1	2	2	MONDIAL	-	0	AG	2	1	0
YLISIA	G	4	9	2	36	0.6	M	H	1	0	20	RECARA	YLISIA	1	MN	2	1	11

ALPHA MAJORA	DROIDAN						NEUTRAL	SYRION: B4				1	1	1		ALPHAMAJ		
MAJORIS	B	8	32	1	33	1	M	T	1	1	5	MAJORIS	MAJORIS	2	AD	4	1	0

APPENDIX E   SUPPORT FILES ON CD-ROM

AR32E301.EXE   Adobe Acrobat Reader v3.01. Must be installed under WIN95
                    and is required to access the .PDF files.

BC3KBUGS.TXT   Current list of known and fixed bugs as of v2.0
BC3KVER.TXT   Version control file

ARTIFACT.PDF   List of artifacts in ACM
ATVSYSTM.PDF   ATV system damage specs
BC3KFAQ.PDF   Official gameplay FAQ
BCALIENS.PDF   List of alien nations and bios with screen shots
BCPOWER.PDF   Battlecruiser power allocation specs
BCSYSTM.PDF   Battlecruiser system damage specs
BCTOUR.PDF   Battlecruiser Walkthru
CASTES.PDF   List of castes in galaxy
CRAFTS.PDF   Ship database with screen shots
EP.PDF   Experience Points database
ICSYSTM.PDF   Interceptor system damage specs
KEYBOARD.PDF   Keyboard commands
MEDALS.PDF   List of medals awarded in ACM
NAVCHART.PDF   Galactic cartography chart
NAVLINK.PDF   Galactic cartography links
NAVMAPS.PDF   Galactic cartography maps
PARTS.PDF   Repair parts database
SHSYSTM.PDF   Shuttle system damage specs
STATIONS.PDF   Starstation & starbase database with screen shots
THREATS.PDF   Threat systems database with screen shots
TRADE.PDF   Trading database
WEAPONS.PDF   Weapons database

APPENDIX F   WALKTHRU

29. GLOSSARY