FRONTIER

Adventures on the Edge of Human Space

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Introduction

An introduction to Frontier v0.5, including the latest release notes.

Quick Start

If you're anxious to start playing right away, this single page of instructions contains everything that you need to know.

Playing the Game

A longer description of how the game is played and an explanation of all commands and screens.

Technical Reference

A description of all the ships, weapons, and devices that appear in the game.

Designer Notes

Some notes about the design of the game and ideas for future enhancements.

Frontier v0.5

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Welcome to the Frontier

This is a game of both skill and strategy in which you explore the various star systems of the Frontier while seeking to increase your income and pay for improvements to your ship. There are plenty of opportunities to make money in the Frontier, from escorting freighters, to raiding pirate outposts, to competing in the Spartacus Battle Arena. But the dangers are equally numerous: pirates protecting their territory, zealous miners staking out a claim, terrorists bent on attacking all space traffic, and of course, the ancient war machines of the Mohadjrin, left over from the previous millennium's war. To succeed, you must make the right decisions: Fight now or retreat and repair the ship? Buy a new shield generator or two-dozen tracking missiles? Use the unknown device or sell it? As your skills improve and your ship becomes more lethal, you'll be able to travel deeper into the Frontier to face more powerful opponents and loot ever more valuable treasures. If you survive, you could return to Earth with enough money to buy a small country. If you don't, your salvaged wreckage will finance someone else's exploration of the Frontier.

Release Notes for Version 0.5

Frontier v0.5 is not yet complete. The majority of the game engine is done: various enemy ships, stations, shipwrecks, missiles, and other objects are implemented and, for the most part, work quite well. Similarly, the first four or five star systems are pretty well fleshed out and well populated, but as you get deeper into the game, the amount of detail and variety decreases quickly. Beyond the first eight or ten systems, the game becomes more monotonous and less balanced. Nevertheless, there's quite a lot that is working in this release, and I believe that beginners should be able to play for quite a while before hitting any limitations.

Here're a few things to watch out for in this release:

Overall Game: The most noticeable limitation in this release is the lack of guidance provided for the player. There's no indication of what the player should do to win the game, nor any ideas about what the player should do next. Right now, the player is pretty much left to wander around the galaxy exploring.

High-Level Items and Ships: The beginning part of the game is well populated with interesting enemy ships and items, but later parts of the game are not as well developed. Future releases will have more high-level enemy ships and items.

Shipyard: The screen that allows the player to install new armor and weapons is quite primitive. In future releases, this will be replaced by a more graphical screen.

Attacking Friends: In this release there is not much of a penalty for attacking friendly ships and stations. In the future, the player will be black-listed for such attacks.

Technical Reference: The technical reference section of this help file is

not complete; not all the ship and items available in the game are currently documented.

If you have any questions, comments, or complaints, please write to one of the following addresses:

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Quick Start   In the unlikely event that you wish to begin playing the game without first reading this manual, the following bits of knowledge will help you:

The object of the game is to accumulate wealth while exploring the star systems of the Frontier. At the end of the game, you will be scored by how many credits you've amassed, how many enemy ships you've destroyed and by extent of improvements that you've made to your ship.

1.   While playing the game, press the [F1] key to get a list of all key-commands used in the game.

2.   When you first enter a system, press the [M] key to see a map of the star system. Visit each planet and asteroid field to find friendly and enemy stations.

3.   Press the [D] key to dock. Dock with friendly stations to buy and sell items, to repair and refuel your ship, and to install new weapons and devices.

4.   Attack enemy stations and ships. After destroying stations or ships, dock with their wreckage and loot any valuable items.

5.   If you find interesting armor, weapons, or devices, take them to a station with a shipyard and install them on your ship.

6.   When you've finished exploring a system, find the Mohadjrin stargate and pass through it to go to the next star system. Use the [G] key to enter a gate.

The Eridani   The whine of oxygen pumps wake you and the first thing you smell
System   after the fourteen-month trip from Earth is the antiseptic air of your Araznikov hyper-sleep coffin. The lights on the instrument panels are unbearably bright, though fortunately most are green. A determined pain fills your skull, and you wonder briefly about where you are and where you would rather be. A stray piece of memory surfaces, and you realize that you are now in the Eridani Star System. The beginning of

the Frontier.

With the ancient governments of Earth more than a year away by ship, and the influence of the Great Corporations on the decline, the Frontier is now ruled by a growing number of independent merchants, profiteers, scam-artists, and pirates. Someone with a ship, a dozen hours in a training Sim, and a couple of lucky breaks could earn a nice living either escorting freighters or plundering them. But Eridani is only the beginning. The one thing that makes this otherwise embarrassingly average system special is the fact that somewhere within orbits an ancient Mohadjrin stargate. Pass through it and you'll find another system and another gate. Beyond that, another still. The chain of gates extends throughout the galaxy, tying together systems that, for incomprehensible reasons, were once favored by the Mohadjrin masters. No one knows how far the chain goes, but many who've returned have brought back the riches, knowledge, and weapons of the now extinct alien race. Of the many who never returned, not much is known.

Your Ship   Your ship is an Osaka-class multi-role transport which you bought as surplus from a Nakura military base. Though normally used as a troop transport, you've been able to adapt it to your needs by adding some heavier armor and a single recoilless cannon. The following pages describe its operation:

> Main Console
> Thrusting and Turning
> Ship's Cargo Hold
> System Map
> Docks and Stargates
> Combat
> Main Reactor and Fuel
> Improving the Ship

Main Console   The main console of your ship displays all the information you need to pilot it. Click on the individual displays below to see a description:

Short-Range Scan: This is the main screen of your ship and the one which you'll be using most. Ships within a certain range will appear inside this scanner. Note that some ROM upgrades are available which will visually indicate objects that are out of range.

Long-Range Scan: This screen shows a large area of space around your ship. Enemy ships show up as red dots; friendly ships show up in blue; all other objects generally show up as gray. The coordinates in the lower-left corner indicate your position in the system relative to the central star.

Armor Display: The current state of your armor is shown here. The bar on the left shows the condition of your rear armor; the one on the right shows your front armor. The bars measure the level of damage sustained so far.

Weapons Display: This screen shows current weapon selected and the amount of ammunition left for that weapon. There are some ROM upgrades which will turn this display into a targeting scanner which will display information about the current target.

Multi-Function Display: This screen shows the status of any of the devices (other than weapons) installed on your ship. Usually, the most important device is the shield generator, which show its current level.

Reactor Output: This bar shows the percentage of reactor power currently being used. Using more power than the reactor is able to provide will lead to an overload and may damage the ship.

Fuel: This bar shows the amount of fuel currently remaining.

Thrusting and Turning   You can fly your ship using the arrow keys. The [Down] arrow key engages the main engines and moves your ship forwards. The [Left] and [Right] arrow keys turn your ship left and right. Once you start moving in a certain direction, your ship will not slow down. If you want to stop or slow down, you need to turn your ship until you're facing in the opposite direction and engage the main engines.

Hold down the [Down] arrow key to thrust continuously in one direction. Your ship will move faster and faster until it reaches its maximum speed. Depending on the total mass of your ship and cargo, your acceleration will vary. For example, you will notice that with a full cargo load, you will not be able to speed up or slow down quickly. To increase the performance of your ship, you need to install a drive improvement device.

Ship's Cargo Hold   At any time while you're at the main console, you may press the [S] key to look inside your ship's cargo hold. From this screen you may view the contents of you cargo hold, use some item in the cargo hold, or refuel the main engines with fuel from your cargo hold. Note that this screen (as well as all docking screens), show you how many credits are in your account and how much room is left in your cargo hold.

The *View Cargo* button shows all the items that the ship is carrying, including any armor plates that your ship is using and all installed devices.

The *Use Item* button allows you to use special items that you're carrying. [Currently, the only items that you can use are the steel drums with strange markings and the ROM biosofts.]

The *Refuel Core* button allows you to use trillum rods to refuel the main engines.

System Map   At any time while you're at the main console, you may press the [M] key to display a map of the current star system. This map will show the orbits of all the planets in the system as well as the locations of any asteroid fields. As you explore different parts of the system, you will also see icons on the map indicating the presence of stations. Here's a list of all the icons and what they mean:

◀	Current position of your ship
+	Location of stargate to previous system
○	Location of stargate to next system
☐	Large friendly station
☐	Large enemy station
☐	Friendly station
☐	Enemy station
⬚	Abandoned station

Docks and Stargates

As you travel around a system you will often see space stations orbiting a planet or just floating in an asteroid field. Many of these are friendly (or at lest neutral) stations that have items for sale or perhaps a shipyard that can repair and upgrade your ship. To dock with these stations, you must move your ship close enough and press the [D] key. It's generally a good idea to dock with something, even if you don't know what it is at first.

In some systems, you might also encounter unfriendly stations such as pirate outposts or terrorist bases. These will almost always attack you on sight and will not allow you to dock. If you are able to destroy the station, however, you will be able to dock and loot its remains. Similarly, sometimes when you destroy an enemy ship it will leave a wreck behind. You can dock with wreck and loot it.

Every system also has at least one Mohadjrin gate. These relics employ a technology beyond our current understanding, but you are able to pass through them by pressing the [G] key when your ship is over one.

Combat

The basics of combat are very simple: maneuver your ship until you are in a position to fire while preventing your opponent from doing the same. Once you're in position, use the [Space Bar] to fire your main weapon. If you hold down the [Space Bar], you will fire repeatedly as quickly as your weapon can reload.

Although your ship starts out with only a single weapon, as you explore various star systems you will find other kinds of weapons that you can install on your ship. For example, you might want to install a

missile launcher on your ship so that you can use the various missiles that exist in the game. If your ship is equipped with multiple weapons, you can use the [Tab] key to cycle through them all. The display at the lower-right of the screen shows the current weapon that you have selected.

The following sections discuss some of the different types of weapons in the game.

Energy Weapons

Energy weapons are weapons that do not have ammunition. You may fire these weapons as often as you want without exhausting them. Note, however, that every time you fire them you will draw some amount of power from your main reactor. The more powerful the weapon, the more power you will draw. As with all devices, you must insure that your reactor is capable of supplying enough power, or else you risk overloading the reactor and damaging your ship.

When the game starts, your ship is equipped with a recoilless cannon, which is considered and energy weapon. Other examples of energy weapons are the pulsed-laser cannon, the Mohadjrin laser, and the X-ray laser cannon.

Missile Weapons

Unlike energy weapons, missile weapons all require ammunition. For example, if you install a plasma cannon on your ship, you will not be able to fire it unless you have some plasma cartridges on board. The weapons display at the lower-right of the screen shows the amount of ammunition available for the current weapon. In general, missile weapons are more powerful than energy weapons and require much less energy to launch. Unfortunately, they are generally more expensive to use since you need to constantly buy (or loot) more ammunition.

The IMP9 missile launcher is a particularly common type of missile weapon, and it is also special because it can launch many different kinds of missiles. Some missiles, such as the EI400-J, are dumb missiles that fly straight and explode on contact. Others, such as the fragmentation missile, will explode into shards when it approaches a target. Still others, such as the Anvil-class missile, will track their targets. If you have an IMP9 missile launcher installed, you can switch between the different kinds of ammunition using the [Tab]. Because the IMP9 launcher is so versatile, it is recommended that you install one as soon as you are able to afford it.

One feature of missiles is that they often have a nose camera that allows you to follow their progress. If you press the [V] key after launching a missile, you will be able to follow it as it flies towards its target.

Targeting Devices

At some point in the game you might find a ROM-upgrade that enables your ship to track enemy targets. This means that you will be able to lock-on to a particular enemy ship and stations even at a distance. When you've locked-on to a target, any tracking weapons will automatically be directed towards your target (normally they would find the closest target). In addition, you will see the ship in your

weapons display.

To target the nearest enemy ship, press the [R] key. To cycle to the next target, press the [T] key. To clear your target screen, press [Y].

Main Reactor Your ship is powered by a fusion reactor capable of providing power both to your engines and to your shields and weapons. The bar at the top-right of your main console shows the amount of energy being drawn from your reactor. Every time your thrust or fire your weapons, you will see the bar increase somewhat. Similarly, while your shields are active, you will see a constant drain on the reactor. So long as the reactor is able to satisfy the demands of your devices, you will have no problems with the ship, but if you overload the reactor, it is possible that the ship will be damaged. If this happens consistently, you will need to install a reactor improvement device, such as the Nova-class reactor upgrade.

Fuel The fusion reactor is powered by trillum, a dense mix of hydrogen, deuterium, and tritium arranged in a lattice of paladium. You can refuel your main reactor in one of two ways. At some stations, you may be able to find a shipyard that can repair and make modifications to your ship; these will always have a refueling station that charges 50 credits per rod of trillum (a normal reactor needs 10). If you happen to have some trillum rods or fusion fuel packs on board, you can refuel the reactor yourself by calling up the Ship's Cargo screen with the [S] key.

Improving the Ship One of the goals of the game is to improve your ship so as to be able to visit more and more dangerous systems. As you visit various stations and loot your enemies' wrecks, you may find some devices or weapons that might prove useful. For example, you might want to buy an IMP9 missile launcher so that you can use the various missiles in the game; or perhaps you might want to use the plasma cannon that you looted from some wreck. In either case, you must find a shipyard station so that the device can be installed on your ship.

Once docked with a shipyard, you will have the option of repairing your armor, installing new armor, installing or removing a device, and refueling your ship. Depending on how damaged your armor is, you will be charged a different amount, but the charge for installing armor or devices is generally a flat 100 credits.

When improving your ship, you must remember a few things. First of all, you must remember that armor is generally very heavy. If you choose to install better armor, be sure that your engines are powerful enough to provide you with adequate maneuverability in combat. Second of all, remember that many devices (shield generators, in particular) draw a lot of power. Before you install a new shield

generator, make sure that your reactor is able to handle it at full load.

Although your situation may vary, some general suggestions are possible. Your ship is initially equipped with pretty good armor and a decent shield generator, so your first improvement should probably be a better weapon. Also, since you'll often need to carry large amounts of cargo as you loot various stations, you may want to invest in upgrading your main engines and perhaps in expanding your cargo hold.

There are also some improvements that do not require a shipyard. Sometimes you will find ROM biosofts that are compatible with your ship's main computer. These can upgrade some of your computer's software, so you should try using them. Also, you may find some steel barrels with strange markings. These often have armor coatings that can make your armor more effective.

Technical Reference

The following pages have detailed statistics on all the items, weapons, armor and ships that can be found in the game.

Armor Table
Weapons Table
Ships

Armor

This table lists all of the different kinds of armor used in the game. A ship needs two armor segments: one for the front and one for the rear.

Lvl	Armor	Cost	Weight	Strength	Notes
1st	Titanium plate	100	50	5 dcms	
1st	Ablative armor	400	50	10 dcms	Half-damage from lasers
1st	Light plasteel plate	600	75	15 dcms	
2nd	Light laser plate	1,000	100	20 dcms	Half-damage from lasers and particle-beams
2nd	Medium plasteel plate	1,200	150	25 dcms	
2nd	Reactive armor	1,200	100	25 dcms	Half-damage from kinetic and blast weapons
3rd	Heavy laser plate	2,000	200	40 dcms	Half-damage from lasers and particle-beams
3rd	Heavy plasteel plate	2,000	300	45 dcms	
4th	Phased compound armor	4,000	300	50 dcms	Half-damage from kinetic, blast, lasers and particle-beams
4th	Light carbide armor	6,000	200	60 dcms	Half-damage from kinetic and blast weapons
5th	Medium carbide armor	9,000	350	90 dcms	Half-damage from kinetic and blast weapons
6th	Neutronium armor	12,000	1,000	120 dcms	Half-damage from plasma, fusion blast, kinetic and blast weapons.
6th	Heavy carbide armor	15,000	500	150 dcms	Half-damage from kinetic and blast weapons
8th	Mohadjrin steel armor	45,000	500	300 dcms	Half-damage from plasma, fusion blast, kinetic and blast weapons;

One-quarter damage from laser
and particle-beams.

Explanations　**Cost**: This is the suggested retail price of a single segment of armor; the actual price in the Frontier may vary.

Weight: The mass of a single segment of armor; the heavier the armor, the less space that will be available for other cargo.

Strength: This is rated strength of the armor. 1 dcm is the amount of energy required to burn through one centimeter of titanium. Note that different kinds of armor are more or less resistant to different types of weapons. For example, ablative armor takes only half-damage from laser weapons.

Weapons This table list some of the most popular kinds of weapons found in the game.

Lvl	Weapon	Cost	Fire Rate	Spd	Rng	Damage	Notes
1st	recoilless cannon	500	30	0.65	195	2-9 kinetic	
1st	pulsed-laser cannon	500	30	Light	150	1-6 laser	
2nd	particle beam weapon	1,800	30	0.90	216	1-12 particle beam	
2nd	plasma cannon	2,000	30	0.75	90	6-21 plasma	Requires ammo
2nd	dual laser cannon array	2,500	30	Light	150	1-6 laser (x2)	
2nd	radiation cannon	2,800	60	0.50	60	1-4 particle beam (x5)	Radiation effects
2nd	EM pulse cannon	3,000	60	0.80	96	Special	Disables target
2nd	dual recoilless cannon	3,000	30	0.65	195	2-9 kinetic (x2)	
3rd	EI SmartCannon	5,000	30	0.80	240	2-9 kinetic	Requires ammo
3rd	anti-matter pulse cannon	5,500	60	0.75	450	6-36 anti-matter	Requires ammo
3rd	Mohadjrin laser cannon	8,000	30	Light	300	3-18 laser	
3rd	positron cannon	8,000	60	0.90	270	6-16 anti-matter	
3rd	recoilless cannon battery	10,000	30	0.65	195	2-9 kinetic (x3)	
3rd	Coulombe blaster	10,000	300	0.75	450	4-48 plasma	
4th	pulsed-laser turret	10,000	30	Light	150	1-6 laser	
4th	bore-jet cannon	12,000	30	0.75	45	5-30 blast (x2)	Requires ammo
4th	X-ray laser cannon	15,000	30	Light	150	3-18 laser (x2)	
4th	plasma furnace cannon	15,000	60	0.75	450	6-21 plasma (x6)	
5th	omni-directional blaster	25,000	60	0.75	225	6-21 plasma	
5th	anti-matter spray gun	25,000	90	0.50	60	1-6 anti-matter (x5)	
6th	fusion gun battery	50,000	60	0.75	45	6-21 plasma (x5)	
7th	graviton pulse cannon	100,000	60	0.80	240	4-80 graviton	

Explanations **Cost**: This is the suggested retail price of the weapon; actual prices may vary. Note that some weapons are restricted to military use only and may not be available for purchase.

Fire Rate: This is the number of seconds that it takes for the weapon to reload and fire another shot. Note that this is the theoretical limit for a weapon's fire rate; in practice, a particular ship might have a lower fire rate.

Spd: The speed of the ordnance fired by the weapons. Speed is expressed as a fraction of the speed of light.

Rgn: The maximum range of the weapon expressed in light-seconds.

Damage: The damage that a weapon makes is expressed in dcms, which is the amount of energy required to burn through one centimeter of titanium. Since there are various factors that affect damage in combat, this table shows the range of damage possible for each weapon. Note that different weapons cause different kinds of damage, and various armors are more of less effective against certain kinds of damage. Also, some weapons fire more than one shell. For example, the dual-recoilless cannon shoots two shell simultaneously. In these

cases, the damage listed is for a single shell. If both shells hit, the damage is multiplied.

Ships

The following pages contain descriptions of some of the more common types of ships to be found in the Frontier. The following statistics are listed for each ship:

Level: This is a rough measure of how powerful the ship is.

Maneuverability: The ability of the ship to maneuver in combat. Ships that are rated *poor* generally have a low thrust-to-mass ratio and a slow turn rate. Ships that are rated *excellent* have a high thrust ratio and a fast turn rate.

Max speed: This is the maximum speed of the ship expressed as a fraction of the speed of light.

Armor: The type of armor that the ship class is generally equipped with.

Defenses: If the ship has a shield generator or other form of active defense, it is listed here.

Weapons: The weapons used by this ship class are listed here.

Fire rate: The number of seconds required for this ship to reload its weapon.

Score: The points scored for destroying a ship of this class.

All ships are listed below:

1st Level Ships

Benten-class Freighter
Grenoble-class Gunship
Nobunaga-class Gunship
Nobunaga II Gunship

2nd Level Ship

Dai-chi II Gunship
Grenoble II Gunship
Kenya-class Gunship
Nobunaga III Gunship
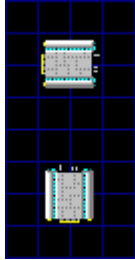Sumatra-class Gunship

3rd Level Ships

Kobe-class Gunship
Osaka-class Transport
Scorpion-class Gunship

<u>Wolverine-class Gunship</u>

4th Level Ships

<u>Nobunaga-elite Gunship</u>

Benten-class Freighter

Level:	1st
Maneuverability:	Poor
Max speed:	0.35
Armor:	Light plasteel plate
Defenses:	None
Weapons:	Pulsed-laser cannon
Fire rate:	150
Score:	35

This is an old freighter class converted into a military transport by Jakartan pirates. Although they are not designed for close combat, they are well armored.

These ships will usually be found with 2 Nobunaga-class gunships as escorts.

Grenoble-class Gunship

Level:	1st
Maneuverability:	Below-average
Max speed:	0.45
Armor:	Ablative armor
Defenses:	None
Weapons:	Recoilless cannon
Fire rate:	60
Score:	50
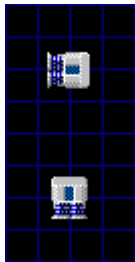
This venerable class was created by the Earth Industries Conglomerate more than a hundred years ago as a heavy patrol ship. Hundreds of thousands of these ships were built during the Second Intercorporate Wars, and many still survive today as mercenary ships.

In combat, the combination of laser-resistant armor and an armor-piercing recoilless cannon make it the bane of its opponents, particularly the Nobunaga class.

Nobunaga-class Gunship

|	
Level:	1st
Maneuverability:	Excellent
Max speed:	0.50
Armor:	Titanium
Defenses:	None
Weapons:	Pulsed-laser cannon

Fire rate:	120
Score:	20
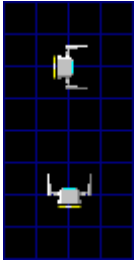
Although far outclassed by modern gunships, this old design is fast, maneuverable, and reliable. Because they are common in the military gray market, these ships are favored by pirates.
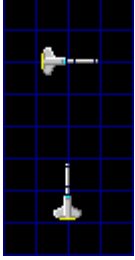
Nobunaga II Gunship

Level:	1st
Maneuverability:	Excellent
Max speed:	0.50
Armor:	Titanium
Defenses:	None
Weapons:	Dual laser cannon array
Fire rate:	60
Score:	40
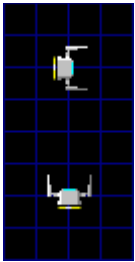
This is an improved version of the Nobunaga-class Gunship. Instead of a single laser-pulse cannon, this ship uses dual cannons with linked fire control.

Dai-chi II Gunship

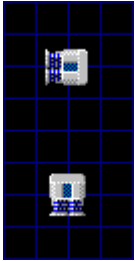|	
Level:	2nd
Maneuverability:	Average
Max speed:	0.40
Armor:	Ablative armor
Defenses:	Laser shield array
Weapons:	Recoilless cannon; IMP9 missile launcher
Fire rate:	60
Score:	100

When the Dai-chi was first deployed, it was opposed by the faster and more maneuverable Nobunaga gunships of the Nakura Corporation. Although it proved impossible to increase the agility of the Dai-chi, it was easy to increase the fire rate of its main gun. With the addition of a missile launcher and its innovative fragmentation missiles, this second generation leap-frogged the Nobunaga design.

Today, this improved Dai-chi generation is well known among mercenaries and pirates. The ship is often found with 1 to 6 fragmentation missiles.

Grenoble II Gunship

Level:	2nd
Maneuverability:	Average
Max speed:	0.50
Armor:	Light plasteel plate
Defenses:	None
Weapons:	Dual recoilless cannon
Fire rate:	60
Score:	95

Improved engines, heavier armor, and a dual cannon made this one of the most popular gunships in its time. Today, this class is used by pirates and mercenaries as escort gunships.

Kenya-class Gunship

Level:	2nd
Maneuverability:	Excellent
Max speed:	0.50
Armor:	Ablative armor
Defenses:	Laser shield array
Weapons:	Particle-beam weapon
Fire rate:	60
Score:	100

When an Earth Industries fleet invaded the Eridani system to start the Second Intercorporate War, the stations of the United African States initially remained uncommitted. But as it became clear that the UAS was favoring the Nakura Corporation, Earth Industries ships began unrestricted attacks on UAS ships and stations. Although the UAS had been preparing to go to war in the Eridani system, the actual attack came almost a year earlier than expected. As a result, the UAS was forced to defend its stations with ancient Dai-chi gunships that were easily massacred by the Grenoble II's of the Earth Industries.

A year later, the UAS deployed the first squadron of Kenya-class gunships around Hamedas III and quickly proved that they were formidable ships by routing a much large force of Grenobles. UAS engineers were able to achieve speed and maneuverability comparable to the Nobunaga class without sacrificing heavy weapons and defenses. Instead of heavy armor, the Kenya-class uses a laser shield array that absorbs laser energy. And instead of the heavy recoilless cannons, this class uses a much lighter and more accurate particle-beam weapon.

Today, these ships are still seen around the Frontier as escorts and mercenary ships.

Nobunaga III Gunship

|	
Level:	2nd
Maneuverability:	Excellent
Max speed:	0.50
Armor:	Ablative armor
Defenses:	None
Weapons:	dual laser cannon array; IMP9 missile launcher
Fire rate:	60
Score:	100

This is the third generation of this gunship class. This improvement adds an IMP9 missile launcher and ablative armor. The Nobunaga III carries up to six EI400J intercept rockets.

Sumatra-class Gunship

Level:	2nd
Maneuverability:	Average
Max speed:	0.50
Armor:	Light plasteel plate
Defenses:	None
Weapons:	EI SmartCannon; recoilless cannon

Fire rate: 90
Score: 65
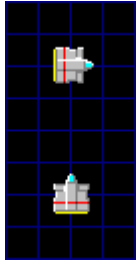
This ship was created by the Amundsen Consortium as a complement to the Dai-chi. Its most innovative feature is the use of an electromagnetic cannon with self-propelled shells. The shells of the EI SmartCannon (originally manufactured by the Earth Industries Conglomerate) are able to direct themselves towards their target, following it even as it changes course.

Most ships carry from two to twenty smart shell. Once exhausted, they rely on a standard recoilless cannon.

Kobe-class Gunship

|	
Level:	3rd
Maneuverability:	Average
Max speed:	0.50
Armor:	light laser plate
Defenses:	laser shield array
Weapons:	positron cannon; EM pulse cannon
Fire rate:	60
Score:	230
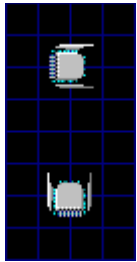
This ship class was originally designed by the Nakura Corporation as a freighter escort during the early wars of the Jakarta system. Today it is almost exclusively used by pirates and small corporations. Although the ship is slower than the agile Nobunaga gunship, it is more heavily armed and armored.

The Kobe's most dangerous weapon is its EM pulse cannon. The electromagnetic pulse generated by this weapon is capable of disabling the computer control systems of most ships. In combat, the Kobe will fire its EM cannon until its target is disabled and then switch to its powerful positron cannon.

Osaka-class Transport

Level:	3rd
Maneuverability:	Average
Max speed:	0.50
Armor:	reactive armor
Defenses:	magnetic shield array
Weapons:	recoilless cannon
Fire rate:	30
Score:	235
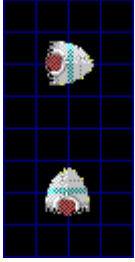
The Osaka-class was designed as an armed transport by the Nakura Corporation during the Second Intercorporate Wars. Once deployed, however, the class proved flexible enough to fill a number of different roles and, towards the end of the war, it was often fitted with a dual recoilless cannon and used as a heavy gunship. Today, the ship class is popular with independent mercenaries because it is extremely reliable and very easy to modify.

Scorpion-class Gunship

|	
Level:	3rd
Maneuverability:	Excellent
Max speed:	0.50
Armor:	Light plasteel plate
Defenses:	Magnetic shield array
Weapons:	Radiation cannon; dual laser cannon
Fire rate:	60
Score:	240
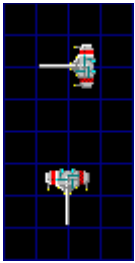
Although the use of nuclear weapons (and neutron-radiation weapons in particular) is heavily restricted throughout the Frontier, some pirates and other outlaws have begun to manufacture these kinds of weapons.

The Scorpion class is a modification of an old Earth Industries design that incorporates a neutron-radiation cannon as its main weapon. Although it has a very short range, it is extremely lethal. The normal armor of a ship is not able to deflect the high-energy radiation, and many victims die of radiation sickness long before their ship is destroyed. With each hit from the radiation cannon, the contamination levels in the afflicted ship rise, increasing the chances of death by radiation sickness. After a while, the contamination will decrease as the environmental filters go to work, but in the meantime, damage to humans by radiation is certain. There is no known antidote to radiation sickness.

Wolverine-class Gunship

|	
Level:	3rd
Maneuverability:	Excellent
Max speed:	0.60
Armor:	Light plasteel plate
Defenses:	Magnetic shield array
Weapons:	Dual laser cannon; plasma cannon
Fire rate:	30
Score:	185
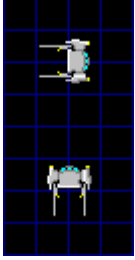
The Genetic Systems Corporation does not build or design as many ships as the Earth Industries Conglomerate or the Nakura Corporation, but the ships that it has produced are widely considered to be among the best. The Wolverine-class gunship, which has been consistently rated as one of the best short-range gunships, is a perfect example. In addition to its excellent maneuverability, it carries twin pulsed laser cannons and a short-rage plasma cannon with one to six plasma cartridges.

In combat, the wolverine class will fire its dual laser cannons until it can get close enough to fire its plasma cannon.

Nobunaga-elite Gunship

Level:	4th
Maneuverability:	Excellent
Max speed:	0.50
Armor:	Light laser plate
Defenses:	Laser shield array
Weapons:	Dual laser cannon; IMP9 missile launcher
Fire rate:	30
Score:	280
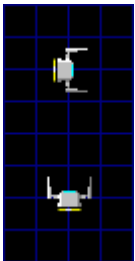
This is the latest generation of the old Nobunaga class. The addition of heavier armor and a laser shield array were made without sacrificing maneuverability. In combat, the ship carries from three to six EI400J rockets.

Comments, Questions, Suggestions

I'd like this game to be a cross between *NetHack* and Accolade's *StarControl*. What I like about *NetHack* is that the game is so rich and detailed that it is possible to play hundreds of games without getting bored. *StarControl* and *StarControl II*, on the other hand, have a certain feel that makes the arcade action extremely satisfying. If I can create a game that is even half as enjoyable as either of these two, then I feel that I will have created a good game.

But to even come close to that goal I need two things: I need a richness of detail that I alone cannot invent, and I need a refinement of the game that can only come from many people playing. That's why I've released the game while it's still not done, and that's why I hope that you will write with your comments, questions, and suggestions. If you have any ideas about the game or if you have any questions or complaints,

please write to one of the following addresses:

Internet: gpm@world.std.com

U.S. Mail: TMA, 15 Whittier Rd. Natick, MA 01760

Future Enhancements

Here's a brief description of some of the enhancements that I would like to add to the game in a future version:

More weapons, ships, and devices: One of the central parts of the game is the variety of enemy ships, weapons, items, and devices that can be found across the Frontier. Future versions will certainly have more of all of these kinds of objects. Any suggestions for new types of ships or items are most welcome.

Sound: Probably the single most important missing element in the game right now is sound. I'm not sure yet how much sound I'll be able to add, but I definitely need to add it.

Scenarios: Any game, no matter how complicated, does eventually get boring. But if a game has the capability to run scenarios created by different people, then a whole new dimension is added.