

SUNRACER OWNER'S GUIDE

AND NAVIGATION MANUAL

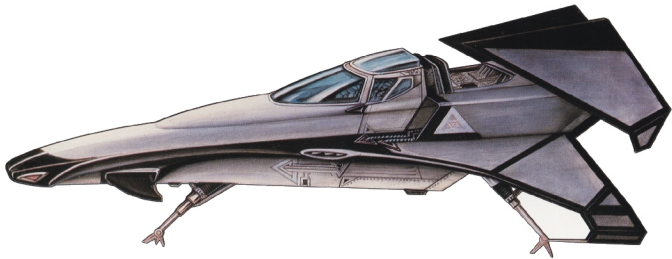
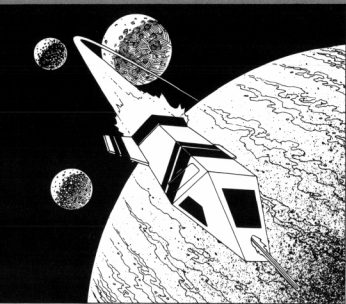


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Congratulations!



When you bought this MANDENWORKS ship, you made a fine purchase!

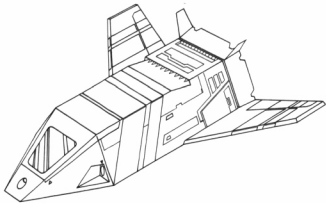
Your Sunracer scout ship embodies the research and manufacturing efforts of Mandenworks employees on 217 worlds throughout the Imperium. The Sunracer sets new standards for reliability, and can easily be customized to meet your specialized needs.

Sunracers travel the space lanes, their holds laden with manufactured goods for the outposts and vital raw materials for the settled homeworlds. Sunracers travel the ancient Malir gates, crossing light-years of deep space in a breath. Sunracers even explore the remote frontiers of the Far Arm!

but we don't last long unless we upgrade!

Won't you take a few moments to review this Owner's Guide for your new Sunracer?

Your Ship



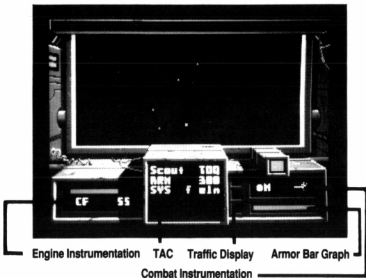
For nearly a decade the Mandenworks Sunracer-class model has been the Imperium's standard among the small, maneuverable ships of its class.

With an extensive selection of options, four tons of cargo capacity, and easy upgrade abilities, the Sunracer is the choice of scouts, couriers, families, joyriders, and anyone looking for a small ship and a price to match.

Class designation:	Sunracer (scout)
Length:	12 meters
Displacement:	14 tons
Armor:	300 units, upgradable (500 units maximum)
Beam:	Garnet laser (10 mw/ns), upgradable as option
Missile:	standard launch tube
Shield(s):	Forward-1, upgradable
ECM:	available as option
Propulsion:	Radionix cold fusion reactionless drive
Acceleration:	0.20 G-standard (turbo booster upgrade available)
Turn (°/sec):	45
Cargo pods:	4 (upgradable to 8)

*Including bureaucrats
in the Procurement Dept.
Sons of*

Finding Your Way Around The Sunracer Cockpit



The Viewscreen

Seated in the cockpit you can see a 90-degree field of view showing the depths of space. Actually, this is your ship computer's simulation of the view outside. All the stars, bases, asteroids, antimatter shards, and drifting interstellar grit are created by the computer to represent real objects detected by the ship sensors.

With this simulation you can vary the view . . . quite an advantage over a mere porthole into space. Two alternate views are available.

Cinematic view shows your ship travelling through space just as you might see it in a sensotheater. Novice pilots understand their maneuvers better when they see the effects on movement "cinematically."

Chase view follows your ship at a distance, as though another ship were chasing you.

Engine Instrumentation

The left console contains engine instrumentation.

The bar graph shows your current speed; the longer the colored bar, the faster you are travelling. Beneath the bar graph is your speed in meters per second. A negative number means you are flying backward. The letters "CF" or "NF" indicate whether you are in Cruise Flight or Newtonian Flight mode; see below.

The number beneath the bar graph is your actual speed in Newtonian Flight mode. However, in Cruise Flight mode, it is your desired cruise setting. The bar graph shows your actual speed in either mode.

Combat Instrumentation

The right console contains combat instrumentation.

Ready Weapon

On top, one of four symbols indicates your ship's ready weapon and its status. The symbols represent your beam weapon and three kinds of missiles. Here are the weapon symbols:

Beam weapon



Plasma torpedo



SM-1



Nova missile



If your ship does not carry a given weapon, you will not see its symbol. Broken weapons have inverse symbols.

These weapons are described in the Combat section of this manual.

Armor Bar Graph - see diagram on page 3.

The bar graph beneath the weapon status field graphically shows how much ship armor remains intact. The longer the colored bar, the more armor you have left.

Traffic Display - see diagram on page 3.

The three-space traffic light display indicates the status of up to three other ships in your sector of space. Each lit light corresponds to an active ship in your sector. The color of the lights shows their status.

Green: The ship is friendly. Friendly ships typically hail you when they pass, as a courtesy.

Violet: The ship is attacking another ship, not you. You may

happen on a battle in progress, between a merchant and a pirate, for example.

Orange: The ship is hostile to you and is attacking.

Incoming Missile Warning Light

The incoming missile warning light above the right console lights up when an enemy is tracking your ship. You can dodge with an abrupt maneuver just before it hits.

The Target Acquisition Computer (TAC)

The TAC screen is located in the center console, below the main viewscreen. It displays data collected by your Target Acquisition Computer; a fifth generation system capable of discerning and tracking all targets in your sector. With its visual and data modes, you can locate and identify targets, get tactical readouts during combat, and coordinate weapon fire. You will find the TAC to be an indispensable tool for navigation and combat.

Selecting a Target

When you activate the TAC, it searches for any targets ships, bases, or Malir gates in your sector. If there is more than one target, the TAC will cycle from one target to the next with each key press.

To help pinpoint your target's location, the TAC superimposes a "heads up" cross hair on your main viewscreen. The cross hair appears as two pairs of arrowheads, which slide along the edges of the viewscreen. If your target is dead ahead, the arrowheads will be centered on the viewscreen edges, and

point inwards. As your target moves off to one side, the arrowheads will follow. If your target moves off the screen entirely, the arrowheads will flip to point outward, and continue to track.

Data Mode

In data mode, the TAC screen displays vital information on your target. Depending on the type of target selected, 2 to 5 lines of data are displayed.

If you are targeting another ship, the following 5 lines of data are displayed:

1st line - Class Name and ID beacon. The ship's official class type followed by a 3 letter/number unique ID beacon. Any messages transmitted by the ship will be preceded by this ID beacon. Warning: if this line is highlighted, this ship is attacking you!

2nd line - Range in Meters. The distance to the targeted ship in meters. Keep in mind that many ships have passive stealth devices that will render them invisible to the TAC beyond a range of about 10km. The TAC will lose its lock on out-of-

range ships and automatically disengage.

3rd line - Tactical Analysis. The AI module aboard your TAC continuously gathers telemetry data on your target. It then performs a sophisticated analysis on this data and determines the most likely tactic the ship is employing.

4th line - Armor Remaining. The amount of armor remaining on the ship. The hull will rupture when all the armor is destroyed, and the ship will perish.

5th line - Onboard Systems. Single letter abbreviations indicate which particular systems are installed onboard the ship. The six systems are: C - Countermeasures (ECM), F - Forward Shield, A - Aft Shield, E - Engine, B - Beam Weapon, M - Missile Launcher. A highlighted letter indicates that the system is damaged and non-functional.

If you are targeting a base or Malir gate, only the first two lines are displayed. If you have no selected target, the TAC gives you data on your Sunracer, with only the 1st, 4th, and 5th lines shown.

Visual Mode

In Visual Mode, the TAC screen shows a close-up view of your target. This can be useful for identifying targets, and for determining their orientation relative to yourself. If you have no selected target, the TAC screen shows your Sunracer.



Maneuvering in Space

Your scout ship has two steering systems. In the more primitive mode, Newtonian Flight (NF), your engines are fixed to thrust your ship straight ahead. As long as you increase thrust, your velocity increases in the current direction.

To change course, you must turn the ship and increase engine thrust as two separate actions. Turning your ship without adding thrust has no effect on your course. Newtonian Flight maneuvering is not recommended for novice pilots.

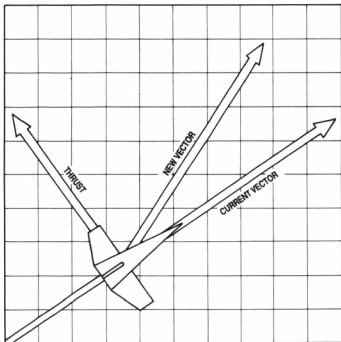
Your ship's standard mode, Cruise Flight (CF), links the engines to the steering system. When you turn, powerful electromagnets redirect engine thrust to aid in the turn.

In CF mode, thrust works as a cruise control. That is, you set the speed you desire, and the engines thrust until you reach that speed. When you change course, the engines thrust the ship in the new direction, trying to keep a steady speed.

Why wouldn't you always use Cruise Flight mode? Newtonian Flight is useful in strafing runs during combat, and in slingshot maneuvers around gravity wells -- stars, planets, and black holes.

To strafe, plot a fly-by course past your target in NF mode. As you pass, you can reorient the ship to keep the target in your viewscreen while still following the original fly-by course. In Cruise Flight mode, you would tend to ram your target instead.

To slingshot around a gravity well, accelerate to a rapid speed on a Newtonian fly-by course close to the well. The slingshot effect as you leave the well can amplify your velocity tremendously -- useful when you want to escape pursuit. (You can also put your ship into orbit around the well.) Cruise Flight mode during a slingshot can result in undesirable braking.



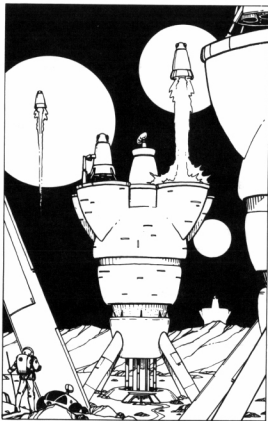
Inertia

In CF mode the illusion of smooth, inertialess flight can be very convincing, especially at low speeds.

However, Cruise Flight is subject to the same physical laws as Newtonian Flight. Foremost among these is inertia. The tendency to continue moving in a straight line affects every maneuver a pilot makes.

The faster you move, the higher your inertia. At high velocity, your ship's controls may feel sluggish and slow to respond. Gradual turns swing wide, and sharp turns become impossible. There is nothing wrong with the controls! You simply must overcome a greater amount of inertia to change your heading.

High-speed maneuvers are not recommended for novices. However, seasoned pilots develop a sense of inertia, and can actually use it to their advantage.



Docking With Bases

Your Sunracer is not equipped to land on planetary surfaces. Dock only in space, at one of the four recognized types of bases: starbases, outposts, mining stations, and carriers.

To dock your Sunracer at any base, simply "nudge" the base's docking platform with the nose of your ship. Automated docking equipment will take it from there. Be alert! Striking the wrong part of a base or docking at too high a speed may result in armor damage.

Here are the docking platforms for each kind of base.

Starbase:

The brightly lighted axial pillar that connects the two pyramidal halves.

Outpost:

The bright inner wall containing the black access door.

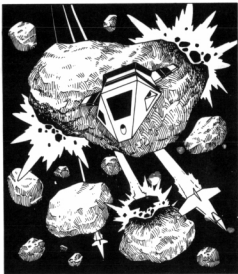
Mining station:

Nudge any part of a mining station to activate its docking equipment.

Carrier:

The main deck, marked by a landing stripe.

These four base types are described in the "Traveller's Recognition Guide" later in this manual.



Collisions

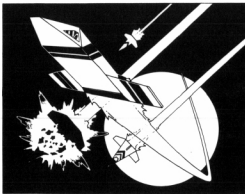
Your Sunracer's armor and forward shield are designed to absorb some damage from collisions with solid objects. Remember, though, that the damage you incur from collisions varies as the square of your velocity.

In other words, if you hit an obstacle, your armor takes damage; if you hit the same obstacle going twice as fast (relative to it), you take four times as much damage as before!

Combat

Scouts must often venture into lawless areas. Your Surracer is very capable of defending itself in unpleasant circumstances.

Always keep in mind that if your ship has more than one weapon system, you must choose one as your "ready weapon," using the ready weapon command. The dashboard ready weapon display symbolically shows which weapon is ready.



Damage

Damage from enemy fire is incurred to either your hull armor or to individual ship systems.

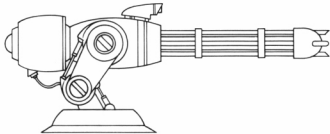
Damaged ship systems appear on your dashboard readout in inverse letters. If the engine is damaged, your ship reverts to backup thrusters, and your acceleration is cut to one-quarter normal. If any ship system is damaged, that system becomes non-functional.

Your current armor is shown on the dashboard readout and on the bar graph on the right console. If armor is reduced to zero, your ship is destroyed.

Weapons

Beam Weapons

Laser and particle beams are the standard weapons of ship combat. They strike instantly, penetrate force shields well, and ammunition is both free and unlimited.



Lasers come in three varieties, designated "garnet" (10 megawatts/second output); "beryl" (15 mw/s); and "sapphire" (20 mw/s). Despite the names, these are not optically-pumped solid lasers but mode-locked gas dynamic models with opaque dye Q-switches. Your Sunracer sports a Taurietten garnet laser as standard equipment under full warranty.

Particle beams are CMG (coherent monopole-guided) beams of heavy W particles. Like sapphire lasers, they are rated for 20 mw/s damage. However, unlike lasers, particle beams cut through defensive force shields without any reduction in cutting power.

Recharging: All beam weapons run on self-contained batteries that are recharged from the ship's power plant. If you fire before the battery has recharged completely, your shots are reduced in strength. A short time without firing allows the battery to recharge completely.

Near the beam weapon symbol on your dashboard's ready weapon display is a circular indicator. Its size shows the current recharge status. The circle begins at full size; heavy fire reduces it to half size, and then one-quarter size. This shows that the beam weapon is firing at half or quarter power.

Manual and automatic fire: Beside the recharge circle on the ready weapon display is a letter "M." This stands for "manual fire." You fire each shot manually.

Though not widely available in most areas, automatic lock-on and firing equipment changes the letter to "A" for "automatic fire." With this equipment you simply start the firing sequence, and the ship fires every two seconds. You can even change ready weapons and fire a missile while the beams continue firing.

Missiles

Unlike beam weapons, missiles are expensive. Targets can jam their telemetry or dodge them. And once you fire one, it's gone. But nothing else matches their ability to inflict damage on the enemy.

Your ship includes one standard missile-launch tube with automatic reloading. It can hold a mix of up to 10 missiles or 20 plasma torpedoes. If the missile system is damaged, you cannot launch.

Reloading after a shot takes five seconds. When the tube is ready to fire again, the ready light glows green in the center of your dashboard's ready weapon display.

*Check with Avenstar to see
if these have arrived yet.*

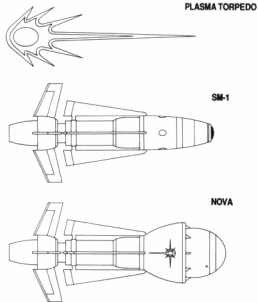


Missiles accelerate at 2 G standard, and carry 30 seconds' worth of fuel. There are three types of missiles available for your Sunracer:

Plasma torpedoes, balls of superheated gas, inflict a rated equivalent of 75 megawatts of damage on a target. Plasma torps are cheap and compact, but they are not true missiles. Rather, they are dumb weapons without heat-seeking ability.

The SM-1, for "Standard Missile 1," inflict 100 mw of damage. These have heat-seeking ability, and target whatever enemy you have acquired with the TAC. See "Using the TAC in Combat," below.

Nova missiles, extremely deadly nuclear-tipped heat-seekers, inflict 250 mw of damage. Like the SM-1, the Nova zeroes in on whatever target you have selected with the TAC.



Defenses

Armor

Armor, standardized on all ships as sloped superconducting ceramic, spreads collision and energy damage equally throughout its structure. Therefore, each ship's armor is numerically rated in standard units of protection.

Armor is affixed in individual plates. The Sunracer comes with four plates (300 units) standard. Optional upgrades are available.

Force shields

Force shields reduce damage from collisions and, less effectively, from lasers. Originally designed to cope with navigation hazards such as asteroids, shields work best against collision with physical objects such as asteroids and missiles. Against lasers their effectiveness drops by one class. Against particle beams they have no effect.

Force shields are numerically rated according to their ability to reduce damage to your armor. Shield #1 stops 1/2 of incoming damage; #2 stops 3/4; and #3 stops 7/8 damage. Shields cover half of the spacecraft, and so are described as either "forward" or "aft."



ECM

ECM (electronic countermeasures) uses X-ray cathode technology to jam the enemy's targeting devices. Put more directly, it interferes with the ability of heat-seeking missiles to target your ship.

ECM, rated by its percentage of effectiveness, is available in three levels: 25%, 50%, and 75%. The percentage indicates the ECM's chance to jam the missile and send it off on an erratic course. If the ECM fails, the missile targets you normally. Note that ECM does not reduce damage from hits.

Using the TAC in Combat

You'll find the Target Acquisition Computer a great ally when you enter combat. It not only provides vital data for making tactical decisions, but also coordinates the targeting and firing of your weapon systems.

Data Mode

In Data Mode the TAC displays several key pieces of information which can aid in your tactical decision making.

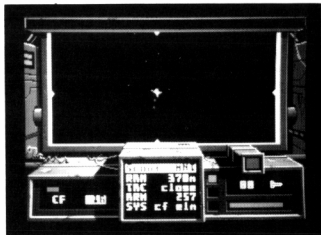
The Tactical Analysis (3rd line) provides an assessment of your target's intent. Extensive combat studies have proven the TAC to be 99.8% accurate, so don't hesitate to rely on its judgement. The TAC characterizes an enemy's intent as one of the following 10 tactics:

- Circle* - The enemy is circling around you trying to stay out of your arc of fire. Counter by circling behind the enemy.
- Close* - The enemy is making quick fly-bys designed to offer good, close shots. Fast ships often favor this tactic. Try to get your shots in just after the enemy passes.

- Cruise* - Your TAC displays this "tactic" for any ship not engaged in combat.
- Elude* - The enemy is accelerating and turning away from your field of fire. Plot an intercept course - try to head him off.
- Flee* - A running, zigzag course. The enemy has broken morale and is attempting to escape. You'll have to fly fast to catch him.
- Follow* - The enemy mimics your maneuvers. This tactic is only effective if the enemy gets behind you.
- Pursue* - The enemy is trying to catch you as quickly as possible. If you don't want to be pursued, don't try to run away.
- Ram* - Prepare for a collision!
- Stand* - The enemy stops and faces you. Big ships often do this just before they launch an attack.
- Swerve* - An erratic, high speed maneuver that is designed to avoid a collision or weapon fire. Don't waste missiles trying to hit a swerving ship. Just stay at a distance and keep him in your sights.

The Armor Remaining display (4th line) is a prime indicator of an enemy's battle worthiness. When this drops below zero, the hull ruptures, and the ship will perish. Most ships will try to flee when this nears zero. When you hit a ship with a missile or beam weapon, note how much damage it takes. This will give you a feel for the effectiveness of various weapons against shielded and unshielded targets.

The Onboard Systems display (5th line) reveals what functioning systems the enemy can bring to bear. Monitoring this display offers great tactical insight. For instance, if the enemy's engines are damaged, he won't be able to pull hard-G maneuvers; if his ECM or shields are damaged, he'll be vulnerable to missile attacks; if his weapons are damaged, you've pulled his teeth.



Weapon Fire Coordination

Your TAC coordinates weapons fire to hit your selected target. For smart missiles (SM-1 and NOVA), the TAC provides the heat signature of your target. For beam weapons, the TAC checks for a clear, line-of-sight path to your target. If the target lies out of the path, is too far away, or is blocked by another object, your TAC will stop the beam weapon from firing. This prevents needless discharging of the beam weapon's batteries (and embarrassing attacks on friendly ships that fly unexpectedly in your path).

Under certain conditions you may find it advantageous to disengage your TAC. For instance, if your target has powerful ECM, it will likely jam your smart missiles. However, if you launch a smart missile with your TAC disengaged, the missile will act as an unjammable, dumb missile. Aim well and it will always hit.

Surviving Combat

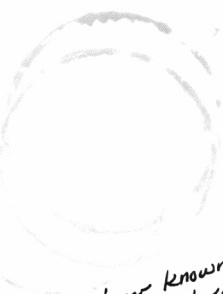
Do not pick fights recklessly! Not only can this incur severe damage, it also affects your reputation. Unlawful battle can bring police retribution and the attention of bounty hunters.

If you do enter combat, remember several points that are essential to your ship's safety.

Standing still is deadly. It simplifies your targeting, but unfortunately it also simplifies the enemy's. The veteran pilot keeps maneuvering at all times.

Some specific combat maneuvers that have proven useful include all the tactics the opponents use, as displayed on your TAC. In addition, you may create your own. For example, consider "overshooting." When an enemy is pursuing, reverse thrust rapidly. The opponent often flies on by, presenting a clear target profile.

If there is terrain in your sector, use it! You can hide behind asteroids; draw your enemy into collisions with antimatter shards; you can even slingshot around stars or planets to put on extra speed for escape or pursuit.



*Never known a Manchi
to accept surrender*

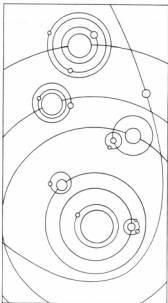
If your target has shields, try to knock them down with beam weapons. Then go in for the kill with missiles. Beam weapons can penetrate an opponent's shields more effectively, increasing your chance to knock out a critical system.

If the opponent proves too dangerous, try to escape. If you can get ten kilometers away from your enemy, his sensors will no longer be able to detect you, and he must break off pursuit.

You can improve your escape speed by jettisoning cargo. A full hold reduces your acceleration dramatically, so in desperate circumstances you can empty cargo bay contents into space and make a quick getaway.

As a last resort, you can try to surrender. After a standard radio call of surrender, pirate and merchant ships may plunder your cargo in return for your life. Imperial ships require you to pay off your bounty.

Navigating Within A Star System



Navigation Control is the only way to travel the long distances between bases; to view the layout of star systems; and to review the status of your ship. Navigation Control also gives an overview of the system you occupy, shows the locations of the Malir gates used to travel between systems, and tells the date and time.

Unlike the cockpit viewscreen, Navigation Control does not show you a first-person view of your surroundings. The Navigation Control screen shows, at upper left, a part of the system you currently occupy, with your ship in the middle. Each system is subdivided into 1024 sectors in a 32x32 grid. Each sector is 1,000,000 kilometers on a side. Sectors are marked on the map with a grid of dots.

The map is not a simple record, but an electronic database that is constantly updated. As you journey across space, your ship moves to its new position on the map. Note how the system's planets move along their orbits with the passage of time.

When you encounter another ship in a sector, Navigation Control alerts you with a status message at the bottom of the panel. At upper right are the commands you can give, as follows:




Chart lets you chart a course anywhere in the system. When you select this command, brackets appear around the current sector. Using the keyboard or joystick, move the brackets to the destination sector. The computer lays in the course along the most direct route.

Helm is only available after you have charted a course. Select the Helm command to embark on the journey via autopilot. The Navigation Control screen shows the time at each stage of the journey. Press a key to stop the journey in the current sector.

If you come under attack in a sector, your journey will be halted automatically. You will only be able to resume your journey after you have resolved the battle.

In autopilot mode your Sunracer safely navigates the hazards of space -- asteroids, antimatter shards, and so on. Be aware, however, that your autopilot requires much more time to safely navigate these hazards (particularly if your engines are damaged). A straight course through hazards is not always the shortest one. For more about these hazards, see later sections.

Status shows your possessions; your reputation with the Imperium, pirates, and Manchi, based on monitoring of



radio traffic; and your ship's weaponry, armor, equipment, and state of repair.

Query retrieves data, when available, about a given sector: bases, significant hazards, even choice bits of lore or history. ~~You can also record your own sector notes using the Query function.~~

Scan lets you see other parts of the system. When you select this command, brackets appear around your current sector. Move the brackets around the map; new areas scroll onscreen. You can choose a sector and then *Query* for data about it.

Cockpit returns you to the viewscreen.

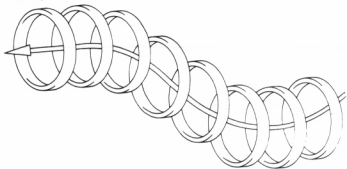
Broken!! No one can fix. Never
got to use it more than half a
dozen times! Thank you Mandenworks!

Travel Between Star Systems

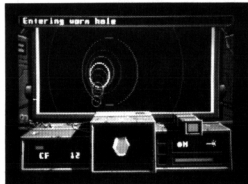
Warp drive has yet to be invented. All spacecraft must travel at sub-light speeds. Therefore, crossing the empty gulfs between systems would take months or years.

How fortunate then, that the ancient Malir gates link Imperial systems through wormholes. Each pair of gates connects two star systems. Your Navigation Control database shows each system's Malir gate(s).

Your Sunracer has been approved by Imperial authorities for travel through all known interstellar Malir gates. When using one of these teleportation devices, keep several safety tips in mind.



*Heard rumors
of breakthroughs here*



1. Known sentient beings that can use the Malir gates without harmful effects include humans, Baakili, Sishaz-ahng, doven, Braunigala, and ssathlar. When some other sentient races, such as the Manchi, use the gates, they invariably die.

2. The gates are long, hollow cylinders. Pilot your ship down the center of the cylinder toward the glowing end. You must achieve a minimum speed of 21 m/sec to activate the gate's wormhole effect.

3. Once within the wormhole, remain within the glowing rings. When you reach the end of the wormhole, you will be dropped back into normal space by the Malir gate at the destination system. Should you stray outside the wormhole before you reach your goal, the jump is faulty and you reappear at the gate of origin.

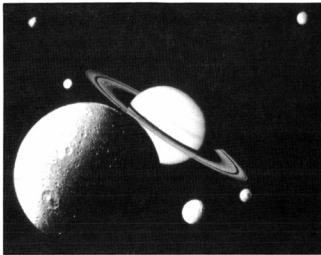
4. Move through the wormhole as quickly as possible. Corrosive gases within the hole damage all known classes of hull armor.

Imperial researchers have devised the null damper to counteract this effect. However, for tariff reasons null dampers are not available in some parts of known space. Check with your ~~Mandenworks~~ dealer for more information.

the black market.

Traveller's Recognition Guide

Mandenworks offers this handy guide to the objects you may encounter in space. Each entry shows the screen symbol that represents the object in your viewscreen simulation or Navigation Control system maps.



Planets

There are three principal types of planets you may encounter. Warning: Do not try to pilot your Sunracer into a planetary atmosphere. The ship is not equipped for planetary exploration, and will burn up due to air resistance and the heat of friction.

Ships

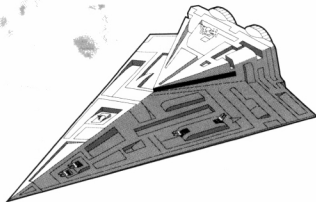
As space travel increases in popularity, the traveller encounters more vehicles every day. For your safety and convenience, this section describes some of the most widespread types of ships.

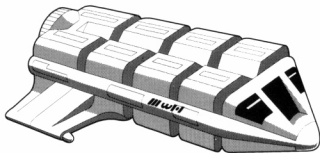
Abbreviations used: m = meter; t = ton; mw/s = megawatts per second; Fwd = forward; °/sec = degrees per second; g = gravities (standard units of acceleration).

TITAN

Type:	<i>Imperial</i>
Class designation:	<i>Heavy cruiser</i>
Predominant color:	<i>Green</i>
Length:	<i>95 m</i>
Displacement:	<i>2,232 t</i>
Armor:	<i>1,000</i>
Beam:	<i>particle (20 mw/s), turreted.</i>
Missile:	<i>Nova</i>
Shield(s):	<i>Fwd-3, Aft-3</i>
ECM:	<i>50%</i>
Propulsion:	<i>Imp. Shipyards positron drive</i>
Acceleration:	<i>0.15 g</i>
Turn (°/sec):	<i>10</i>

The glory of the Imperial fleet, the Titan-class cruiser reduces piracy in a system by its mere presence. Titans lack nothing in state-of-the-art armaments and defenses.





TANKER

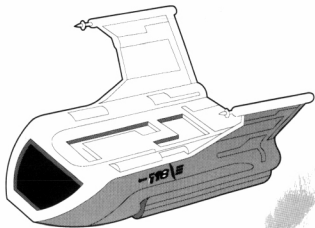
Type:	Merchant
Class designation:	Trader (50 t capacity)
Predominant color:	Blue
Length:	45 m
Displacement:	371 t
Armor:	360
Beam:	Beryl laser (15 mw/s), turreted
Missile:	SM-1
Shield(s):	Fwd-1, Aft-2
ECM:	20%
Propulsion:	Varies
Acceleration:	0.20 g
Turn (°/sec):	15

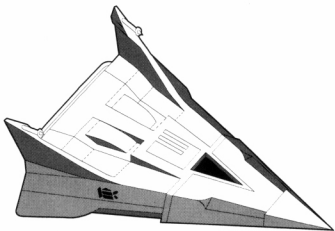
The vehicle of choice for the prosperous trader, this sturdy model emphasizes cargo capacity but does not neglect defense. Though not flashy, a Tanker fusing skillful defense tactics can often send a more maneuverable Dart packing.

CRUISER

Type:	<i>Imperial</i>
Class designation:	<i>Light cruiser</i>
Predominant color:	<i>Green</i>
Length:	<i>50 m</i>
Displacement:	<i>478 t</i>
Armor:	<i>435</i>
Beam:	<i>sapphire laser (20 mw/s), turreted</i>
Missile:	<i>SM-1</i>
Shield(s):	<i>Fwd-3, Aft-2</i>
ECM:	<i>30%</i>
Propulsion:	<i>5 Radionix MEGA reactors</i>
Acceleration:	<i>0.30 g</i>
Turn (°/sec):	<i>25</i>

Whereas Titans patrol the lawless frontiers of space, Imperial cruisers customarily anchor support fleets in settled systems. However, heavy pirate activity can draw cruisers into deep space. They are a match for any pirate vessel.





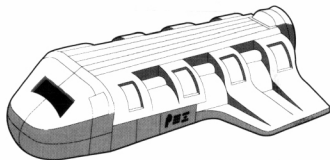
CORSAIR

Type:	Pirate
Class designation:	Light cruiser
Predominant color:	Orange
Length:	48 m
Displacement:	434 t
Armor:	405
Beam:	Beryl laser (15 mw/s), turreted
Missile:	SM-1
Shield(s):	Fwd-2, Aft-2
ECM:	25%
Propulsion:	5 Radionix MEGA reactors;
Acceleration:	0.30 g
Turn (°/sec):	30

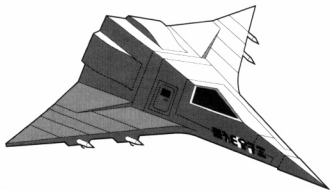
Still extremely dangerous after more than two decades of service, the Corsair model remains popular along the frontier and in lawless areas. Facing a hostile Corsair, your best tactic is to surrender your cargo and hope the pilot is in a friendly mood.

SCOW

Type:	Merchant
Class designation:	Trader (10 t capacity)
Predominant color:	Blue
Length:	23 m
Displacement:	74 t
Armor:	210
Beam:	Garnet laser (10 mw/s), turreted
Shield(s):	Aft-1
ECM:	--
Propulsion:	Varies widely
Acceleration:	0.25g (varies)
Turn (°/sec):	20



More of these dependable workers travel the spaceways than any other ship type. Scows place cargo capacity above all else.



DART

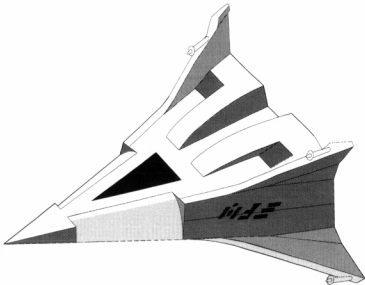
Type:	Pirate
Class designation:	Fighter
Predominant color:	Orange
Length:	12 m
Displacement:	16 t
Armor:	245
Beam:	Garnet laser (10 mw/s)
Missile:	SM-1
Shield(s):	Fwd-2
ECM:	10%
Propulsion:	Borelle High Performance
Acceleration:	0.30 g
Turn (°/sec):	45

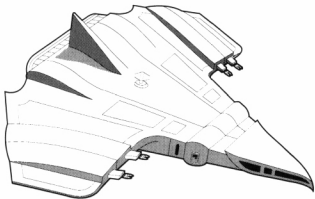
A ship for pirates on a budget -- no interior comforts, but it sports a highly-tuned engine and astounding maneuverability. In combat with a Dart, fly an erratic course and try to wear down its armor.

HUNTER

Type:	<i>Independent</i>
Class designation:	<i>Fighter</i>
Predominant color:	<i>Green</i>
Length:	<i>21m</i>
Displacement:	<i>90t</i>
Armor:	<i>350</i>
Beam:	<i>Particle (20 mw/s)</i>
Missile:	<i>Sm-1</i>
Shield:	<i>Fwd-3</i>
Propulsion:	<i>3 Radionix MEGA reactors</i>
Acceleration:	<i>0.31 g</i>
Turn (s/sec):	<i>40</i>

With their particle beams and Fwd-3 shields, Hunters are efficient killers. A favorite of bounty hunters, they are often found prowling the lawless regions for prey.





Not all ships you meet belong to the Imperium. The hostile aliens called the Manchi pilot ships of bizarre design. By request of the Imperial admiralty, Mandenworks offers what is known about these aliens' principal ship types.

VULTURE

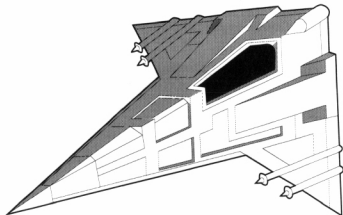
Type:	Manchi
Class designation:	Light cruiser
Predominant color:	Violet
Length:	49 m (est.)
Displacement:	456 t (est.)
Armor:	480 (est.)
Beam:	sapphire laser (20 mw/s)
Missile:	Plasma torpedo
Shield(s):	Fwd-2, Aft-1 (est.)
ECM:	--
Propulsion:	Unknown
Acceleration:	0.30 g
Turn (°/sec):	25

In every encounter with Imperial ships, Manchi Vultures have attacked to kill, given no quarter, and have never accepted surrender. Exercise extreme caution.

WASP

Type:	Manchi
Class designation:	Fighter
Predominant color:	Violet
Length:	11 m
Displacement:	13 t
Aarmor:	180 (est.)
Beam:	Beryl laser (15 mw/s)
Missile:	Plasma torpedo
Shield(s):	--
ECM:	--
Propulsion:	Unknown
Acceleration:	0.45 g
Turn (°/sec):	50

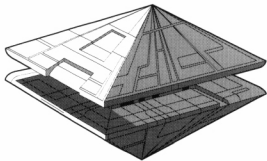
These incredibly fast and maneuverable fighters appear to double as scouts, for they are often found deep inside Imperial space without evident support craft. Pilots often display suicidal attack tactics.



Bases

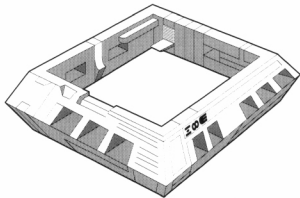
The life's blood of all star travellers, bases provide protection, repair facilities, trading posts, and a friendly cantina. Only at bases can you meet people, get your ship repaired, or purchase new equipment and cargo.

There are four principal types of bases:

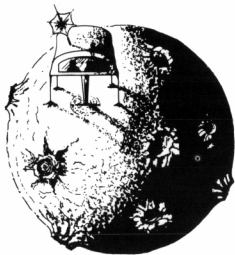


Starbases are the Imperium's grandest achievements, full cities in space that can supply all of a traveller's needs. Each starbase is the work of generations, and each draws the finest pilots and most desirable trade goods in known space.

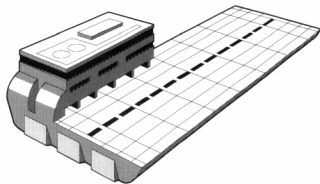
Unlike other bases, Imperial starbases routinely check incoming ships for contraband cargo. Any contraband discovered is immediately confiscated.



Outposts are centers of commerce for systems that have not yet constructed a starbase. They offer no-frills service for the traveller's immediate needs.



Mining stations -- solitary frontier depots -- pioneer new sections of space and supply civilization with vital raw materials. Many mineral-rich planetoids host these rugged commercial stations. They are usually operated by gigantic megacorporations such as MiCon or ConVec.



The new Imperial carrier serves as a platform for an entire squadron of the Imperial fleet. It provides police protection and asserts civilized authority in lawless areas. Private ships may dock at carriers for security, supplies, and repairs.

The first of these amazing new bases, the Koth, is named for the heroic admiral who led the Imperium to victory in the Battle of Binary Stars. It is stationed in the Arcturus system in the Far Arm. Other carriers are under construction.

Hazards of Astrogation

The pilot can encounter many hazards in the wilds of deep space. Some, such as pirates, can be fought. Others are natural and can only be avoided. Natural hazards are summarized below.



Antimatter shard fields form deadly obstacles. Antimatter atoms carry electric charges opposite to those of conventional matter. When matter and antimatter meet, the charges cancel out explosively, destroying both.

Conventional force shields provide little protection against antimatter shards. The only safe tactic is to avoid them through slow and painstaking piloting.

Asteroids are small boulders or ice chunks. Your ship's shield provides effective protection against collision with an asteroid, so long as you travel slowly.



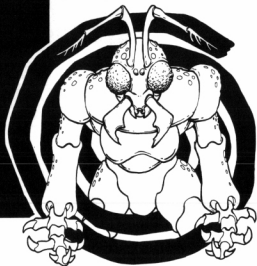
Watch for uncharted hole in sector m

Black holes are the invisible remnants of massive stars. A black hole's gravity is so strong that no ship -- in fact, not even light -- can escape its fatal pull. Known black holes are noted in your ship's database. However, theorists believe there may be many more uncharted black holes, so beware.

Ion storms, dangerous clouds of charged particles, form from whorls in turbulent stellar winds. Traders sometimes report spoilage of cargo due to ionization.

Nebulae are clouds of interstellar gas and dust. They slow ship passage and therefore increase travel time. Some nebulae gases are corrosive, and can eat away at your ship's hull armor.

Should your destination lie within a hazard field, consider travelling elsewhere for a time. Some destinations, such as planets, may orbit out of the field with the passage of time.





A TRAVELLER'S GUIDE TO THE FAR ARM

THANK YOU for purchasing this spacecraft at a Far Arm dealership! Merchants of the Far Arm count on your support to push back our expanding frontier. And in return, you can count on the same top-quality service and attention to detail offered in the busiest sectors of the Imperial Arm.

*plus pirates, Manchi raids,
uncharted black holes,
no extra charge.*

*In the 2300-year history of the Imperium, the Far Arm is a newcomer to the galactic stage. Our small but durable net of Malir gates was discovered hardly a century ago. As late as 2217 the exploration ship *Leading Edge* crashed in an ion storm in the Sigure system, its fate unknown until a generation later.*

Though colonization proceeded over the next century, the sleepy Far Arm attracted little attention until the ill-advised Rebellion, an abortive uprising by seedy frontiersmen in the Gryphon system.

The Imperium crushed these scoundrels at the famed Battle of Binary Stars in 2303. For his heroism in this battle, Imperial Admiral Koth received the Golden Sunburst of Valor, the only living person so honored.

The Far Arm's path to Imperial acceptance began when Emperor Hiathra assigned our Deneb System to Duchess Avenstar. No one could have envied the young Duchess her task of cleaning up the rowdiest system in the Galaxy. But to the critics' surprise, Avenstar has turned Deneb into one of the shining spots of the Far Arm, a safe harbor and prosperous home for any citizen.

Today the Far Arm is home to a dozen thriving bases in eight systems. The Far Arm is represented in the 100-member Ruling Council on the Imperial homeworld. Multi-system corporations like MiCon and ConVec co-exist peacefully with independent operators on Ross, Lagrange, and Trochal. All supply the raw materials that make possible YOUR standard of living!

While you travel the Far Arm, be sure to stop and visit these exciting systems, all conveniently connected to the reliable network of Malir gates:

Karonus: Site of magnificent Hiathra Starbase and the historic MiCon I mining station. Piracy has been virtually wiped out in this sector.

Deneb: Impressive Denebprime Starbase is the home of Duchess Avenstar. Piracy has been much reduced under her wise rule.

Gryphon: ConVec East mining station welcomes all miners, mineralogists, and tourists. See the deep-space monument commemorating the Battle of Binary Stars.

Arcturus: MiCon II mining station awaits the visitor with a taste for industrial technology. At this writing, Arcturus hosts the Imperium's fabulous carrier Koth, newest addition to the fleet and a shining symbol of the rule of law in the Far Arm.

Nar'see: Lagrange mining colony produces the finest titanium in the galaxy. Nar'see's fields of antimatter shards have attracted much attention in popular entertainment; but space is a big place, so they're easy to avoid!

Bassruti: The Free Guild Independent Outpost experiments with new social attitudes toward taxation and authority. Meanwhile, the advanced Bassruti Genetics Research Center is making exciting new discoveries about the nature of life.

Figure: Trochal Independent Outpost stalwartly holds down the frontier against Manchi incursions. Piracy is no longer a significant problem.

Zed: The MiCon IV outpost is proud to announce that the distinguished gravitation physicist Zoriah Prosk is pursuing further research breakthroughs in its laboratories. Another sign that the Far Arm is attracting the movers and shakers of the Imperium!

FACTS AND FALLACIES ABOUT THE FAR ARM

Our home has attracted attention throughout the Imperium, both in action-adventure entertainment and, sadly, in the news of the MiCon III tragedy. As you visit the Far Arm, take this opportunity to get the facts!

1. The Imperial government extends across the Far Arm. As governing body, defense force, and police power, the Imperium retains authority in all systems. So-called "lawless areas" are fiction. Of course, any traveller in deep space takes certain risks. But deep space can be risky in the Imperial Arm itself!

The Imperial bounty system instituted by Duchess Avenstar has produced a significant reduction in crime. By this system, a lawbreaker incurs a bounty for each misdeed. This gives incentive for the Far Arm's clever and well-armed bounty hunters to pursue and punish the wrongdoer.

A criminal can also visit any Imperial starbase and

pay off his bounty, which (after processing fees are deducted) goes into a restitution fund for victims.

2. The Scarlet Brotherhood are not pirates. This guild of free traders believes in the conduct of trade without onerous government restraints. Past incidents of substandard behavior no longer represent the Brotherhood's methods. Piracy has decreased every year since the failed rebellion of 2303.

3. There is no "Black Hand." We enjoy the action stories about this supposed cult of "psychic assassins" as much as the next sentient being. But believe us, no one in the Far Arm can kill you at a touch, hypnotize you at a distance, or drive you crazy by looking at you. We can all rest more easily for that!

4. The Manchi threat is under control. The Far Arm's proximity to Manchi space should not worry tourists. No Malir gate connects their territories to ours, so Manchi ships can reach only the most distant worlds, and only in small numbers. Imperial police are well able to protect citizens from these mindless insects.

Do not let Manchi hostility color your attitudes

So is believing everything you read

not so I've noticed

right!

toward the many other valued and trusted sentient races found throughout the Far Arm. By and large these nonhuman races engage in honest trade, in material goods and, in the case of the Baakili Far Traders, information. Treat them well and they treat you the same way.

BASE FACILITIES

Because travellers speak different languages or perceive in different bands of the spectrum, bases use a uniform code of symbols to designate facilities.

Repair



A wrench indicates a repair station. Move up to the counter, in front of the friendly staffer on duty, and ask about repairs or supplies.

If you ask for supplies, the staffer gives a price list of your ship automatically while you are on base.

If you ask for repairs to your armor or ship systems, the staffer provides a speedy cost estimate according to how much damage you would like repaired. If you pay the fee, the repairs will be performed automatically while you are on base. Remember: It's always cheaper to repair than to replace!

Trade



A "\$" symbol (family crest of the legendary trader Igon Stowell, whose exploits spawned much folklore) indicates a trading post. The easiest and most widespread method of income in the Far Arm, trade offers beginning spacefarers the opportunity to visit many systems and serve the Far Arm community.

Move up to the counter in front of the friendly trader and ask to buy or sell merchandise.

If you ask to buy, the trader gives you a manifest of cargo available for purchase. All goods are sold in convenient one-ton shipping containers. For raw materials like minerals or agriproducts, the weight is simple bulk; for high technology items or luxury goods, much of the weight is taken by frameworks, padding, and shield generators to prevent damage in transit.

If you ask to sell, the trader makes an offer on the cargo in each of your holds.

Outfitting



Look for the rocket symbol to find an outfitter, a dependable supplier of weapon and defense systems, engine upgrades, and a wide selection of equipment for that special need. Whether you want an armor upgrade, a spare cargo pod or a turbo thruster, just go up and ask your friendly Far Arm merchant. And remember, installation is free!

Cantina

In these convivial taverns and eateries, travellers from every sector of space converge for good fellowship and conversation. You might run into anyone from an Imperial captain to a Baakili Far Trader.



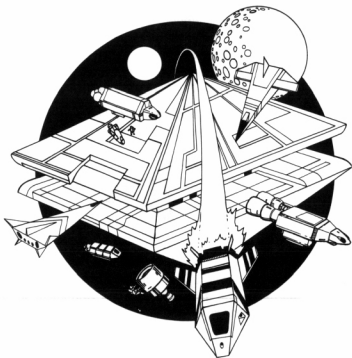
OTHER THINGS TO DO AT BASES

On bases, you can talk to anyone. When you respond to a remark, the responses you can make appear at the bottom of the screen. Select the one you want. The conversation continues based on that selection, and it may offer you further responses.

You can examine or take items, or even pick the locks on locked doors or safes. (The Far Arm Amalgamated Chambers of Commerce do not endorse theft or illegal entry; this is mentioned for informational purposes only.)

You can get a list of your current possessions, the condition of your ship, and your reputation with various factions in the Far Arm.

To leave a base, move next to your ship's hatch and enter. Your ship leaves the base automatically. You're ready to head elsewhere in the exciting, enchanting Far Arm!



Playing Space Rogue

WHAT YOU DO IN THIS GAME

Space Rogue is not just a spaceflight combat simulator it's a role playing game.

In the role of a space pilot you do lots of different things besides fly your ship. You must pursue a career to generate income, so you can undertake long-range goals beyond your immediate mission.

Talk to everyone you meet. Some will offer you missions. Many have information you need to survive.

You have a reputation in the Far Arm, and what you do in the game affects it. For example, if you come across a space combat between a merchant and a pirate, you can get involved on one side or the other, and that affects your reputation with both merchants and pirates.

Your personnel status screen shows your standings with the Imperium, the Merchant Guild, and the pirates. These stand-

ings directly reflect your dealings with these organizations and affect your ability to travel peacefully in space, to gain the aid of others, and therefore to achieve your goals in the game.

Repute is your reputation as a combat pilot. Each victory in combat increases your repute; however, as your repute grows, it takes progressively more (and more spectacular) kills to further increase your repute. Repute also governs the likelihood that an opponent will break morale and flee from combat.

WHAT DIRECTION TO TAKE

As the game begins, you have no clear goal. But the Far Arm offers many career opportunities. You can pursue any or all of the following activities.

Trading. *This is the easiest way to make money and the best way to get started in the game. Luxury and high-tech goods are cheap at Karonus, whereas raw materials are expensive. In*

the distant systems, just the opposite is true. You can exploit the differences to make credits. See what cargo is available.

Be wary of combining radically different kinds of cargo, as some types have unusual effects on others. Some kinds of cargo are also perishable; make sure you sell them quickly.

Piracy. Raiding merchant ships is lucrative, and they usually surrender rather than fight to the death. However, piracy brings a bounty on your head, and the bounty hunters will descend in force unless you pay off the bounty at a starbase. You need a fast, well-equipped ship for this roguish life.

Bounty hunting. Search for and destroy pirate ships to collect Imperial bounties. This is profitable but extremely dangerous. Only the best-equipped ships try bounty hunting.

If you pursue these activities, explore known space, and talk to everyone you meet, you will eventually find a clear goal. You can achieve that goal while following any career. But your methods will vary according to whether you are a trader, pirate, or bounty hunter.

Good luck!



Credits

Game Design

Paul Neurath

Producer

Dallas Snell

Associate Producer

Alan Gardner

Programming

*Paul Neurath, Steve Muchow
Ned Lerner, John Miles*

Additional material

Warren Spector, Allen Varney

Computer Graphics

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Denis Loubet*

Product Packaging

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Sabrena Allen*

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Ray Studios

Playbook

Allen Varney

Playbook Art

Studio X

Playtesting

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Kirk Hutcheon, Jonathan Lamy,
Dan Coughlin, Steve Cantrell,
John Watson, Jon Nials,
Joel Manners, Paul Malone*

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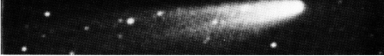


Stars of Opportunity

By Neil Shapiro



P.O. Box 161750, Austin, Texas 78716



The Stars of Opportunity by Neil Shapiro

My father is a jeweler famous throughout the Far Arm for precious settings. He can bring out the luster of a Denbian Zil pearl or gather in the light from a Sigurian flame diamond and send it in bright bursts to the eyes of a dazzled beholder. My family's been in the jewelry business for years, and my father dreamed of a time when his only child would join him in the workshop, learning how to fashion cabochons and necklaces. But I wanted none of it — I wanted to go into space.

This nearly broke my father's heart, but he supported me in a future he could not imagine for himself. He even paid my entry into the Merchant Guild. And many's the night he would indulge me in my fascination with space. He always found the time to stand with me in the Arcturian twilight as I peered through my telescope and regaled him with obscure facts about the Far Arm.

On one such night, I centered the scope so that the star Deneb shone in the middle of the field.

"This is the home of the Duchess Avenstar," I said, moving away from the telescope so father could look. "Deneb used to be the wildest system in the Far Arm — the place used to be swarming with pirates. She tamed it, she and her Imperial Guardsmen. Now only the Scarlet Brotherhood dares approach. And even they think twice about it."

Father looked up from the eyepiece and shifted restlessly from foot to foot on the hard, pebble-strewn ground of our estate, but I continued.

"Avenstar's as tough as her cousin, Emperor Hiathra, was in his prime. But unlike the Emperor, Avenstar is genuinely concerned about her people. That's because she's blessed with psionic ability and knows their innermost needs. I wonder if that is truly a blessing...but here, look again."

"I don't know why you're so fascinated by all of this," father said. "I hold stars in my hand every day — you dream about those you can never touch..." Sighing, he bent over the telescope once again, but I saw him shoot a guilty look toward his workroom. His work called to him as the stars called to me and I knew that I would soon be alone under the stars of the Far Arm.

□□□□

Some time later, my dream of a spacefaring life became a reality. Father drove me to the starport and we stood together in the boarding area beneath the prow of the trading vessel, Princess Blue — my first ship! He wore the old-fashioned formals that the jewel-buying public thought so grand. I was in my new merchant-marine uniform.

Father placed his hand on my shoulder and then smiled.

"This is what you want," he said. "Who knows? Maybe some of the things you learned in our shop will help you out there among the stars."

Then the ship's klaxon sounded and I hugged my father before shouldering my kit bag. Stepping onto the Princess Blue's autoramp, I was whisked into the ship.

□□□□

Now, adrift in space, my comrades gone, I stare blankly at the main viewscreen of my small scout vessel.

The stars swim outside, diamonds scattered on a black velvet cloth. I wish father could see them. Then, he might understand what drove me here.

□□□□

The Princess Blue was a good ship to start a career upon, with a good Captain and crew. Her powerful Hawking Drives thrust her effortlessly from one end of the Arcuturian system to the other. The vibration of those drives was ever-present, like a heartbeat, permeating everything aboard ship. We ate, we drank, we lived and we slept to the sound of the engines.

Then, the sound stopped.

At first I was alarmed — the sudden silence was unnerving. Then I realized that the Captain had simply shut the Hawking Drives down in preparation for a hyperspace jump — my first jump!

The doors that covered the ship's glassine nose drew back slowly and I viewed space directly rather than through an electronic viewscreen. Much of the crew was gathered here to watch as we made our approach. The view we shared was like a gigantic, living painting that stretched from floor to ceiling and wrapped around the curving walls of the foredeck. I felt for a moment as if I were falling into the star-strewn expanse of space

There was a Malir Gate somewhere out there and, though I couldn't yet see it, I knew that the Princess Blue was drifting toward it like a spear thrown at a target. The Second Mate looked at me, smiled, and pointed straight ahead.

"There," he said, "where the stars shimmer and the light bends and colors change. If you squint your eyes, it'll soon come into view."

I gazed for several minutes, searching for a glimpse of the still-distant gate. I knew that in space the stars shone like beacons, undisturbed by cloudy atmospheres, but the stars dead ahead of the Princess Blue twinkled like the stars at night on my own MiCon II. That made me think of the nights with my father and the telescope. Now here I was at last.

"I see it," I whispered. "I see the Malir Gate."

The Second Mate turned and raised his glass of Zedian champagne to me. The lights of the fore-deck had been dimmed, but the starlight streamed in and reflected rainbow spectra from the sparkling liquid. Colorful ribbons of light flickered on the walls around us.

"To your first gate," the Second Mate declared. The crew of the Princess Blue raised their glasses and echoed him. The crystal goblets shone like the stars shimmering beyond the gate.

The Princess arrowed closer and closer until the stars around the gate seemed to move — as if a God had lit a celestial fire below them hotter than their own nuclear flames. They shuddered like firefly lights in the heated air from a bonfire.

In the center of this maelstrom, the Malir Gate tumbled like a huge, six-sided cylinder. I imag-

ined the Captain of the Princess Blue, with the First Mate standing beside him, huddled in the ship's Go Room, his fingers dancing along the control panel. Then, the drives cut in again as the Captain made last minute course corrections. Knowing that we were seconds away from the gate, my throat went dry — a nervous dryness that even the good Zedian champagne could not quench.

The Princess Blue maneuvered so that the open-end of the cylindrical gate faced us. At this angle, I could see the gate's pulsating heart of orange, flaming energy. We were so close to the gate the stars were cut off from view by its sides. The gateway to the wormhole pulsated and flickered and the Princess Blue inched toward it like a moth to a brilliant candle.

"To the Captain, may he preserve us all!" the Second Mate cried in a toast no less sincere for all of its ceremony.

Even as he spoke, we were out of the universe of N-space and into hyperspace. We were in the wormhole, falling between the stars. In place of the stars, the wormhole surrounded us with immense rings of light, hoops through which the Princess Blue dove and weaved under her master's guidance.

If the Captain went too fast or misjudged the convolutions of the hyperspace trail, we would return to where we had entered the gate, our fuel depleted. If he did not travel swiftly enough through the three-dimensional maze, then the strange, corrosive atmosphere of H-space would eat its way through our hull — we would smell the sweetness of the gas with our last breath.

Passage through the Malir Gates is tricky, and I was glad the Captain was experienced in the ways of hyperspace travel. My senses reeled as we tumbled in a controlled spiral through the corruscating hoops of the Malir Gate's H-space wormhole. Then, as I shuddered at the time it was taking, the hoops vanished and the normal universe reappeared. We emerged from the jump unharmed and with plenty of fuel. Then and there I made a vow that I would become as accomplished a Malir jumper as the Captain of the Princess Blue.



In the year to come, all of the gates linking the Far Arm network of nine planetary systems would become familiar to me. Unlike other gates, familiarity with a Malir Gate breeds neither contempt nor contentment.

The gates are the cornerstone of human space. They are as necessary as ships themselves, for without these gates our ships, with their limited speeds, would be unable to traverse the vast reaches of space. The Hawking Drives push our ships to almost unimaginable speeds, but the speed of light is a barrier we cannot yet pass on our own.

Luckily, there are networks of interconnected Malir Gates throughout human space. Each net has from nine to twelve interconnected gates which enable starships to travel rapidly from star to star. But each net is almost totally isolated from all other nets — while some LongSleep ships move from net to net without benefit of the Malir Gates, it can take such

a ship many years, even generations, to make its journey. It is hardly a surprise that the Emperor Hiathra himself has offered an imperial Baronety to any Captain who discovers a gate linking one net to another.

So far, no Imperial Barons have been made through this offer. Each net of stars stands alone and nearly all of mankind's worlds lie close to a net.



The Second Mate nudged my elbow as the stars, now in different patterns and designs, flickered and then steadied as we left the influence of the gate. I coughed, reddened in embarrassment, as I remembered my ceremonial duty and lifted my newly-filled glass to toast the stars just outside the Princess Blue.

"To the universe," I said somberly, "to the stars, to the Malir to whom we owe so much, to the Captain, to the crew, to the good ship Princess Blue." My heart beat faster as the rest of the crew, in one great roar, closed the ceremony of my initiation as a spaceman with their full-throated, chorused reply: "To the Princess Blue!"



The ship is a memory. It tumbles through my mind in a crazy pattern of regret and longing that twists and weaves more than ever did a wormhole highway. I remember the Princess Blue and her crew. I will not forget her.



It was during my twelfth month on the Princess that the derelict ship was spotted. I was on the watchteam as we swung toward the Malir Gate in the Karonus System. We had just sold some exotic pets to the crew of Imperial Starbase Hiathra and had realized quite a good profit. I was already thinking of the trip home and six months of leave, but my reveries were interrupted by the Watch Officer's strident voice:

"Manchi ship ahoy, Captain!"

Instantly, all eyes turned toward the ship's computer viewscreen. The Manchi had been preying on ships in human space for the past few months — no one knew why. Though a merchant ship, the Princess Blue was decently equipped. We were hardly a warship, but a merchant vessel must be prepared to defend itself. We were nervous, but ready.

Then, curiously, the Manchi ship passed us by like a huge ghost. Our sensors tracked it as it left visual screen range but, finally, even the sensors could no longer detect its presence.

The Second Mate breathed a sigh of relief and pushed his chair away from the sensor control console. The Captain's hands relaxed from their grip on the ship's throttles and the First Mate leaned back from the Targeting Acquisition Computer console.

"Secure from General Quarters," the Captain announced from the Go Room.



In the Go Room an inertialess shield protected the Captain from the effects of the Princess Blue's maneuvers. Beside him, the First Mate sat at the combat TAC. During high speed maneuvers the weapons systems would be under his command, safe within the Go Room from the forces that would batter the rest of us.

This kind of shield works only on a limited area, the exact size of the area determined by complex quantum math. Some scout vessels are small enough that their entire interiors can be protected by such a shield, resulting in great maneuverability; not so the Princess Blue.

As part of my training, I had spent days in the Go Room learning how to fly the Princess manually, using both her Cruise Flight Mode and her Newtonian Flight Mode. In cruise mode the pilot only has to worry about the ship's direction and speed. In newtonian mode, the engines thrust only dead ahead, and course changes, while swift and sure, must be made by rotating the ship and firing the engines. It's rather like doing vector mathematics in your head. Like most new pilots, I preferred the cruise mode.

The Captain of the Princess Blue actually preferred newtonian flight because of the increase in maneuverability. The thought of doing so much vector addition and subtraction gave me a headache. Only after many months of practice was I able to swing the Princess Blue in a clean 180-degree turn in anything other than cruise mode.



"The Manchi has left sensor range," the Second Mate reported, "but there's another ship, just coming into range now!"

"Manchi?" the Captain asked.

The Mate looked at the image forming on the viewscreen.

"No," he said, "it appears to be an independent — a scout ship." He threw a toggle switch. "Automatic hailing frequencies opened." A pause as he checked his console. "No reply."

"Keep sending," the Captain said, "and I'll maneuver to within 300 clicks. Shields to max. Go Room to take control of weaponry."

On the electronic screen a small blue dot grew closer and assumed the sleek, wedge shape of a scout vessel. The scout appeared to be adrift but undamaged. The Second Mate confirmed this via his instrumentation.

"No sign of Hawking energies," the Mate read out. "Main reactors appear functional, however. Shields are down. I get no indication of bio-electricity." He tapped a few of his console's switches. "None at all."

"Keep on the hailing frequencies," the Captain replied. "We'll move to two clicks. Put a remote on the screen."

The Second Mate threw another switch and the viewscreen showed us closing in on the scout, courtesy of one of the cameras aboard the remote sensors that hovered like a loose cloud around the Princess Blue.

"A Manchi kill?" the Captain asked.

"No, sir." The Second Mate shook his head.

"Sensors indicate no damage to the hull or interior systems. Whatever happened to the scout probably wasn't the result of combat."

"Your opinions, gentlemen?"

"I don't like this," the First Mate responded, "not so soon after stumbling upon a Manchi ship..."

"You think it might be a trap?"

"I don't know..." The First Mate leaned forward in his cocoon chair, checking the status of the Princess' onboard weaponry. "If it is a trap, we can hold our own against two, even three, bug ships long enough to dive into the Malir Gate and get away."

"It's true, Captain. The bugs aren't about to follow us there," the Second Mate chimed in. A grim smile accompanied his words as he added, "I've seen what happens to the bugs if they try to Gate. There isn't much left of them afterwards that isn't liquid."

"Moving to one click," the Captain said. Almost imperceptibly, the Princess inched forward. "Anything?" he asked.

The Second Mate checked his console again.

"No, sir. Still no life readings, no attempt to communicate or acknowledge our communications. It seems to be abandoned, sir. Either that or the crew is dead."

"All right, thank you," the Captain answered. "Who has EVA duty?"

I cleared my throat, "I'm on the duty roster today for extra-vehicular assignment," I said.

The Captain glanced at me. For a moment I feared he was going to question my competence, but all he did was nod. "Suit up and get over to the derelect," he said. "Check it out and report back."

"Yes, sir! Permission to leave the watchroom?"
"Granted."

I tore down the corridors to the engineering department and suited up. Trying to ignore my sweaty palms and dry mouth, I locked the suit's permaglass helmet into place.

This would be my first solo mission, but I had trained for EVA. I determined that I would be as quick and professional as possible.

Suited up, I made my way to the airlock. As soon as the airlock doors opened, I jetted toward the scout ship. The derelict grew larger and clearer as I approached. I felt as if I were falling toward it, although up and down were, of course, meaningless.

Then, I noticed something.

"EVA Unit One to Princess Blue," I called. "I have a good visual on the scout vessel. Her name is Jolly Roger and..." I squinted to be sure. "She looks intact. No sign of damage or obvious malfunction."

"Carry on with your mission EVA One." The Second Mate's voice filled my helmet. "Enter the Jolly Roger and report back. I've conferred with the Captain — if the vessel is not manned it falls under the laws of salvage." He laughed. "That should make the Princess' owners happy and increase all our shares as well."

Above me the Princess Blue floated. She dwarfed the tiny scout ship. I imagined that I could feel her gravity pulling me to her, but any pull was simply that of longing to be home again with my mates.

Then, I heard a shrill voice: "Manchi!"
I glanced involuntarily around but the

shouted voice was, of course, coming through my helmet radio — it was the Second Mate.

"Princess Blue to EVA One," he said, his voice strained and hurried. "Sensors show Manchi ships closing in, armed and ready. ETA...within minutes. No time for you to return before shields are raised and battle alert is sounded. The Captain says ride it out in that scout. The bugs'll be targeting us. It's unlikely they'll bother a derelict. We'll pick you up right after. Going to radio silence. Acknowledge!"

"Acknowledged," I replied, "and godspeed."

"And to you." The Second Mate's voice was a whisper. "We'll tilt a few when this is over. This is the Princess Blue to EVA One — out."

I rushed through the airlock and into the Jolly Roger. The doors slid closed behind me. The ship's sensors picked up my presence and automatic life-supports began humming throughout the ship. A moment later, my suit gauges showed breathable air had been restored so I removed my helmet. Whatever had gone wrong onboard Jolly Roger, it was not mechanical, for which I was very grateful.

I was alone inside the cramped scout. Throwing myself into the driver's seat, I switched on the master control console. The console's electronic view-screen was functional and I toggled to a true visual — the Princess was so close there was no need for electronic enhancements. I gasped at what I saw.

The Manchi had arrived, and not just two or three — ten Manchi ships dove out of the distance to surround the Princess Blue. They spaced themselves all around the merchant vessel, their overlapping shields creating an impenetrable force sphere.

To maneuver directly into one of the Manchi shields would be suicidal. For the first time, I realized these were not mindless bugs, but sentient, and quite ruthless, beings.

I was just outside the Manchi encirclement. The Princess Blue was a goldfish trapped inside an invisible but deadly bowl.

Switching on the ship's Target Acquisition Computer, I found that the scout's missile bays were empty, and her weak garnet lasers would be totally ineffective against such Manchi vessels. I pounded my fists on the console and watched helplessly as the battle began.

The first Manchi ship fired her lasers directly at the Princess Blue. The Princess' bow shield flickered visibly as it absorbed the deadly beam. Then a second Manchi fired, and a third.

The Princess Blue twisted and spun, and I knew that the watchroom crew would be pressed hard in their seats as the Captain tried desperately to maneuver away from the deadly blasts, hoping against hope for some small opening in the globe of enemy shields.

Within seconds, all of the Manchi were firing their lasers at the twisting, helpless merchant ship. The Princess made a separate attempt to fire her missiles, but it was far too late for that. Her shields flickered one last time and then gave out. All I could do was hold my breath.

Suddenly, all the Manchi fired directly into the center of their deadly sphere. With a tremendous release of energy, as if space itself had been ripped apart, the Princess Blue was transformed into a

roiling ball of energy, a miniature sun. Then the imitation sun cooled and vanished into dispersed vapors, molten chunks and scattered clouds.

The Manchi sphere pulled back, separating into its component ships. I braced myself for the quick assault I was certain would come. Instead, the Manchi ships turned on their drives and dove away through N-space leaving me alone.



For a time it seemed to me as if my entire world had died, but I have made certain decisions, taken certain actions. Under the laws of salvage, I have taken possession of the scout ship Jolly Roger in my own name and for my own purposes. She is a good, serviceable vessel, though I still do not know what happened to her Captain or crew.

I have spent the time since the Princess Blue's destruction studying my ship, learning her capabilities, her limits, her idiosyncracies. Onboard, I found a book, an owner's manual, complete with hand-written notes, apparently the work of the ship's previous owner. The manual has served me well as a course in the running of this vessel.

Now that I am the master of my ship, I will investigate why the Manchi did what they did — it makes no sense for them to have destroyed a merchant vessel and its cargo. I know that uncovering the meaning of any Manchi act will prove difficult. It may even be impossible, but I must try. My resources are limited, but there are ways to change that — an independent scout can thrive in the Far Arm if he uses his head.

There are numerous outposts and bases scattered amongst the nine systems of the Far Arm. As a member of the Merchant Guild, I will be able to buy and sell goods. The long hours I spent in my father's showroom as a child, watching him haggle with diamond merchants, listening to his sales banter with the customers, all will prove useful, I am sure.

I'll begin my career as a trader (and my investigations) here in the Karonus System. The Hiathra Imperial Starbase is nearby and will be my first port of call.

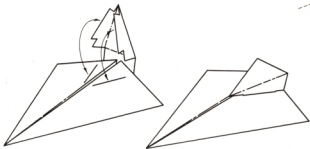
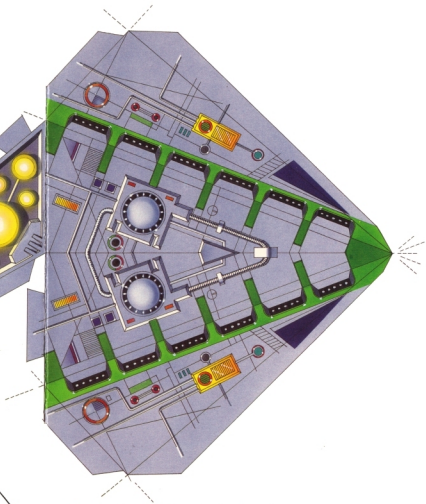
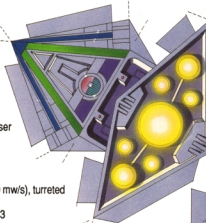
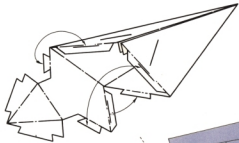
I have heard that the Imperium has placed bounties on the heads of some of the more notorious pirates. Perhaps I'll augment my income by becoming a bounty hunter. Then I will begin the refitting of my ship. Her missile bays cannot — must not — remain unstocked. Her garnet lasers must be replaced by more powerful beams. Once I'm better equipped, I can move on to the Gryphon-Arcturus trade run.

One way or another, I will survive and learn what must be learned, do what must be done. My path may be a long and arduous one, but I will follow it to the end. Survival is the only thing that matters now — if I do not survive, there can be no revenge.

The Princess Blue will be avenged. There are ghosts among the stars, and I will lay them to rest. I swear it.

TITAN

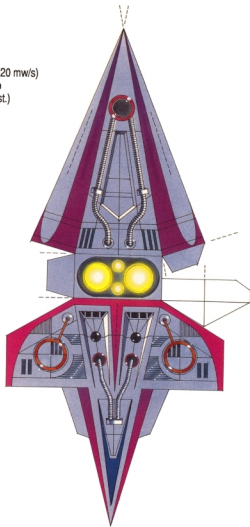
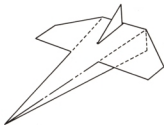
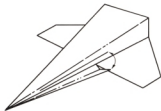
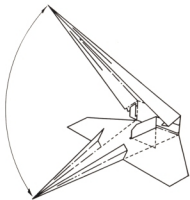
Type:	Imperial Heavy cruiser
Class designation:	Heavy cruiser
Predominant markings:	Green
Length:	95 m
Displacement:	2,232 t
Armor:	900
Beam weapon:	particle (20 mw/s), turreted
Missile weapon:	Nova
Shield(s):	Fwd-3, Aft-3
ECM:	50%
Propulsion:	Imp. Shipyards positron drive
Acceleration:	0.15 G
Turn (°/sec):	10
Date introduced:	2304



The glory of the Imperial fleet, the Titan-class cruiser reduces piracy in a system by its mere presence. Titans lack nothing in state-of-the-art armaments and defenses.

VULTURE

Type:	Manchi
Class designation:	Light cruiser
Predominant marking:	Violet
Length:	49 m (est.)
Displacement:	456 t (est.)
Armor:	480 (est)
Beam weapon:	sapphire laser (20 mw/s)
Missile weapon:	Plasma torpedo
Shield(s):	Fwd-2, Aft-1 (est.)
ECM:	--
Propulsion:	Unknown
Acceleration:	0.30 G
Turn (°/sec):	25
Date first sighted:	2309



In every encounter with Imperial ships, Manchi Vultures have attacked to kill, given no quarter, and have never accepted surrender. Exercise extreme caution.