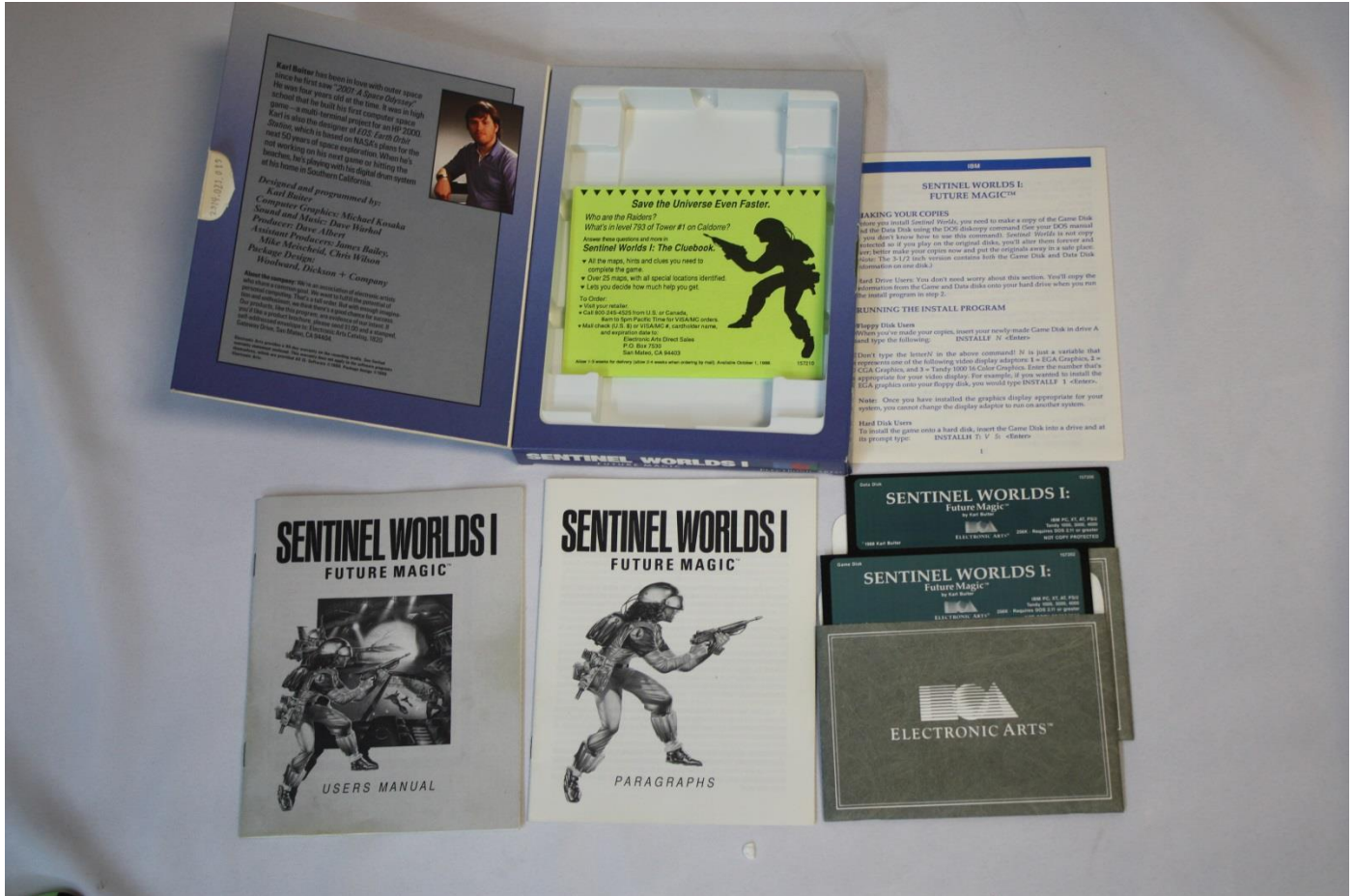


SENTINEL WORLDS I: FUTURE MAGIC

U S E R S M A N U A L



Edited by Whane The Whip
Ver 1.1

Mission Dossier

I. Excerpt from report by Patrick Blane, Federation Undersecretary for Caldorrian Affairs, 2/3/2994:

PRIVATE AND CONFIDENTIAL

SCRAMBLE CODE B3Q8##

To Her Excellency the Ambassador to Caldorre,
I am delighted to report a successful conclusion to our negotiation with shipping magnate *William Grager*. He agrees to provide transportation for shipments of food from Caldorre and Norjaenn to our new outposts in the Rouyn and Mistassini systems. In return, the Federation provides protection for the shipments and the compensation package that you and I designed.

He's a shrewd old horsetrader, but I played him like a violin. I think this will mean promotions for us both. Keep the champagne cold until I get there.

II. Weak and fragmentary message received at Federation Comm Center on Caldorre, 5/23/2995.

...MAYDAY MAYDAY CALDORRE DO YOU RECEIVE! THIS IS THE TRANSPORT BARGE "NEW MOON" OUT OF NORJAENN TOWN WE HAVE BEEN ATTACKED [...] LIKE NOTHING WE'VE EVER SEEN [...] OUT OF NOWHERE [...] ENGINES ARE CRIPPLED OUR CARGO PODS HAVE BEEN [...] LOSING FUEL. HURRY CALDORRE WE'RE SITTING DUCKS OUT HERE MAYDAY MAYDAY [...] OH NO OH MY GOD THEY'RE COMING BACK...

[end of transmission]

III Transcript of the appearance of Caldorre System Representative Elizabeth Nguyen before the Federation Subcommittee on the Transport Raids, 10/23/2995:

"Gentle sentients, Since the first Raider attack earlier this year, Grager Transport has lost seventeen ships. The Federation has lost gigacredits' worth of badly needed supplies for the new settlements. And eighteen men and women of my system have lost their lives."

"According to *William Grager*, the attacks are swift and brutal. The raiders appear out of hyperspace, rake the ships with some sort of energy weapon, and disappear before they can be identified. They make no attempt to contact the ships, or to capture them, or to salvage their remains. The destruction of this vital shipping route seems to be their only intention."

"The Federation must rethink its strategy. The current defensive posture, although well-intentioned, has been ineffective. The Dreadnought-class escort ships that you have supplied are too slow and heavy to respond to these lightning fast attacks. Only a more maneuverable ship, such as the Interceptor-class vessels, might stand a chance against the Raiders."

"On behalf of the Caldorre system, I demand that you find out who these Raiders are. It is an atrocious affront to justice when terrorism is permitted to rage unchecked in civilized space."

"Gentle sentients, no matter what you do, I beg you, do it quickly. We can spare no more lives to these monsters."

IV. Address by Cynthia Rodrigues, Federation Mission Coordinator on Casparis, to the crews of eight Federation Interceptor-class vessels, 1/27/2996:

"Let me begin by congratulating each of you on your talents and dedication. You have been chosen from among thousands of volunteers, and have passed... some would say, 'survived', a grueling training program that has tested and honed skills vital to the success of the mission."

"Most importantly, you have encountered the four other people whose skills and temperaments were found by our tests to be the most compatible with yours. You came here as strangers to each other, but the training you have undergone together has forged you into partners and friends. Your lives will depend on your ability to rely on each other."

"Let me review some of the details of your mission. A hyperspace barge will transport you and your ships from the Federation Central Base to the Caldorre system. This trip will take six months, during which your crew will be placed in cold sleep in order to conserve supplies. When the barge reaches the Caldorre system, you will be awakened, and your ship cast off to begin its mission."

"From that point on, the course you take will be up to you. You may decide to remain in space to protect the transport ships. In this way, you can challenge the raiders in battle, and, if you are victorious, even board their ships, although I must remind you that no one has ever returned from such an attempt. With these tactics you can learn about the raiders first hand and still collect the bounties we offer for each raider ship that you destroy and each transport that you lead to safety."

"Or you may choose to go planetside to collect intelligence on the raiders. You'll find information on the streets and in parks, in restaurants and bars, wherever people gather. *Along the way, you may find the clues that will let you put together the pieces to this deadly puzzle.*"

"Don't forget that, to some extent, you must learn to fend for yourselves on this mission. While we have armed and supplied you, your party will have to earn money so that you can buy additional training, equipment, and weapons. While this requirement is in part a consequence of recent budget cuts, it has the benefit of forcing you to immerse yourselves more fully in the local culture, which cannot help but to add to your store of information."

"In closing, let me send with you the best hopes of your teachers who remain behind. May you have good hunting and a successful return!"

Commander's Reference Manual

Section 1. Assembling the Crew

Prior to departure for the Caldorre System, you will use the StarCrew Development System to review your five-person crew for the mission. This sophisticated cybernetic personnel tracking system enables you to examine each crew member's characteristics and skills. If you wish, you can enlist new personnel for any or all of the crew positions at this point. Finally, you will christen your Federation Interceptor-class spacecraft, and embark on your mission.

1.1 Crew Duties

The five current members of your party are displayed by the StarCrew Development System in the following order: Pilot, Navigator, Communications, Engineer, and Medic.

The shipboard duties of each crew member are explained below:

Pilot: Handles the ship's guns during space combat.

Navigator: Guides the ship through real space or hyperspace. Interprets long range scanner input. Executes boarding and orbiting procedures.

Communications Officer: Establishes contact with targeted ships and programs the ship's computers.

Engineer: Repairs any damage the ship takes in combat.

Medic: Heals injuries suffered by all crew members, except when performing as the team leader.

1.2 Assigning a New Crew Member

You can look at the dossier of any current crew member by entering the number next to that person's name.

If you choose to erase that record and enlist another person instead, select option #3 from the crew member's profile and the StarCrew Development System displays the photographs of all personnel who are currently available to join the mission. Press the number that corresponds with the face of the person you wish to add to the crew.

1.3 Reading a Crew Member's Profile

The crew profiles reflect the most up-to-the-minute information about each crew member's equipment, experience, skills rating, and physical condition. Profiles are dynamically updated by information from telemetric sensors, which is interpreted and quantified by the StarCrew personnel analysis programs.

If you are looking at the profile of a crew member that you have just added to the crew, start by entering that person's name at the top of the screen. Here is a guide to reading the rest of the information on the screen:

name of member - Ripley
class - Nav Level - Combat Cadet
experience above class Level - 0
current armor - uniform
(ontot 2 edged 1 Projct 0 blast 0)
current weapon - hands
health status - 30 (30) hit points
party's current cash - 325

Characteristics -		Skills -			
strength	16	contact	1	gunnery	0
stamina	14	edged	1	atv repair	0
dexterity	16	projectile	1	mining	0
comprehend	14	blaster	0	athletics	0
charisma	10	tactics	0	observation	0
		recon	0	bribery	0

Profile for the selected crew member.
Select.. (1) Done.
(2) Look at the items this member carries..

Figure 1. Crew Profile

Class: The new crew member's function in the crew. A new crew member automatically takes the class of the old one.

Level: Levels are ranked as follows:

Rank	Experience Points Required
Combat Cadet	Initial Rank
Senior Cadet	25
Command Cadet	100
Ensign	225
Combat Ensign	400
Senior Ensign	625
Command Ensign	900
Lieutenant	1225
Combat Lieutenant	1600
First Lieutenant	2025
Senior Lieutenant	2500
Command Lieutenant	3025
Lt. Commander	3600
Commander	4225
Combat Commander	4900
Senior Commander	5625
Captain	6400
Combat Captain	7225
Senior Captain	8100
Command Captain	9025

Crew members attain higher ranks during the course of their duty. The higher their rank, the more effective they are at doing their job. For example, a Communications Officer with more experience will be more successful at reprogramming the ship's computers.

A higher experience level also increases the crew member's Maximum Trauma Rating, which is measured in "hit points". In addition, for each two additional experience levels attained, there is a 5% increase in effectiveness with any type of weapon.

Experience above class level: This is the number of experience points the crew member has above his or her rated level. This amount is reduced to zero when he or she has enough points to advance to the next highest level.

Current Armor: At the beginning of the mission, each crew member has his or her uniform as armor. The screen displays the armor's degree of protection against the four classes of weapons: the higher the number, the greater the armor's effectiveness against that class of weapon.

Current Weapon: This is the weapon with which this person is currently equipped. Members start out with only their hands as weapons. Preparatory to orbiting or boarding, they can get weapons from the ship's armory. You must then equip crew members with weapons using the Crew Command System. See Section 3.

Health Status: The number in parenthesis is this person's Maximum Trauma Rating. It is initially calculated as the person's strength plus their stamina, and then is increased as higher experience levels are attained (See Stamina). The first number is the current number of hit points.

Party's Current Cash: The party begins with 200 CR. They can use their cash to buy equipment and supplies, and to acquire increased training for party members. The party can increase its cash by the following means:

- Federation bounties for destroying raiders' vessels
- Enabling transport ships to safely reach their system destination
- Delivery of scientific cargoes
- Mining minerals on the planets surface
- Selling items encountered during the party's travels

These aspects of the adventure are explained in greater detail in section 2.

1.3.1 Assigning Characteristic Points

When recruiting a new member, you specify the characteristics you wish the crew member to have by assigning between **10 and 20 points** for each characteristic from a total "well" of 70 points. The characteristics are as follows:

Note: If you make a mistake, you can use the backspace or the "up arrow" key to backup and change the assigned points.

Strength (combat): Effectiveness in battle. High strength means that more damage is done when the person uses a contact or edged weapon. Also added to stamina to determine initial Maximum Trauma Rating.

Stamina (combat): How long the person can last in battle. The higher a person's stamina, the more their Maximum Trauma Rating is increased as they attain higher ranks.

Dexterity (combat, medic): The attack rate at which the person can attack using any weapon. It also determines the speed with which the medic can heal injuries.

Comprehend (non combat, communications officer, point person): Ability to learn new skills. The higher a person's comprehension, the more new skills they acquire as they are promoted.

Charisma (non combat, communications officer, point person): Ability to communicate with and influence others. Confers greater effectiveness in encounters with other characters.

You should specify characteristics for a new member that are relevant to the role he or she will play in the party: the communicator's profile should reflect high comprehension and charisma, while crew members who are expected to fight should have high strength and dexterity, etc.

Should you wish to improve your crew's characteristics, you can **visit the Caldorre Towers, where you can take advantage of training facilities for a price**. For example, using the aerobics gym increases stamina; a trip to the plastic surgeon increases charisma, etc.

1.3.2 Assigning Skill Points

Federation training provides each crew member with one skill point in contact weapons and one in edged weapons (**out of a maximum in all skill categories of seven**). During the recruitment of a new member, you can assign one additional skill point in any of the following areas:

(T) Denotes a skill that is a team skill and whose benefits are conferred to the team based on the **cumulative level** of that skill.

(I) Denotes a skill that affects an individual crew member based solely on the individual's own level of expertise.

(I)Contact: Effectiveness with blunt or clubbing weapons.

(I)Edged: Proficiency with cutting or slashing weapons.

(I)Projectile: Effectiveness with projectile weapons.

(I)Blasters: Proficiency with the blaster class of weapons.

Each point a person has in one of the above skills is reflected in a 5% increase in their combat effectiveness rating with that class of weapon. See Appendix 1 for more information about weapons.

(I)Tactics: Skill in using any weapon. Every 2 points allocated to this skill results in a 5% increase in the combat effectiveness with any weapon.

(T) Recon: Ability to discern objects and locations using the long-range scanner in the Ground Command Helmet.

(I) Gunnery (Pilot): Ability to aim the ship's lasers effectively. This skill is useful only to the team pilot.

(T) ATV Repair: Ability to make repairs on the ATV (All-Terrain-Vehicle).

(T) Mining: Expertise in locating valuable mineral deposits on a planet's surface.

(I) Athletic: Overall physical and mental potential. At the start of the mission, each characteristic can only be increased 3 points above its original level by means of training. This "ceiling" is increased by one for each point gained in athletic skill.

(I) Observation: Ability to notice useful details about encountered beings.

(I) Bribery: Effectiveness in using the party's cash to influence encountered characters to do what you want them to do.

As the crew members gain promotions, they will also gain skill points, which you can assign as you like, using the Crew Command System. (See Section 3.) The rate at which they gain additional skills is determined by their comprehension level.

Section 2. The Federation Spacecraft Command

When the hyperspace barge arrives in the Caldorre system, you will be revived by the automatic systems on board. After a brief orientation from the barge captain, your ship's systems will come up to normal, and you will be cast off from the barge.

Although you have received the standard hypno-holographic training in the operation of the Interceptor-class ships, it is advisable that you thoroughly review this section of the manual so that you will be familiar with the operation of your ship.

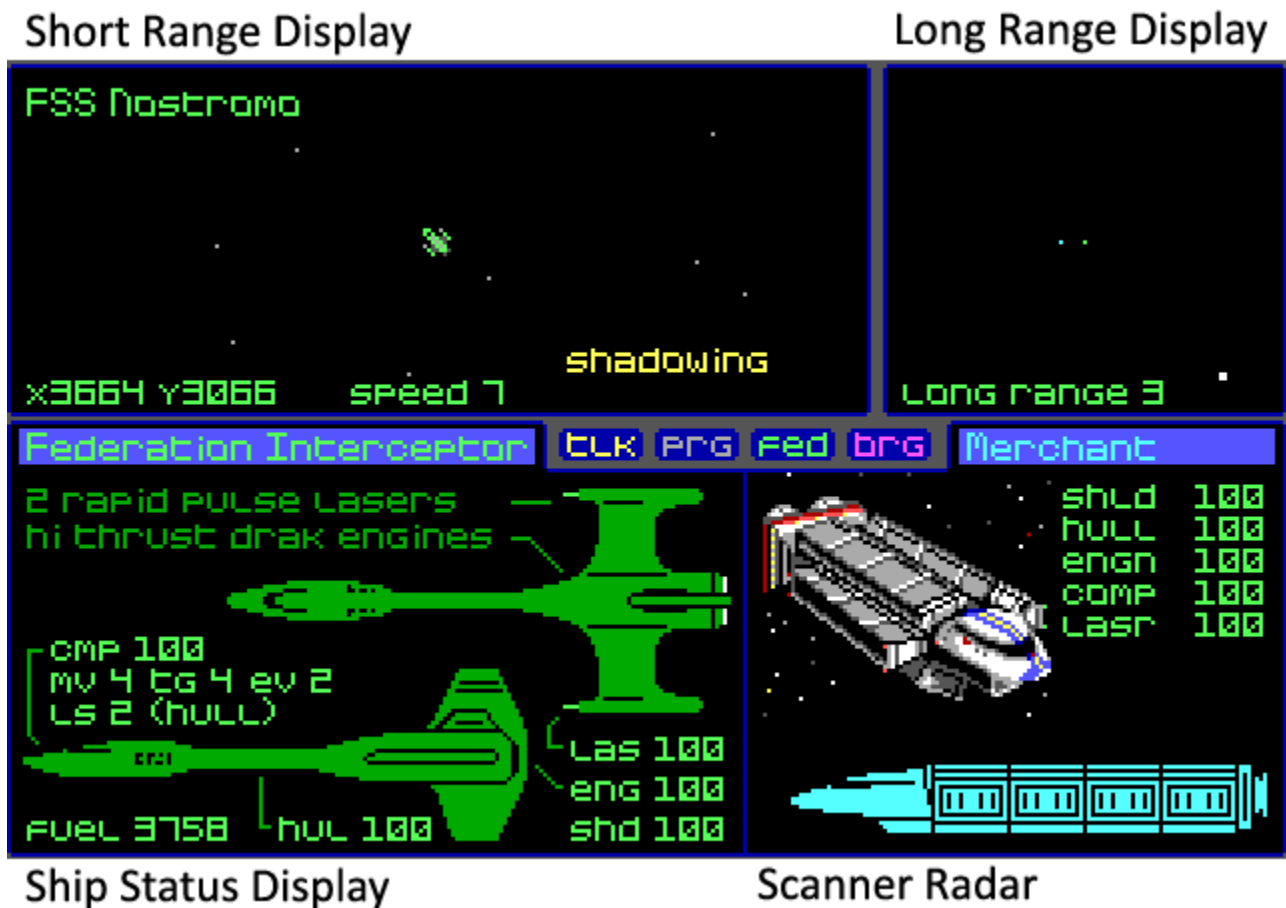


Figure 2. Interceptor class view screen

This state-of-the-art multichannel sensor display is your interface with your ship, your crew, and the area of space in which you find yourselves. Its screen is divided into quadrants, explained below:

Short-Range Display: On this display, your ship is color coded green. Your fellow Interceptors are purple; convoy ships are yellow; merchant ships are blue; and Raider ships are red. At the lower left corner of this display are your ship's

current coordinates and rate of speed. Other status messages also appear in this part of the display. These are explained in later sections. (In CGA mode all Federation Interceptors are turquoise, convoy and merchant ships are white, and Raider vessels are red.)

Long-Range Display: Ships in the surrounding region of space are displayed using the same color coding as above. Press L to cycle through the five levels of magnification. Level 1 is the most powerful. Your ship is always located in the exact center of this display as in the SR display.

Scanner Display: When a target has been selected, this portion of the display show information about the targeted ship. (See section 2.4 for more about targeting.)

Ship Status Display: This stylized diagram shows the condition of all ship systems as a percentage of total. These readouts are as follows:

- **Upper left:** Description of ship's weapons and engines
- **Middle left:** Conditions of the ship's computer, the effectiveness level of each program, and the current system targeted by your lasers
- **Lower left:** Remaining fuel and condition of the ship's hull
- **Lower right:** condition of the lasers, engine, and shield

2.2 Command Modes

The different command modes are shown on the indicators in the center right of the screen. They are as follows:

2.2.1 Talk (TLK)

When you have targeted another ship, pressing T directs your communications officer to open hailing frequencies.

The communications system on the Interceptor-class ships uses a modified version of the Intelligent Text Communications system (ITC), which transmits encoded short-burst messages in place of digitized speech. Thus, when you encounter another ship that wishes to respond to your communication, you are presented with a menu of topics. For each topic, you select from a library of phrases.

2.2.2 Programming the Ship's Computers (PRG)

Your Interceptor class vessel is equipped with the MAI-7000 cybernetic ship control system. It supports four principal programs:

Move: Controls the speed and direction of the ship. The better the Move program is, the more closely you can shadow a targeted ship. See Section 2.4.3.

Target: Aims the lasers at the selected target.

Evade: Adjusts the ship's trajectory to avoid enemy fire.

Laser: Fires lasers at selected portions of the enemy crafts.

The effectiveness of these programs is rated on a **scale of one to eight**.

When you press P to enter this mode, you can order your **communications officer** to rewrite ("hack") one of these programs to fit the circumstances. **The more experience this officer has, the more success he or she will have.** If the officer is very inexperienced, an attempt to hack a program can actually decrease its efficiency.

Note: If you decide not to "hack" one of the programs, you may escape from this by pressing the "X" key (see reference card for more information on keyboard commands).

You can also choose to implement one of the four sub-modules of the Laser program, which enable you to direct the lasers at the targeted ship's hull, engine, computer, or lasers. For example, you might target the raider's hull to destroy the ship, or its laser to keep it from doing any more damage, or its engines so that you can immobilize and board it.

2.2.3 Federation Communiques (FED)

Pressing F displays the Federation Communications channel. This channel shows the location and status of transport convoys, alerting you to convoys that are in danger. It also continuously displays messages from the Federation that may be of use to you, as well as a map of the entire system.

2.2.4 Bridge (BRG) (Boarding)

Depending where you are in space, pressing B to enter this mode accomplishes one of three things:

- If you are in open space, it directs the navigator to prepare to enter hyperspace. (See Section 2.3.2.)
- If you are within docking range of a planet's spaceport, it enables you to use spaceport facilities and orbit the planet. (See Section 2.5)
- If you are in close proximity to an enemy ship with disabled engines, it effects boarding procedures. Before you board, you'll have a chance to visit your ship's armory to provide your crew with weapons. Remember you must target a ship before you can board it (See Section 2.4.1)

2.3 Navigation

2.3.1 Sub-Light Speed

Navigation in regular space is controlled by an array of four keys. The "left" and "right" arrow keys turn the ship correspondingly; the "up" arrow fires the thrusters to increase the speed one level; and the "down" arrow fires the retros, which reduce the speed one level. The maximum possible speed is level 10; however, this is diminished if your engines have been damaged.

2.3.2 Hyperspace & Fuel Consumption

Hyperspace is used for interplanetary and cross-system travel. You specify the destination by aligning a set of cross hairs on a system map. Once hyperspace travel is completed, you may have to fine tune your position at sub-light speeds.

For a combat cadet-level navigator, one hyperspace jump consumes 500 fuel units. As the navigator gains higher rank, hyperspace travel becomes more fuel efficient.

2.4 Weaponry and Battle Procedures

2.4.1 Targeting

Press the space bar to target ship's sensors on any ship that is visible in the short-range display. Press the space bar repeatedly to cycle through the visible ships.

When a ship is targeted, its picture and status appears in place of the scanner display in the lower right part of the main display. Targeting is a necessary prerequisite for the following activities:

- Using the Talk mode
- Boarding an enemy ship
- Shadowing another ship

2.4.2 Laser Control & Ship to Ship Combat

Initiating inter-ship laser combat with a specified enemy ship is a two-step process: **First you target the enemy ship by pressing the space bar, then you arm the ship's lasers by pressing Enter.** At this point, the ship's programming takes over. Firing is automatic until you "de-target" the enemy, destroy it, or move out of range or until your own lasers are disabled.

Even if no ship is targeted, your ship's computers will fire automatically on enemy ships as they come within range if your lasers are activated.

2.4.3 Shadowing

When you press S to shadow a targeted ship, your ship's autopilot takes over and attempts to match the course of the targeted ship turn for turn. The higher the level of the "Move" computer program, the better you will be at matching the other ship's moves.

2.4.4 Damage to Ship Systems

Damage to ship systems has the following effects:

Engine: The ship's top speed is reduced from 10 to a number corresponding to the remaining percentage of engine function. For example, if your engine condition is 42%, your maximum speed is 4.

Lasers: Speed of laser recharging and firing is decreased in proportion to the damage suffered by the lasers.

Computers: Since the computers ultimately affect all ship functions, many systems are affected by damage to the computers. When there is computer damage, the ship moves more slowly, it is slower to switch targets, you will get hit more often by enemy fire, and less damage is done by your lasers.

Hull: When hull condition reaches 0%, your ship undergoes explosive decompression. This has a permanently negative impact on the viability of the entire crew.

If your fuel is depleted to zero, or if your engines are less than 10%, you can **press H to call a tug** that will bring you to Caldorre for refueling and repair. If the team has sufficient funds, they will be charged 2000 CR. Otherwise, the Federation Mission Command considers that such action can only be the consequence of serious crew incompetence and disciplinary action will be taken.

2.5 Spaceport Contact Procedures

There are a number of useful facilities to be found at the spaceports of Caldorre and Norjaenn. Before landing on either of these planets, you may wish to avail yourself of them. (Since Ceyjavik is a research facility, it has no spaceport facilities.)

2.5.1 Leave this Spaceport

2.5.2 Visit your Ship's Armory

The ship's armory contains a standard complement of weapons, armor and other valuable objects. It can also be used to store item that you acquire during the mission but do not wish to carry around with you. At the beginning of the mission the armory contains the following items:

- 3 flight jackets
- 1 dagger
- 1 power fist
- 1 cyro cutlass
- 1 auto pistol
- 2 auto pistol cartridges
- 1 arisian lens
- 1 holophone

Once you have chosen a weapon from the armory and given it to a crew member, you must use the Crew Command System to equip that member with it before it can be used in battle. See Section 3.

2.5.3 Orbit the Planet

This option initiates the landing process. By the use of the crosshairs, you select the location on the planet that you wish to visit and hit the "Enter" key to accept your choice of landing sites (or by using the # 1, 2, or 3 if you wish to visit one of the 3 Caldorre towers). If landing on other than a Caldorre tower, the crew will utilize the ATV to travel planetside.

2.5.4 Visit Recruitment Center

In the unfortunate event that one of your crew should be lost in combat, you must visit the Recruitment Center on Caldorre as soon as possible. Until you replace the lost crew member, your ship's functions will be impaired as follows:

Pilot: Ship cannot engage in space combat.

Navigator: Ship cannot travel in hyperspace. Long-range scanner only operates at level 5. Federation Communication Channel system map is rendered inoperative.

Communications Officer: You cannot receive Federation messages, hack ship's computer programs, or communicate with targeted ships.

Engineer: Damage to ship cannot be repaired until you return to drydock.

Medic: Wounded crew members cannot be healed.

Because replacement members have not undergone the special mission training program, they have characteristic ratings of 14 for all categories: strength, stamina, etc. Also, they cannot function as expedition leaders when the crew is on foot.

There must always be at least one of the original crew members in the mission. If the original five crew members are all lost, whether in a single tragedy or one at a time, the mission is at an end.

2.5.5 Visit Science Foundation

Your party can obtain funds by accomplishing Science Foundation research missions. When you land at the specified location and place the equipment, the Foundation will credit your party's account with 700 CR.

2.5.6 Visit Space Miner's Guild

Another way to obtain small amounts of money for your mission is to use the All Terrain Vehicle to mine valuable ores on the planets' surface. These minerals are typically found in the mountainous regions of the planets of this system.

The Miner's Guild is currently interested in these three minerals:

- **Kokodite:** Crumbly yellow ore. Used in ceramic components of spaceship booster engines.
- **Cryolote:** Iridescent black crystals. When refined, forms the power source for most energy weapons.
- **Elionium:** Radioactive greenish dust. Acts as a catalyst in tissue-cloning procedures.

When you have picked up a quantity of ore, visit the Space Miner's Guild to drop it off and be reimbursed.

2.5.7 Enter Fuel Depot

Refueling is available at the rate of 20 CR per 100 fuel units on Caldorre, and 30 CR per 100 units on Norjaenn.

2.5.8 Enter Dry Dock (Only at Caldorre)

When your ship has been damaged in battle, and you can't wait for your ship's engineer to effect repairs, visit the dry dock. Federation trained technicians can repair your ship at the following rates:

System	Price	Improvement
=====	=====	=====
Shields	5 CR	5 %
Hull	7 CR	5 %
Engine	15 CR	5 %
Computer	20 CR	5 %
Lasers	10 CR	5 %

Section 3. Crew Command Center

You can press C to access the StarCrew Command Center from shipboard, ATV, or when exploring on foot. Use this system to inspect crew profiles, trade weapons and items, equip weapons, and set the crew order. Each of these functions is explained below:

3.1 Return to Active Duty

3.2 Looking at Crew Profiles

Choose this option when you wish to see a crew member's rank, experience, characteristics, and skills. **You should select this option when crew members receive promotions in order to allocate the new skill(s) they've acquired.**

3.3 Trading Weapons and Items

Weapons, Armor, and items carried in backpacks can be redistributed among crew members by means of this option. If a crew member is killed, use this option to give their possessions to their crewmates. Remember a crew member can only carry one type of Armor at a time though.

3.4 Equipping Weapons

Although a crew member may be carrying a weapon, it can't be used in combat until you equip the person with it. Choose this option as soon as you obtain a new weapon so that crew members will be ready for battle at any time.

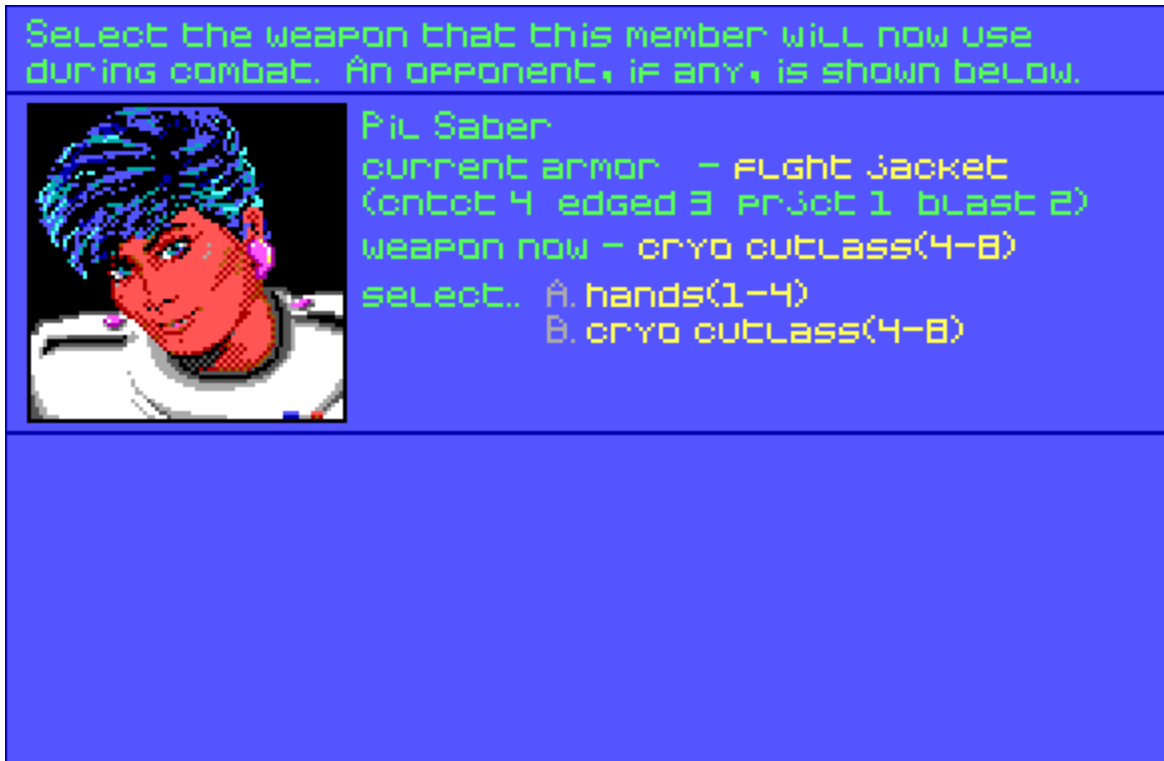


Figure 3. Equip Weapons Menu

3.5 Setting the Crew Order (Only available from GCH)

This option determines the order in which crew members advance when on an enemy ship or indoors. **The first crew member speaks to the characters the party encounters, so if you were trying to get information, you might want that person to be someone with high charisma and comprehension.** If you were expecting trouble, you would probably want a strong fighter to take the point.

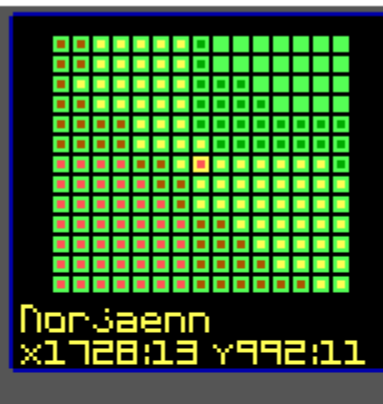
Section 4. The All-Terrain Vehicle (ATV)

The All-Terrain Vehicle is a self-contained vehicle whose extremely rugged armor and versatile sensor systems make it suitable for exploring the possibly hostile surface of an alien planet.

Top View Monitor Display



Navigation Display



Items to buy and sell.
(1) General Store

kakodite	0
cryolite	0
elionium	0
empty area	80

-no science load-



Viewscreen Display

Message Display

ATV Status Display

Figure 4. ATV Display Screen

Top View Monitor Display: This area of the screen gives you a top-view display of the ATV's immediate surroundings. Friendly animals are indicated by a blue dot, hostile ones by red. Mineral deposits appear as a light-blue dot. (In CGA all animals are red dots and minerals are white.)

Navigation Grid Display: This is a stylized display of the surroundings along with a readout of your current coordinates.

ATV Status Display: This display shows the remaining fuel. When an encounter is selected, it shows a picture of the encountered creature and a catalog of its natural weapons.

Message Display: A text summary of the current sensor readings appears here. When the sensors indicate that there is an action to be taken, such as mining a mineral

deposit or healing an injured animal, a menu appears here from which you can select this action.

Viewscreen Display: This portion of the screen displays a representative view of the current surroundings.

4.2 Navigation

To navigate the ATV, you use the same quadrant of keys that you use to steer your spaceship.

Although the ATV is well-armored, it is subject to mechanical breakdown, especially when driven for long periods over rugged ground. The length of time repairs will take depends on the composite ATV repair skill level of the entire crew.

To enter a structure, maneuver the ATV around until it is facing the structure. If the structure can be entered, the message display will give you the opportunity to do so.

When your party is exploring on foot, as when you enter a structure from the ATV, board another ship, or enter a spaceport, you will use the Ground Combat Helmet (GCH), explained in the next section.

Section 5. The Ground Combat Helmet (GCH)

The GCH provides a multi-channel interface with your party's defense, attack, and information capabilities. It is custom designed for the individual wearer and is programmed with your crewmate's names and Federation characteristic profiles. This information automatically adjusts itself as your party becomes more experienced.

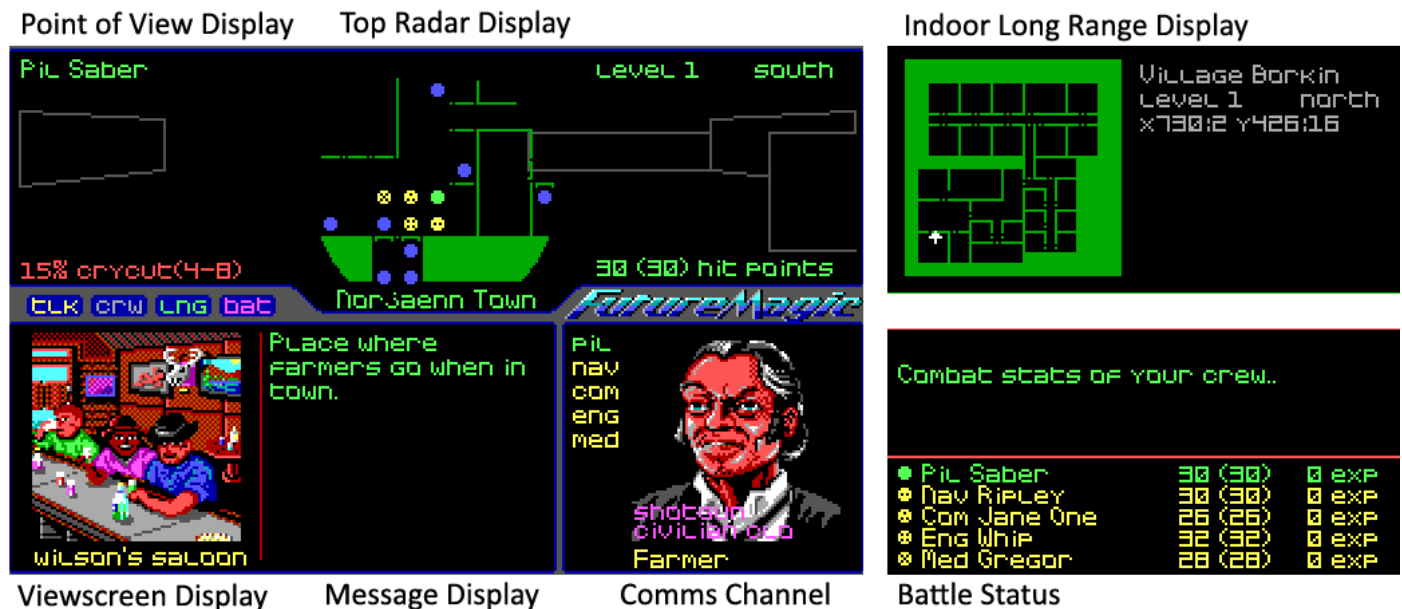


Figure 5. Helmet Display Screen

Point-of-view Display: This portion of the display shows the area immediately in front of you (as group leader) as a matrix of two-dimensional planes. The display is reoriented as the party moves through its surroundings.

Around the periphery of the display is the following information: your name; which level of the structure you are currently exploring and your directional facing; your current maximum trauma rating; and your currently equipped weapon, its status, and its damage potential.

Top View Radar Display: Superimposed on this display is a top-view diagram of the GCH's automatic sonar pulse readings, which also reorients itself as your party moves.

The team leader appears in green. Crew members are shown in yellow, with their order in the party denoted by the number of dark pixels on each blip. Friendly beings appear as blue blips, and hostile ones appear in red. (In CGA the team leader is turquoise, crew members are white, all others are red.)

Indoor Long-Range Display: By pressing L, you can use the GCH radar system to scan a 20 move square map section. This readout is displayed in place of the viewscreen and message displays.

As the members of your team improve their recon skills, you will be able to discern other items on this display, as follows:

Cumulative Recon Skill	Locations Displayed
2	Weapons shop
4	General stores
6	Training facilities
8	Ship's docked location
10	Access points to new map locations
12	Elevators between levels
14	Armories
16+	Chests and footlockers

Communications Channel Display: The left portion of this lower right display window shows a text listing of the available communications channels. Crew members appear on this listing in their crew order. This display also shows a picture of the currently targeted being, and that being's complement of weapons.

Message Display: A text summary of the current surroundings appears here. When one of your part makes a voice-channel comment, it is also displayed here. When there is action that can be taken, such as an area in this structure that you can choose to enter, a menu in this portion of the display gives you the opportunity to do so.

Viewscreen Display: A composite picture of the current surroundings appears in the lower-left portion of the display.

5.2. Command Options

5.2.1 Battle Status

Press B to see your combat statistics. The readout shows the crew order and each member's hit points and experience over grade level.

5.2.2 Crew Command

Press C to inspect crew profiles, trade weapons and items, equip weapons, and set the crew order. The Crew Command System is explained in section 3.

5.3 Intelligent Text Communication System

The GCH uses a version of the same Intelligent Communication System found in the Interceptor-class starships. When you initiate communications with a member of your crew or an encountered being, you are presented with a menu of relevant phrases. You select from these phrases in response to the other party's replies.

The ITC is context-sensitive in its display of phrases. You may find that there is more information to be obtained on a particular subject after a period of time has passed.

5.3.1 Crew Member Channels

When you select one of your crewmates' communications channels, that person's picture appears on the screen (see your Reference Card for more information on selecting crew member channels). If you select your team leader's channel you will be able to use any abilities that they might possess. By selecting your Medic's channel you will be provided with a menu that gives you the option of selecting the order in which you wish to heal your crew.

5.3.2 Encounter Channel

You can only communicate with encountered beings whom the sensors deem to be friendly. Remember that Federation regulation 334-MV1 paragraph Q specifies stiff penalties for attacking any person so designated.

5.4 Battle Procedures

The GCH interface enables you to target a hostile being and to use your currently equipped weapon to combat it. Use the space bar to target a hostile being. You cannot target a being that is not in your line of sight.

Press "Enter" for the team leader to fire on a hostile being. Your other team members handle their own firing.

Weapon range for each class of weapon is as follows: Contact and edged weapons have a range of two squares on the short range display; projectile weapons and blasters have a range of four squares.

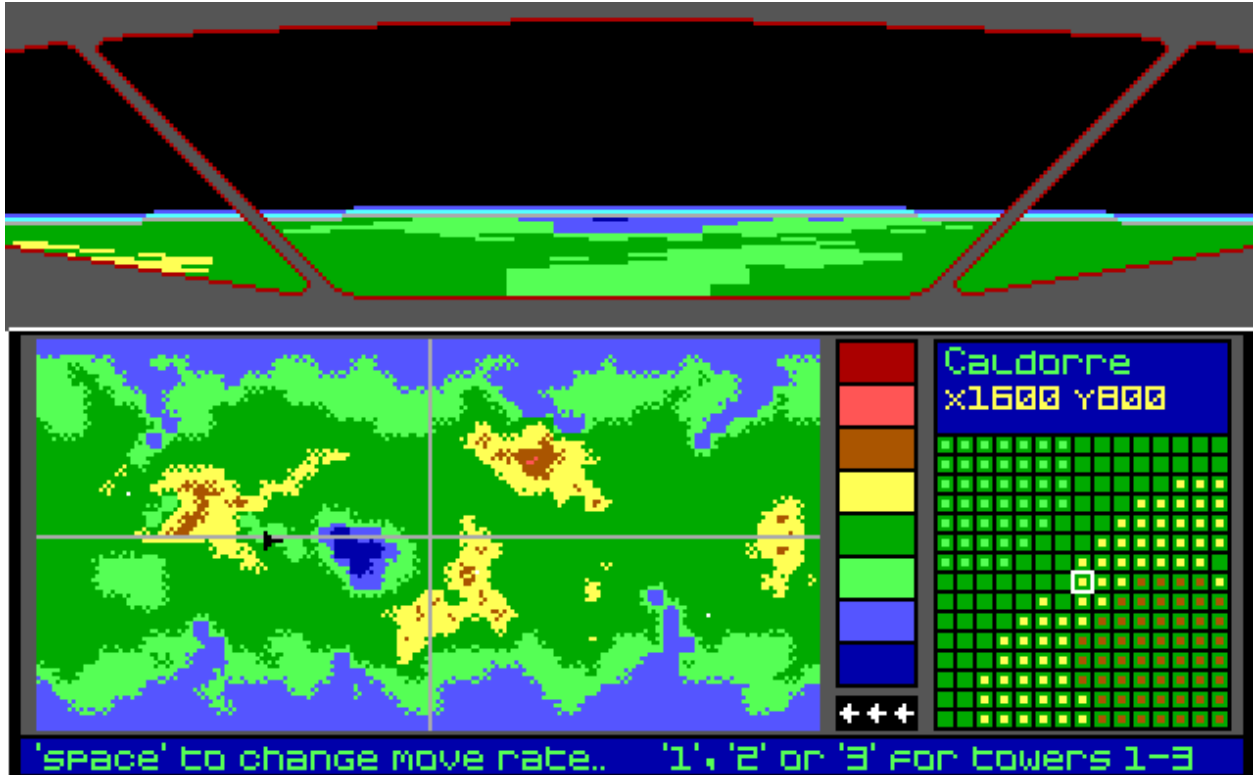


Figure 6. Caldorre Planet map

Section 6. Survey Results on Caldorre System

The following Information is excerpted from the Official Report of the Federation Survey Party of 2990.

6.1 Caldorre

6.1.1 History of the Caldorre System

When the first Federation exploration teams entered the Caldorre system in 2709, they found to their surprise that its most Earthlike planet (for which the system was named) was already inhabited by a highly advanced and technologically literate culture. In fact, the Caldorrians detected and hailed the Federation ship before it even knew there was life on the planet.

The Federation explorers found the Caldorrains eager for contact with spacefarers. Communication proved easy, since the Caldorrians spoke a much corrupted descendant of an obsolete language called English -- a precursor of modern Commonspeak. From this, and from the fact that this region of space was known as a destination for early deep space travellers, it was theorized that Caldorre was originally settled by a lost Earthish colony ship hundreds of years before.

In 2720, Caldorre and Norjaenn became fully-represented members of the Federation of Planets. Relations between the heartworlds of the Caldorre system have generally been friendly. The Caldorrians value the influx of culture, trade, and industry brought by the Federation, while the Federation finds Caldorre a useful

stopping point for outbound expeditions, as well as a valuable trade and population center in its own right. In addition, the system offers food and mineral resources that are vital to continued Federation expansion in this area of space.

6.1.2. Geography and Lifeforms

Caldorre's major landform is a single huge continent that girdles the planet's equator. Except for the polar regions, the climate is generally humid and temperate. The planet is widely and luxuriantly forested, possessing many of the characteristics of an Earthish rain forest. Known animal life includes cave bears, gorillas, and dust snakes, all of which have been known to be hostile to human beings.

6.1.3 Politics and Culture

Small communities of tribal humans are found at various locations on the planet. It is a point of contention among Federation scientists as to whether these are descendants of the same colony ship that established the Tower culture, or whether they are the evidence of a separate human landing on Caldorre. The attitude of the tribal dwellers toward the Tower inhabitants can generally be described as benignly oblivious.

The only other human life on Caldorre is centered in the three huge Towers which rise several kilometers above the surface of the planet. The top of each Tower is a docking port, through which atmospheric crafts enter the Tower. Below that are hundreds of levels which house all aspects of human industry, commerce, and recreation. The lower levels fall into several different basic types:

- Bar and Club levels house establishments that cater to visitors' needs for recreation and conversation.
- Store levels provide weapons and other supplies for visitors.
- Apartment and Office levels comprise living and working quarters for Tower inhabitants. The facilities of interest to travellers on these levels include the aerobics studios, plastic surgeon, weight gym, library, and tennis/racquet courts.

The citizens of Caldorre never leave the Tower where they live, and only know of the rest of their world's surface by means of geoeducational holograms. Their sole industry is providing services for space travellers.

Caldorre boasts the most complete Federation-run spaceport in the region, with facilities capable of repairing and resupplying any class of spacefaring vessel.

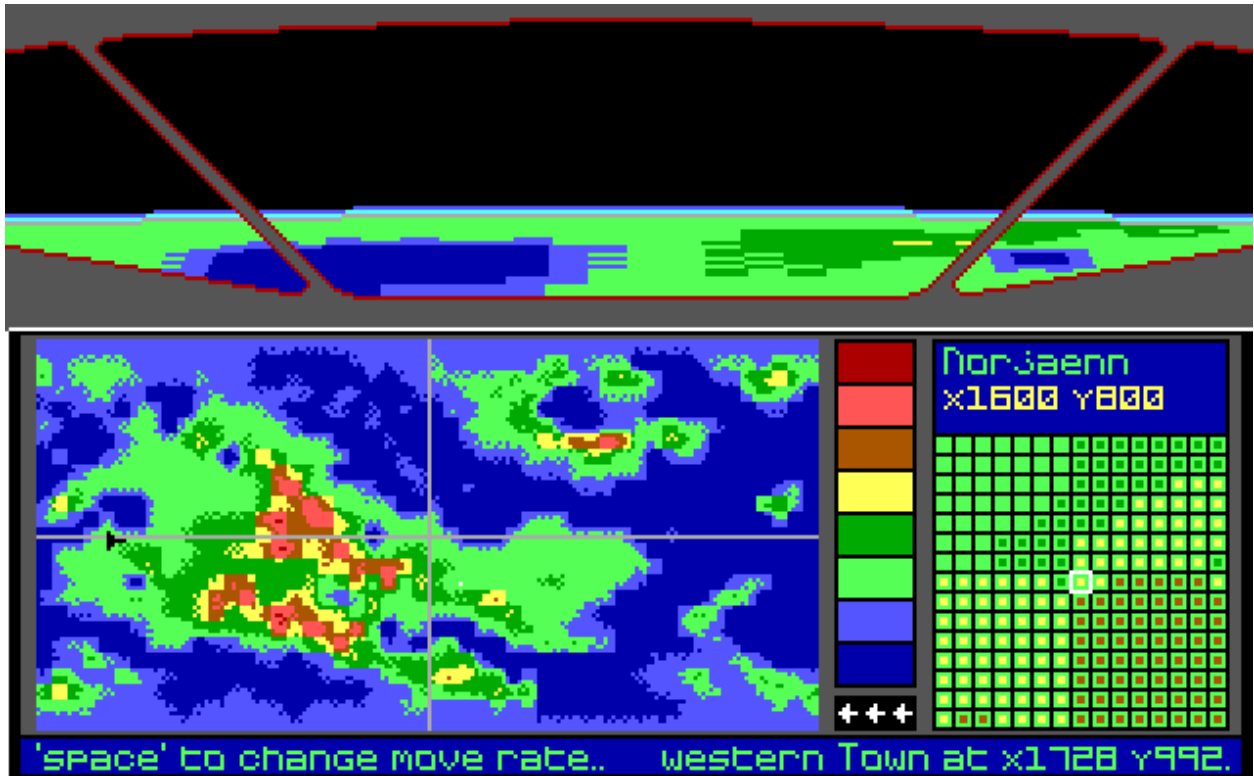


Figure 7. Nojaenn Planet Map

6.2 Norjaenn

6.2.1 Geography and Lifeforms

When the original Federation exploration party surveyed Norjaenn in 2709, they theorized that its soil must be extremely fertile because of the mineral rich god that shrouds the planet for a portion of the year. With the help of Federation development contracts, the planet's extremely rich grain and livestock industries now make it the breadbasket of the entire region.

Landforms include one large continent and numerous islands, the largest of which is located to the northwest. The land is mostly meadowland and rolling hills, with a ring of steep, thickly wooded mountains located on the main continent. There are two seasons on Norjaenn: "misting," when fine rains sweep the farming areas of the planet for several months at a time, and "graintime," when the weather is predominately clear and temperate.

Aside from the cattle, which are a hardy variant of the Talmanian "Tusker" breed, large lifeforms are rarely found outside of the mountainous areas. They include cave bears and grey bats, both of which can be dangerous to travellers.

6.2.2 Politics and Culture

The political forces on Norjaenn are perennially embroiled in land-use squabbles of Byzantine complexity. The two main groups, the Ranchers and the Farmers, have a long standing political rivalry. Each group is made up of approximately ten feudal clans, each of which has its own alliances and rivalries.

Currently, the two groups are abiding a treaty which apportions the usable land. Representatives of each family meet together once a year under a pledge of sanctuary to decide planetary affairs. No one knows how long this uneasy peace will last. Observers fear that war could break out again at any provocation.

Human life on Norjaenn is mostly found in scattered farming communities. The center of trade and culture is the two town Tolte. The planet has a Level 2 spaceport, with full supply capability, but no repair facilities.

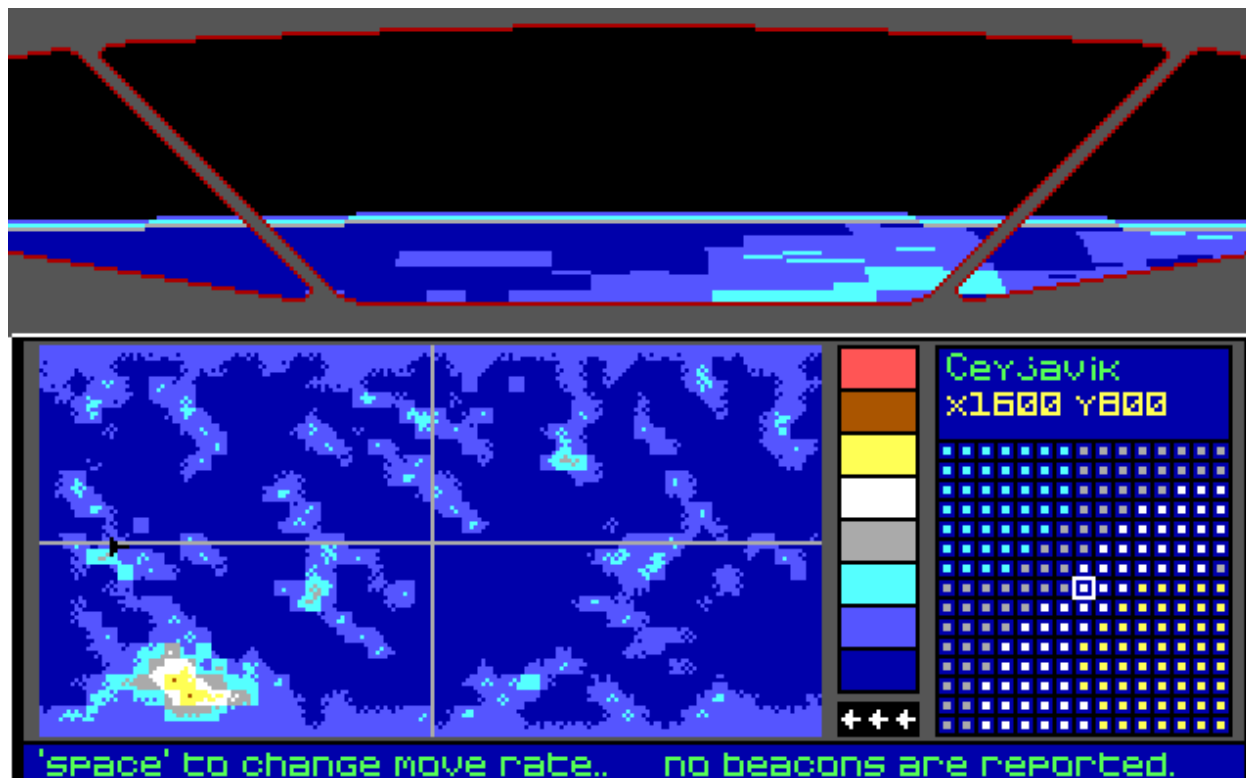


Figure 8. Ceyjavik Planet Map

6.3 Ceyjavik

Ceyjavik, the most remote planet in the Caldorre system, has a wild and inhospitable climate that makes it ill-suited to human colonization. However, the fragile system of animal life that manages to survive such conditions is of interest to science, and so the Federation has established a biological research laboratory on Ceyjavik.

6.3.1 Geography and Lifeforms

Ceyjavik's surface is mostly ocean, with two polar continents that are home to numerous live volcanoes. These volcanoes continually spew molten debris, which congeals in the frigid sea to form the scattered bergs of buoyant lava that are the other major landforms on the planet. The volcanoes also spew vast quantities of a bluish gaseous sulfur compound which is harmless when it reaches the surface, but is toxic when concentrated in the volcanic caves.

The planet is subject to intense and long-lasting seasonal storm systems. Winds can reach 200 to 300 kph during a severe storm, and a meter of snow frequently falls in the course of a standard day. This heavy precipitation coats the floating bergs with a thick layer of frozen snow, so that they appear as icebergs by the time they reach equatorial latitudes.

The following life forms are found on Ceyjavik:

- **Ice Tiger:** Large, white and roughly tigerlike. It lives in the coves of the larger and more stationary bergs and eats sea creatures which it captures by swimming. The ice tigers are normally amiable.
- **Bush Rat:** This small rodent protects itself by remaining still, whereupon its thick scrubby coat causes it to resemble a small shrub.
- **Seals:** These are peaceful, intelligent creatures that live primarily in the water and occasionally on the beaches.

Early accounts also contain unsubstantiated reports of such creatures as blue fliers, red lizards, and lava snakes.

6.3.2 Politics and Culture

The only inhabitants of Ceyjavik are the 50 or so scientists who staff the BORKIN Laboratory (Biological and Research Kinetics). The station consists of a base camp with a landing pad for orbital vehicles, and two outpost labs that are carved into stationary bergs. These outposts consist of a cat observation facility, and a sea life/aquarium area. They are linked by an underwater tunnel.

Ceyjavik has no facilities for supplying or repairing space vessels. Federation ships are advised to bring their own supplies when visiting Ceyjavik.

Appendix 0: Command Reference

Most of the keyboard command options are seen on-screen. For example, when in space you will see **tlk** **prg** **fed** and **brg** options. Pressing the first letter of each command will open new options. For example, pressing B for brg when at a planet will allow you to visit the ships armory or orbit the planet. Some key commands are not obvious, they include:

C key to access the StarCrew Command Center from shipboard, ATV, or on foot. Use this to inspect crew profiles, trade weapons and items, & equip weapons. *This option is not available when in orbit mode.*

F9 to access options and to save the game.

Space bar to toggle available targets from shipboard, ATV, and foot.

Enter key to attack a target selected with the space bar.

O key from your ATV to return to your ship.

L key when in space to toggle scanner range.

B key when near a targeted ship with disabled engines to board it. See **2.2.4**

H Key to call a tug from space should you run out of fuel. The fee is 2000 cr.

Appendix 1: Weapons

This section describes weapons commonly used in the Caldorre system. The going price and damage range are listed for each weapon. **Purchase or sale of weapons marked with an asterisk (*) is not allowed** under Federation Regulation M-435-B3N, subparagraph L.

Contact Weapons (Range: 2 moves):

Weapon	Damage Range	Price
Hands	1 - 4	---
Power Fist	2 - 10	40
Sonic Mace	3 - 12	90
Gyro Pike	4 - 16	160
*Neuron Flail	10 - 30	---

Edged Weapons (Range: 2 moves):

Weapon	Damage Range	Price
Dagger	2 - 6	20
Cyro Cutlass	4 - 8	50
Power Axe	3 - 12	120
Energy Blade	5 - 20	200
*Edged Spinner	14 - 28	---

Projectile Weapons (Range: 4 moves):

Weapon	Damage Range	Price
Auto Pistol	2 - 8	100
Shotgun	3 - 12	300
*HyperUzi	6 - 24	---
*AK 4700	7 - 28	---
*Gauss Rifle	8 - 32	---
*Thermocaster	10 - 40	---

Blasters (Range: 4 moves):

Weapon	Damage Range	Price
Hand Laser	6 - 30	900
*LR Laser	8 - 40	---
*Plasma Gun	10 - 50	---
*Neutron Gun	20 - 60	---

Ammunition:

Item	Rounds	Price
-----	-----	-----
Auto Pistol	50	40
Shotgun Pak	35	60
Uzi Magazine	35	100
AK Magazine	30	110
Gauss Magazine	25	210
Thermal Pak	20	370
Crysprism	25	900

Armor:

Item	Price
-----	-----
Uniform	---
Flight Jacket	100
Steel Mesh	190
Flak Jacket	550
Kevlar Suit	870
Laser Reflec	950
Combat Armor	3500

Future Magic Art Notes:

One afternoon, while I was busily "pixelating" on my computer, Karl Buitter poked his head into my cube. On his face was a big smile and in his hand was a thick stack of papers; his script for Sentinel Worlds. We sat and discussed it a while and I came away with the notion that this would be a rather nice, short, and relatively undemanding art project involving 30 to 40 pictures, some map graphics, and a few spaceships. I told him I really hadn't done too many portraits of people but he assured me that there would only be a few major characters. Well, a year and a half later, I've done over 150 pictures, 3 entire world environments, and a ton of portraits. So much for initial notions.

Reading Karl's script was a lot like reading a thorough movie scripts or short novel. Each character was unique, well-developed, and colorful. I felt that the hardest job was to come up with faces and places that would portray the depth of his vision. Following that was the fact that each picture, person, and landscape had to fit in an 80 by 80 area with 16 EGA colors of IBM/Tandy's choice. We talked at length about who should look like what, who needed a bigger nose, and if a towel was really necessary. It felt like I was a casting director for a Hollywood movie. Before long, Karl had my preliminary art up and running, and we were on our way.

Three things stood out in rendering any of the pictures of SW1: FutureMagic. One, they had to be unique and distinctive. For the player, the picture of Alex Kann would BE Alex Kann and I didn't want there to be any mistaking him for someone else. Number two was dramatic situations. The pictures don't always appear and when they do it's usually at a key scene. I'd have to take advantage of that because I couldn't rely on panning scenes or establishing shots. Third but foremost was quality. Karl is a quality game designer and programmer, hence nothing short of the best possible execution would do.

We've tried hard to accomplish these goals and make Sentinel Worlds I: FutureMagic a magically enjoyable experience. We hope you'll find yourself agreeing that we did. ~ Graphic Artist: Michael Kosaka

Notes by the sound designer..

When Karl asked me to handle the sounds for FutureMagic, 2 problems immediately surfaced. First, the program was to run primarily on the PC single speaker system, the most limiting of all the available home entertainment computers. Second, Karl wanted top-notch rock/pop music, citing examples of Michael Jackson, Robert Palmer. It seems to me that if I were capable of cranking out that kind of music, I would be making albums and not videogame soundtracks; so, leaving the second problem to puzzle over for later, I concentrated on the first.

I set about creating a music driver that would simulate many instruments at once, particularly drum sounds (which was important to Karl, a drummer himself). Though only one "instrument" plays at any given time, they are swapped around so fast that it gives the impression that more than one voice is playing. Voices can be created with varying rates and depth of tremolo, in order to simulate guitar/synthesizer sounds; and other effects intended to portray snare, bass, and tom-tom drums.

As far as the sound effects themselves went, well that was much simpler; it's pretty easy to come up with sounds of weapons that haven't been built yet; but, I think that a gyro pike really will sound something like that.

Once the driver was "perfected", the task of composing music finally arrived. Not only was I to come up with Top 40 tunes (except for the "old west" piece), the band I hired had to fit into the one and a half inch pc speaker and the members had to take turns 240 times a second being heard! I experimented with drum riffs inspired by examples provided by Karl and built songs up from there. And, I also used this project as a chance to create original music of the type I wanted to do myself anyway -- but please don't tell Karl. ~ Sound Designer: Dave Warhol

Designed and programmed by: Karl Buitter

Computer Graphics: Michael Kosaka

Sound and Music: Dave Warhol

Producer: Dave Albert

Assitant Producers: James Bailey, Michael Meischied, Chris Wilson

Document Edit: Whane The Whip

Digital Editor Note: I bought this game 'back in the day' on a 3.5" disk and it has left an impression on me that's lasted 25+ years. If you have a copy of this game then it is more than likely that since the game has fallen into abandonware, that you did not pay for it. At the very least, I hope that you will acknowledge the designer and programmer Karl Buitter at <https://twitter.com/karlbuitter>. And if you can find a copy, it's worth the purchase just to get your hands on the original manual, typo's and all. ~ **Whane The Whip**