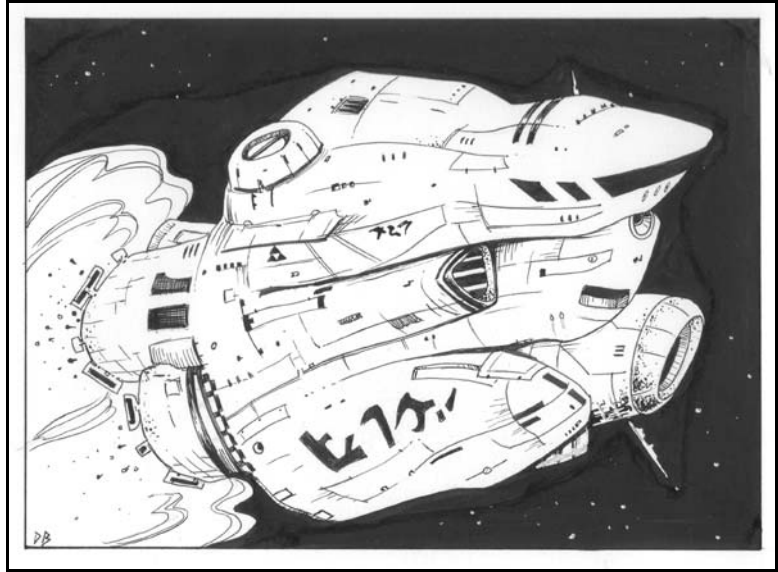


INTRODUCTION

This free guide is meant to be used with the Nebuleon SFRPG setting. It is not meant to be used as a miniatures rule guide but as a means for characters to construct ships, spending their money, and building the center for an adventure. It is not meant to build ships for detailed combat since Nebuleon SFRPG is orientated toward character driven science fiction. With that understanding, the following will allow for the construction of ships for use in the Nebuleos.



INTRODUCTION
GENERAL SHIP PRICING

SPACE CAPABLE STAR SHIP CONSTRUCTION

Star ship construction usually falls into two categories, pre-made models and custom built ships. Depending on the use, custom ships are slightly more common but governments tend to purchase ships in mass and by model. Model pricing is often different from custom pricing because of market. Often, in order to have a ship now, a customer will pay more while at other times the customer pays less because the model was over produced or can be manufactured at lower expense.

The following is a guide for the construction of custom star ships. The following companies represent the largest five star ship manufacturers. They maintain shipyards throughout the Nebuleos but often focus on their own home worlds.

The following table represents the market prices for the vehicles listed in the Nebuleon SFRPG Core Rules.

Table 1: General Ship Pricing

Type	Vehicle	Price
Planetary Vehicles	Swiftwind	16 KC
	Bush Lord	12 KC
Fighter	Rrladu Interceptor	300 KC
Shuttle	Eioun Shuttle	600 KC
Hardened Shuttle	Royu Hardened Shuttle	1.2 MC
Shuttle	Erdago Technical Shuttle	1.9 MC
Light Transport	Trabado Cargo Hauler	4.5 MC
Destroyer	Hiradi Class Destroyer	8.3 MC
Medium Transport	Doyu Transport	17.0 MC
Pinnacle	Valiant Class Pinnacle	34.5 MC
Explorer	Hisoyu Explorer	44.9 MC

Maintenance costs for the above ships amount to 10% of their purchase price per year. For example, a Hisoyu Explorer would cost 4.49 million credits to maintain in normal use through a year of operation. If a ship is not used then maintenance can be as little as zero credits.

NOTE ON SHIP TO SHIP COMBAT

Great space naval battles do not happen. The only place that ships will general battle each other is around planets, as a surprise as they decelerate in-system or as they attack a habitat. Deep space, and even between planets, is a large area and it is very difficult to box an opponent into fighting if they do not wish to. This does not mean that individual ships cannot be pursued and attacked. Conventional wisdom holds that they cannot be attacked while in Flux but while in normal space they may fall victim to an antagonist.

SHIP'S BASE DEFENSE

The ship's base defense is its Propulsion Rank + Command Control Rank. For instance, a rank 4 propulsion and a rank 5 Command Control would equal a base defense of 9.

SPACE UNITS

Space units are points used in the construction of a ship. One space unit may be traded in for one cubic meter of cargo space. Ten space units may be converted to one metric ton of cargo capacity. Space units on Cargo may not be traded in to add to the total hull. Most cargo space is depressurized cages and not valid for conversion.

SHIP GENERATION STEPS

1. Choose a hull. Record its capabilities and characteristics including the number of Space Units it has located in "Ship Hulls Space Units" on page 4.
2. Record the minimum System Components ("Components - Description" on page 6) for the hull chosen. These do not use the Space Units for the Hull, they come for free with the ship. Use the Space Units for the Hull to upgrade the base System Components if desired using the "System Components Space Unit Costs" on page 7.
3. Using the table "Auxiliary Components" on page 9, purchase any Auxiliary systems for the ship.

HULLS

A hull must be chosen and according to the capabilities of the company, ship yards and nature of the hull will determine the hauling capacity. Any of the added benefits of the companies may be dropped if desired and the SU recovered. Any addition of the components does not subtract from the total SU of the hull as it is a feature of the company's hull. In constructing a custom ship, the integrated components offered by each company are not accounted for financially or in Space Units, they are free. If they are upgraded then all benefit is lost for that integrated component; i.e. an ACG hull has a Rank 3 Shield Generator. If it is upgraded to a Rank 4 then the full price and Space Unit cost must be paid.

Ships hulls are sometimes restricted in sale. Civilians may not buy military hulls without special permitting. Such permitting will usually cost at least 50% of the hull's price. Civilian hulls may be

purchased by anyone but weapons pods and systems will then be restricted to no more than rank one.

Table 2: Companies

Company	Description
ACG	<p>The Andromedaen Council of Guilds is a collection of companies that have banded together in order to provide production, resource and planning advantages to those who are a member of the Guild. The Guilds primary focus being trade one would think their ships would focus on these endeavors but instead they are almost evenly weighted with warfare. This reflects the ACG's penchant for resolving matters with force where necessary. The ACG member corporation, InterStar Transport, actually manufactures the ships for the ACG.</p> <p>All ACG Ships have advanced Shield Generators (Rank 3) built in to thier hulls.</p>
OmegaStar	<p>OmegaStar is the premier ship builder founded and run by the Dremin. They have a formidable business presence outside ship construction and use it to their advantage when making components for their ships.</p> <p>Omegastar components cost .75 of the listed price.</p>
Rrossi Industries	<p>Rrossi is a relatively new company on the rise in the Grou-Lynn Empire. Its primary customer is the Imperial Navy and Rrossi specializes in war ships. They have yet to produce a viable fighter design but prefer to focus in heavier warships.</p> <p>Rrossi military class warships have enhanced Weapons Control (Rank 2) and a Weapons Pod (Rank 2) integrated with the hull during construction if desired.</p>
Tradali Concern	<p>The Tradali Concern is a subsidiary company of InterStar. Linked closely to InterStar but focusing on the trade needs more intensely than InterStar, Tradali ships have become synonymous with trade.</p> <p>All Tradali ships have enhanced Interstellar Drive (Rank 2) and a a Sensor Pod (Rank 5) integrated with their hull at construction.</p>
W.A.R. Industries	<p>War Arsenal Reserve Industries is exactly what it sounds like, a weapons manufacturer. The company is one of the only truly multi-racial efforts in ship building. They use military technology from several races and for this reason have what is considered the best war ships in the Nebuleos.</p> <p>All W.A.R. ships start with integrated Weapon Control (2 Ranks) and a Weapons Pod (2 Ranks).</p>

Table 3: Ship Hull Price

Hull	ACG	OmegaStar	Rrossi Industries	Tradali Concern	W.A.R. Industries
Shuttle	500 KC	800 KC	400 KC	600 KC	700 KC
Hardened Shuttle	800 KC	1 MC	700 KC	900 KC	1.1 MC

Table 3: Ship Hull Price

Hull	ACG	OmegaStar	Rossi Industries	Tradali Concern	W.A.R. Industries
Fighter	--	--	--	900 KC	1 MC
Pinnacle	1.9 MC	1 MC	1.8 MC	1.2 MC	2 MC
Lt. Transport	1.8 MC	1.5 MC	1.2 MC	2 MC	1.1 MC
Med. Transport	2.3 MC	2 MC	1.7 MC	2.5 MC	1.6 MC
H. Transport	2.8 MC	2.5 MC	2.2 MC	3 MC	2 MC
Super Cargo	3 MC	4 MC	3.5 MC	3.75 MC	3 MC
Cruiser	7.5 MC	7.2 MC	7.7 MC	--	8 MC
Destroyer	13 MC	12.7 MC	13.2 MC	--	13.9 MC
Exploration	3.7 MC	3.5 MC	4 MC	3.5 MC	--
Super Exploration	4.7 MC	4.5 MC	5 MC	4.5 MC	--

Note that some hulls innately have abilities listed elsewhere beyond the SU listed here. For instance, the Tradali shuttle has cargo space for 6.5 MT which would normally cost 65 SU. In this case, it is free and requires no additional SU. If the cargo space were dropped, then the shuttle would not have an additional 65 SU.

Table 4: Ship Hulls Space Units

Hull	ACG	OmegaStar	Rossi	Tradali	W.A.R. Industries	Class
Shuttle	150	240	120	180	210	Civilian
Hardened Shuttle	150	210	120	180	240	Military
Fighter	--	--	--	270	300	Military
Pinnacle	570	300	540	360	600	Military
Lt. Transport	540	450	360	600	330	Civilian
Med. Transport	690	600	510	750	480	Civilian
H. Transport	840	750	660	900	600	Civilian
Super Cargo	900	1200	1050	1125	900	Civilian
Cruiser	750	660	810	--	900	Military
Destroyer	900	810	960	--	1170	Military
Exploration	1110	1050	1200	1050	--	Civilian
Super Exploration	1410	1350	1500	1350	--	Civilian

Landing capability refers to a ships ability to land and take off from a planet.

Table 5: Landing Capability

Hull	ACG	OmegaStar	Rossi Industries	Tradali Concern	W.A.R. Industries
Shuttle	Yes	Yes	Yes	Yes	Yes
Hardened Shuttle	Yes	Yes	Yes	Yes	Yes
Fighter	--	--	--	Yes	No
Pinnacle	Yes	Yes	Yes	Yes	Yes

Table 5: Landing Capability

Hull	ACG	OmegaStar	Rrossi Industries	Tradali Concern	W.A.R. Industries
Lt. Transport	Yes	Yes	No	Yes	No
Med. Transport	No	Yes	No	Yes	No
H. Transport	No	No	No	No	No
Super Cargo	No	No	No	No	No
Cruiser	No	No	No	--	Yes
Destroyer	No	No	No	--	No
Exploration	No	No	No	No	--
Super Exploration	No	No	No	No	--

This is integrated cargo space and may not be converted to space units.

Table 6: Hull Cargo Capacity

Hull	Cargo in MT					Crew
	ACG	OmegaStar	Rrossi	Tradali	W.A.R.	
Shuttle	10	20	30	6.5	8	4-6
Hardened Shuttle	10	20	30	6.5	8	4-6
Fighter	--	--	--	1	5	1-4
Pinnace	120	80	70	90	100	4-15
Lt. Transport	50	35	70	80	40	1-10
Med. Transport	550	600	500	900	400	1-10
H. Transport	1000	800	900	2000	700	3-30
Super Cargo	4000	3000	3200	6000	2200	10-100
Lt. Cruiser	5K	8K	4K	12K	90K	30-100
Destroyer	80	50	30	--	180	30-150
Exploration	200	180	220	150	--	30-200
Super Exploration	400	300	440	250	--	40-200

COMPONENTS

Components are the parts that make up the ship. They have different costs and may be maximized via cash spent, company bought from and purpose. Components are ranked from 1 (lowest a ship can have still have the component function) to 10 (highest). A rank of zero indicates the component does not exist or does not function. Beyond level ten components will only come from experimental versions or previously unknown sources. Some Military sources of components will have components in this range.

System components are the basic components of a star ship. Auxiliary components are listed later and may be added to a star ship as desired and space allows. Initial Ranks do not need to be paid for financially or with Space Units since they are integrated and part of the initial hull purchase.

Table 7: Components - Description

Component	Description	Initial Rank
Command Control	This is the vehicles ability to be piloted and respond to commands. This follows the rank modifiers but are applied to the pilots Piloting Skill checks. All hulls come with 1 rank of Command Control except where noted otherwise.	1
Power Systems	This is the power distribution system. It is required to be at the same level as the Engines which supply the power for the ship. All hulls start with 1 rank in Power Systems except where noted otherwise.	1
Shield Generators	Shield generators are defensive shielding for the ship. A ship that is able to enter the atmosphere of a planet must have at least 1 rank in Shield Generators. Shields will defend a ship for 40 points per rank. Shuttles start with 1 rank in Shield Generators except where noted otherwise.	1 (see description)
Engine	Engines are the power plants of a ship. The amount of power depends on the number of reactors and their type. One reactor may be mounted for every rank of Engine.	1
Propulsion	This is the in-system normal space drive. It is usually a form of gravity drive in most modern ships. A rank of propulsion equals 100,000 Mm/hour of max speed. Cruising speed is normally 1/2 of max speed but may be purchased up independently. All hulls come with one rank except where noted otherwise.	1
Navigation	Navigation represents not only the navigation computer but the positioning array for determining location, and astrogative capabilities of the ship. All hulls start with 1 level in Navigation except where noted otherwise.	1
Structural	Structural represents the level of reinforcement that the hull receives against damage or hauling stresses. One point of structure represents 30 Hull Points. All hulls start with one rank in Structural except where noted otherwise.	1
Weapon Control	For every 1 level in Weapon Control that a ship has a single weapon may be put on automatic or a gunner will receive +1 to hit when it is manned. Ships without weapons have no need for Weapon Control. All Hulls start with 0 in Weapon Control except where noted otherwise.	0

Table 7: Components - Description

Component	Description	Initial Rank
Interstellar Drive	This represents the speed of a ship at interstellar travel. Reference page 102 in the Nebuleon Core rules for speeds of the various ranks. Flux ranks over five are restricted to military craft in most systems. All hulls start at 0 except where noted otherwise.	0
Life Support	Life support represents a ships capability to recycle or store breathable atmosphere, maintain habitable environment (temperature, waste disposal) and maintain artificial gravity. One rank in life support will sustain 2 crew, two ranks: 10, three ranks: 20, four ranks: 40, five ranks: 100, six ranks: 200, seven ranks: 300, eight ranks: 400, nine ranks: 500, ten ranks: 1000. All hulls start with 1 rank of Life support except where noted otherwise.	1

Table 8: System Components Space Unit Costs

Component	1	2	3	4	5	6	7	8	9	10
Command Control	2	4	8	10	20	30	40	50	60	70
Power Systems	3	6	12	24	48	96	125	150	175	200
Shield Generators	10	15	20	40	80	120	160	200	240	280
Engine	10	20	30	40	50	60	70	80	90	100
Propulsion	20	35	50	65	80	95	120	145	170	195
Navigation	2	4	8	10	20	30	40	50	60	70
Structural	2	5	10	15	30	60	90	120	150	180
Weapon Control	10	20	40	60	80	100	130	160	190	220
Interstellar Drive	30	60	90	120	150	180	210	250	300	350
Life Support	5	10	15	20	25	30	35	40	45	50

Upgrading the system components costs money and the following table outlines the costs required in the upgrade of system components.

Table 9: System Components Cost

Component	1	2	3	4	5	6	7	8	9	10
Command Control	20K	30K	50K	100K	400K	1M	3M	6M	10M	20M
Power Systems	40K	100K	200K	300K	500K	700K	1M	1.4M	1.7M	2M
Shield Generators	100K	200K	300K	500K	800K	1.5M	2.5M	3.8M	5M	10M
Engine	500K	1.5M	3M	6M	9M	12M	15M	20M	25M	30M
Propulsion	400K	800K	1.8M	3M	5M	8M	13M	18M	25M	35M

Table 9: System Components Cost

Component	1	2	3	4	5	6	7	8	9	10
Navigation	30K	40K	50K	100K	400K	1M	3M	6M	10M	20M
Structural	100K	200K	300K	400K	500K	600K	700K	800K	900K	1M
Weapon Control	500K	1M	2M	4M	7M	11M	16M	21M	27M	35M
Interstellar Drive	4M	8M	16M	30M	45M	60M	80M	100M	150M	300M
Life Support	10K	50K	100K	200K	300K	500K	800K	1.5M	3M	6M

SPECIAL NOTES ON SYSTEM COMPONENTS

Some system components may be upgraded or implemented in different ways so as to result in a different effect on the ship.

Table 10: Components - Description

Component	Description
Power Systems	See Engines.
Engine	<p>Fission - Very uncommon but sometimes used as a means of inexpensive power for a ship. Cost of the power system will be halved for a fission system but must be upgraded if the reactors are ever changed to non-fission. They produce 2000 SEU per hour.</p> <p>Fusion - This is the most common form of reactor used. Generally, they run on deuterium which may be purchased from any orbiting habitat or manufactured from any source of salt water. The cost of refueling is covered by maintenance fees discussed "Space Capable Star Ship Construction" on page 1. Gren use a form of cold fusion with little risk of radiation exposure. Fusion reactors are purchased at the listed price for a Power System and Engine rank. Fusion reactors produce 4000 SEU per hour.</p> <p>Matter Anti-Matter (MAM) - The most expensive and desired form of power, MAM reactors require very little in the way of fuel. MAM reactor management is more complicated and therefore requires a more sophisticated power management system. Power management system and Engine Systems ranks cost double for MAM reactors. A single MAM Reactor will produce 12,000 SEU per hour.</p>
Interstellar Drive	<p>Interstellar drives commonly available in the Nebuleos are hyperdrive and flux drive. Flux is a form of creating a singularity that a ship then falls through. Although in normal space, technically, it is on the edge of warped space allowing it to travel faster than light.</p> <p>Hyperdrive is only used by the Gren and is a form of quantum space bubble allowing it to travel in a state outside normal space, a hyper space, not bound by normal rules of space time. Both flux and hyperspace travel close to the same speed although the Gren claim their hyperdrives have no theoretical limit to how fast they may travel.</p> <p>Costs quoted in the "System Components Cost" on page 7 are for flux drives. Hyper-space costs 1.25 times as much.</p>

Table 10: Components - Description

Component	Description
Life Support	<p>Life support comes in three types.</p> <p>Canister - As the name implies, this system is simply canned air. It will supply 100 hours of air for each Rank of the life support system. It costs 1/2 the normal credits but double the space units.</p> <p>Scrubbers - This system is a chemical scrubber that strips the CO2 out of the atmosphere and replaces it with oxygen. These are standard for most ships in the Nebuleos and costs are normal.</p> <p>Cultured Algae - This is state of the art in life support. This system has a genetically designed algae that feeds on the CO2 in the atmosphere and produces oxygen at an incredible rate. Special additives can cause it to produce additional oxygen to replace lost atmosphere. It can also be programmed to produce other elements in a specific atmosphere to suit the needs of individual races. Cost for this system is double in credits but half in space units.</p>

AUXILIARY COMPONENTS

These are components not required for operation but that are found on many modern craft.

Table 11: Auxiliary Components

Component	Cost										Space Units
	1 KC	2 KC	4 KC	8 KC	16 KC	32 KC	64 KC	128 KC	256 KC	512 KC	
Med Bay	1 KC	2 KC	4 KC	8 KC	16 KC	32 KC	64 KC	128 KC	256 KC	512 KC	5 per rank
<p>A med bay is essential to the welfare of a crew in that it contains the medical supplies, treatment facilities and morgue of a modern vessel. Med bays may come in as simple as an aid station with first aid kit (rank 1) up to a deluxe surgical theater, treatment center and cloning facilities (rank 10). Medics working in this environment are subject to the Rank Modifiers for components table.</p>											
Docking Bay	20 KC	40 KC	60 KC	80 KC	100 KC	120 KC	140 KC	160 KC	180 KC	200 KC	30 per rank
<p>Docking bays include births for one ship of fighter, shuttle or hardened shuttles per rank.</p>											
Artificial Entity	100 KC	200 KC	400 KC	800 KC	1.6M	3.2M	6.4M	12.8M	23.6M	47.2M	4 per rank
<p>Having an Artificial Entity in the computer core can be quite helpful. It may control one system component for every rank it has. For instance, a rank 3 A.E. can control Life Support, a Weapon and the Engines. In addition, the A.E. receives one skill at 80% for each rank. For instance, the same rank three could have Targeting (Artillery) 80%, Xenobiology (Gren) 80% and Ships Technology (Med. Transport) 80%. The A.E. has a personality and will have its own codes. Although bound to obey the captain and the officers of the ship, just as any crew member, an AE will not act against its own codes or morals.</p> <p>An A.E. requires a computer core component of the same Rank to inhabit.</p>											
Computer Core	--	--	--	--	500 KC	600 KC	700 KC	800 KC	900 KC	1M	8 per rank

Table 11: Auxiliary Components

Component	Cost										Space Units
<p>The computer core is used for analysis and advance computation. Although not restricted to exploration ships they are a common component of that class of ship. Component Rank Modifiers apply to any person using the computer core in conjunction with a skill. The minimum rank of a computer core that may be purchased is a Rank 5. For every Rank of the computer core it receives a skill level which may be spent in a skill. When using the skill, the computer core may cooperate adding its success (or failure) to the character's roll. This is in addition to any Component Rank Modifiers.</p>											
Weapon Pod	10 KC	20 KC	30 KC	40 KC	50 KC	60 KC	70 KC	80 KC	90 KC	100 KC	5 per rank
<p>Weapon pods are modular weapons platforms which may be attached to a ship. Each weapon pod may hold up to one weapon per rank. The gunner of the weapon pod receives a +1 to hit and damage for each rank of the weapon pod. One gunner is required for each weapon in the weapon pod. If the Weapons System of the ship offers additional bonuses to hit they are added if a gunner is present. If no gunner is present then the weapons officer firing from the bridge via the Weapons Systems only receives the bonus for the ship's Weapons Systems. Note: An A.E. counts as one gunner for each rank if it has a Weapon Use (Artillery) skill.</p>											
Sensor Pod	200 KC	400 KC	600 KC	800 KC	1M	1.5 MC	2 MC	2.5 MC	3.5 MC	5 MC	15 per rank
<p>A sensor pod is an advanced form of navigational sensors. All ships have basic sensors but a sensor pod is usually only allowed on military class star ships. All Component Rank Modifiers apply to the sensor pod. In addition, it has a range of 10 Million km per rank.</p>											
Armor	20 KC	80 KC	160 KC	350 KC	700 KC	1.4 MC	3 MC	6 MC	12 MC	24 MC	10 per rank
<p>Armor applies to all areas of the Systems Components protecting them from damage. Each Rank of armor renders 50 points of armor.</p>											
Escape Pods	10 KC	20 KC	30 KC	40 KC	80 KC	120 KC	160 KC	200 KC	250 KC	300 KC	2 per rank
<p>Escape pods will support 2 people per Rank for 100 hours per Rank. Rank 8,9 and 10 have stasis chambers built in and will allow a passenger to survive indefinitely. The higher the rank the better the pod will be supplied for survival on a planet. Escape pods of Rank six or higher may be undocked and used as a ships boat for landing on a planet and returning to the ship.</p>											
Auxiliary Power	30 KC	60 KC	90 KC	150 KC	200 KC	300 KC	400 KC	500 KC	800 KC	1 MC	10 per rank
<p>Auxiliary power is basically a large storage battery. It will store 400 SEU per rank; i.e. rank 4 Auxiliary Power System will store 1600SEU. The power to store in the Auxiliary power system comes from any excess over standard operating power cost. FOr instance, a ship with a Fusion Reactor will produce 4000 SEU per hour. If the total ranks of all systems are added together and it comes to 24 ranks then the systems require 2400 SEU per hour to run normally. Auxiliary power can then be charged with the remaining 1600 SEU per hour. In the case of the example, the system would be charged in one hour.</p>											

RANK MODIFIERS FOR COMPONENTS

Where applicable, like in Navigation and Command Control, where skills are used in conjunction with a character's skill the following table is used to modify the roll.

Table 12: Rank Modifiers for Components

Rank	Modifier
1	-40
2	-30
3	-20
4	-10
5	0
6	+10
7	+20
8	+30
9	+40
10	+50

COMPONENT MODIFICATION

It is possible to modify System Components after purchase. These are called field modification or upgrades and kits are provided by the manufacturer to aid in the efforts. The modifications can be made without a kit but it then the tech doing it must have six ranks of Ship Technology in that class of ship instead of three. In addition, the tech must have the appropriate ranks of the skills outlined in the table below to perform modifications on the desired System Component.

Table 13: Field Modifications - Required Skills and Costs

Component	Required Skill	Cost of Kit
Command Control	Electronics	25% of Target Rank
Power Systems	Electronics	50% of Target Rank
Shield Generators	Electronics	25% of Target Rank
Engine	Engineering - Power Systems	50% of Target Rank
Propulsion	Engineering - Propulsion	25% of Target Rank
Navigation	Electronics and Navigation	50% of Target Rank
Structural	Ship Technology	50% of Target Rank
Weapon Control	Weapons Technology	50% of Target Rank
Interstellar Drive	Engineering - FTL	50% of Target Rank
Life Support	Biology and Engineering - Chemical	10% of Target Rank
Auxiliary Components		
Med Bay	Medicine and Ship Technology	50% of Target Rank
Computer Core	Computer Technology	50% of Target Rank
Aux. Power	Engineering - Power Systems	50% of Target Rank

Table 13: Field Modifications - Required Skills and Costs

Component	Required Skill	Cost of Kit
Weapon Pod	Weapons Technology	50% of Target Rank
Sensor Pod	Comm. Technology	50% of Target Rank
Armor	Armor Technology	50% of Target Rank
Escape Pod	Depends on the Component being modified on the Escape pod. Use the listings in this table as though modifying a ship; i.e. in creasing Life Support requires a Biology Skill	50% of Target Rank
Artificial Entity	Computer Technology and Psychology	50% of Target Rank

COST

The cost of a field modification kit is stated in the above table. Take the target rank cost from “System Components Cost” on page 7 and multiply it by the percentage in the Cost of Kit column. For example, to upgrade, via a FMK, from rank 1 to rank 3 Life Support, the cost would be $10\% \times 100K = 10,000$ credits. There is no charge for intervening ranks.

PERFORMING FIELD MODIFICATIONS

Originally intended for and used by military vessels, field modification kits have caught on in all sectors. The process is meant as a manual upgrade of original components and has its limitations. First, no original components may be upgraded more than four ranks. The current technology of the Nebuleos limits this. Second, field modifications are difficult to repair when damaged. Any repairs to a system that has had field modifications is done at a -10% to the skill check. Finally, field modifications must be registered with the Interstellar Trade Organization. If they are not then the owner of the ship could be sentenced to a lengthy prison term or to reeducation. Only military vessels are allowed to have Weapons System upgrades.

There are two methods of performing field upgrades. The first is to acquire the raw components and perform the upgrade with existing personnel. Such an upgrade costs 10% of the target rank as listed in the table “System Components Cost” on page 7. For example, upgrading the engine system from rank 2 to 4 would cost $10\% \times 6M = 600,000$ credits. To perform the upgrade, several things are needed:

- A technician with six ranks in Ships Technology for the target ship
- A technician with the skill required in the table “Field Modifications - Required Skills and Costs” on page 11.
- The money for the components
- A space port with repair facilities
- One month for every rank upgraded

The following table lists the modifications that a technician has for upgrading the components.

Table 14: Skill Modifiers for Field Modifications

Ranks to Modify from Original	With FMK	Without FMK
One Rank	-15%	-20%

Table 14: Skill Modifiers for Field Modifications

Ranks to Modify from Original	With FMK	Without FMK
Two Ranks	-30%	-40%
Three Ranks	-45%	-80%
Four Ranks	-60%	-160%

When upgrading the system, one should always track the original system rank. The Skill Modifiers table is based off of the number of ranks from the original. For example, to upgrade from Rank one to Rank two would be a -15% with an FMK. To then go from Rank two to Rank three would be a -30% to the technician's skill.

FIELD MODIFICATION KITS (FMK)

FMKs are readily available from the MegaCorps who manufacture ship's hulls. In order to modify a ship's System Components the FMK must be purchased from the company who manufactured the hull. In doing so the purchaser, their master's license id and the ship ident code is registered with the ITO. FMKs are legal but highly regulated and tracked. In order to upgrade a System Component with an FMK the following are required:

- A technician with three ranks in Ships Technology for the target ship
- A technician with the skill required in the table "Field Modifications - Required Skills and Costs" on page 11.
- The money for the FMK
- A space port with repair facilities
- One week for every rank upgraded

FMKs will drastically decrease time and the level of skill required for an upgrade. They usually increase the cost except in the case of Life Support Component, where the components, technology and FMKs have come to very inexpensive.

FAILURE OF A FIELD MODIFICATION

The failure of a modification means that the upgrade has some sort of fundamental flaw. This may be detectable (upgrade to the computer core results in the computers no longer functioning) or undetectable (the upgrade to the computer core has driven the AE insane and it is now pumping low levels of carbon monoxide into the Life Support to annoy the crew). The result of a normal failure of the upgrade is up to the GM to determine.

A critical failure, a skill check failed by more than 40%, results destruction of all component materials, FMKs, and the original component. For instance, if a technician has a Biology skill of 40%, a Ships Technology skill of three ranks, a Life Support FMK and is upgrading from Rank four (the original component Rank) to Rank five he must roll under a 25% to succeed. If he rolls a 40% he fails and the GM may decide he recognizes the error or that it goes unnoticed until the air grows thin. If, instead, the technician rolls a 70% then he critically failed the upgrade and the Life support system will need to be replaced. If the GM so desires, he may also rule the technician then smells like boiled cabbage for a month.

SHIP RECORD SHEET

Model		Initial Rank	Current Rank
Manufacturer			
Type			
Base Defense			
Speed	Cruising: Mm/hour Max: Mm/hour Max Flux: Flux Rate		
Capacity	Crew: Passenger: Cargo: Metric Tons Docking bay		
Ceiling			
Sensor Package	Range: Mm Type:		
Life Support	emergency max recommended		
Escape Pod			
Engine Type			
SEU/Round	Produced: Consumed Norm: Consumed Max:		
Armament			
Shields			

Area	Hull Points	Armor	Detail	Initial Rank	Current Rank
1			Command Control		
2			Power Systems		
3			Shield Generator		
4			Engine		
5			Propulsion		
6			Navigation		
7			Structural		
8			Weapon Control		
9			Interstellar Drive		
10			Life Support		