Chapter 13: Standard Designs

This chapter contains examples of standard computers, vehicles and spacecraft in use throughout the ***Traveller*** universe.

VEHICLE DATA BLOCK

Every vehicle uses the following data block for easy reference to commonly used information during play. They have been designed to fit well on a standard 3”x5” index card. The information presented in the leftmost column is that which will be most used during normal operation of travel, trade, and commerce. The information in the middle column is the data that will be most needed when the vessel is engaged in combat. The rightmost column is used to detail the vehicle’s offensive weapon systems. At the bottom of each block will be a listing of any other equipment or supplies installed or stored aboard the vessel, that have not already been detailed.

Class:	**EP Output:**	
Cost:	**Agility:**	
Tech Level:	**Initiative:**	
Size:	**AC:**	
Streamlining:	**AR:**	
Pressurized?	**SI:**	
Climate Control?	**Visual:**	
Drive Train:		
Crew:		
Passengers:	**Sensors:**	
Cargo Space:		
Fuel:		
Range:	**Comm.:**	
Speeds:		
Acceleration =		
Offroad =	Very Slow =	Slow =
Cruising =	Fast =	Maximum =
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

STARSHIP AND SPACECRAFT DATA BLOCK

Every starship and spacecraft uses the following data block for easy reference to commonly used information during play. They have been designed to fit well on a standard 3”x5” index card. The information presented in the leftmost column is that which will be most used during normal operation of travel, trade, and commerce. The information in the middle column is the data that will be most needed when the vessel is engaged in combat. The rightmost column is used to detail the ship’s offensive weapon systems. At the bottom of each block will be a listing of any other equipment or supplies installed or stored aboard the vessel, that have not already been detailed.

Class:	**EP Output:**
Tech Level:	**Agility:**
Size:	**Initiative:**
Streamlining:	**AC:**
Jump Range:	**Repulsors:**
Acceleration:	**Nuclear Dampers:**
Fuel:	**Meson Screens:**
Duration:	**Black Globes:**
Crew:	**AR:**
Staterooms:	**SI:**
Small Cabins:	**Main Computer:**
Bunks:	**Sensor Range:**
Couches:	**Comm. Range:**
Low Berths:	
Cargo Space:	**Cost:**
Atmospheric Speeds:	NoE =
Cruising =	Maximum =
Other Equipment:	

TAS Form 3.1 (Condensed) **Ship’s Data (Commercial)**

Standard Computers

Hand Computer

0.135vl. A small hand-held computer system, complete with miniature keyboard and view screen. While technically these types of computers can be built at any TL, the effective computer power of a hand computer before TL9 is negligible. Even at this point they are little more than glorified address books with limited computing capability. It is not until about TL11 that the true hand computer becomes a standard part of most societies and capable of any real processing power.

Type	*TL*	*Units*	*Cost*	*Volume*	*EP*	*CPU*	*Model*	*INT*	*PP*
Parallel	9	x0.25	50	0.135	0.003	2.5	B1	0	2/1
Synaptic	11	x0.5	75	0.135	0.006	5	B2	0	3/2
Adv. Synaptic	13	x1	100	0.135	0.009	10	B3	0	4/2
Positronic	16	x10	1000	0.135	0.009	25	B4	0	5/3

Portable Computer

1.35vl. A lightweight portable computer, complete with a full sized keyboard and small view screen. Until about TL 8 or 9, these small computers are found only in use among high ranking businessmen, executives, and government officials, but they soon become fairly commonplace with the general population. Portable computers (Portacomps) start to be replaced by the hand computer at TL11.

Type	*TL*	*Units*	*Cost*	*Volume*	*EP*	*CPU*	*Model*	*INT*	*PP*
Linear	7	x1	250	1.35	0.09	2	B1	0	2/1
Parallel	9	x2.5	500	1.35	0.03	25	B4	0	5/3
Synaptic	11	x5	750	1.35	0.06	50	B7	1	8/4
Adv. Synaptic	13	x10	1000	1.35	0.09	100	B9	1	10/5
Positronic	16	x100	10,000	1.35	0.09	250	A2	2	13/7

Standard Desktop Computer

13.5vl. The desktop computer can be found at most TL and is never really replaced due to its reasonable power to size ratio when compared to other types of computers.

Type	*TL*	*Units*	*Cost*	*Volume*	*EP*	*CPU*	*Model*	*INT*	*PP*
Linear	7	x10	2500	13.5	0.9	20	B4	0	5/3
Parallel	9	x25	5000	13.5	0.3	250	A2	2	13/7
Synaptic	11	x50	7500	13.5	0.6	500	A7	3	18/9
Adv. Synaptic	13	x100	10,000	13.5	0.9	1000	M1	4	28/11
Positronic	16	x1000	100,000	13.5	0.9	2500	M1	4	28/11

Miniframe Computer

135vl. Miniframes are typically found powering the computer networks for businesses, manufacturing plants, research facilities, and other locations where massive computing power is required, and size is not a major issue.

Type	*TL*	*Units*	*Cost*	*Volume*	*EP*	*CPU*	*Model*	*INT*	*PP*
Electromechanical	5	x10	10,000	135	9	10	B3	0	4/2
Linear	7	x100	25,000	135	9	200	A1	2	12/6
Parallel	9	x250	50,000	135	3	2500	M1	4	28/11
Synaptic	11	x500	75,000	135	6	5000	M2	4	35/12
Adv. Synaptic	13	x1000	100,000	135	9	10,000	M4	5	49/13
Positronic	16	x10,000	1,000,000	135	9	25,000	M6	6	65/14

Autopilot Computer

(Hardwired) A basic computer system capable of operating a single vehicle or vessel type safely, and with access to limited emergency maneuvers intended to bring the vehicle back under control rather than undertaking automated combat maneuvers. Software is hardwired; the computer cannot be transferred to a different type of vehicle.

Type	*TL*	*Units*	*Cost*	*Volume*	*EP*	*CPU*	*Model*	*INT*	*PP*
Linear	7	x112.5	28,125	151.87	10.12	300	A3	2	14/7
Parallel	9	x22.5	4500	12.15	0.27	300	A3	2	14/7
Synaptic	11	x22.5	3375	6.07	0.27	300	A3	2	14/7
Adv. Synaptic	13	x22.5	2250	3.04	0.202	300	A3	2	14/7
Positronic	16	x90	9,000	1.21	0.081	300	A3	2	14/7

Software	*PP Cap*	*Cost*	*INT Mod*	*Ability Mod.*	*Total Skill Mod.*
*Low Basic Logic	2	1000	+0	-	-
*Limited Verbal Interface	2	500	+0	-	-
Driving	5	5000	-	-4 (Int)	+1
Navigation	5	5000	-	-5 (Edu)	+0
Totals	14	11,500	+0	-	-

*always operating

Targeting Computer

(Hardwired). A basic fire control computer capable of controlling missiles and other weapon systems. Programs are hardwired and cannot be upgraded.

Type	*TL*	*Units*	*Cost*	*Volume*	*EP*	*CPU*	*Model*	*INT*	*PP*
Linear	7	x168.75	42,187	227.81	15.19	450	A6	3	17/9
Parallel	9	x33.75	6750	18.22	0.405	450	A6	3	17/9
Synaptic	11	x33.75	5062.5	9.11	0.405	450	A6	3	17/9
Adv. Synaptic	13	x33.75	3375	4.56	0.304	450	A6	3	17/9
Positronic	16	x135	13,500	1.82	0.121	450	A6	3	17/9

Software	*PP Cap*	*Cost*	*INT Mod*	*Ability Mod.*	*Total Skill Mod.*
*Low Basic Logic	2	1000	+0	-	-
*Limited Verbal Interface	2	500	+0	-	-
Gunner Interact	1	1000	-	-	-
Predict	2	7500	-	-	-
Select	1	3000	-	-	-
Return Fire	1	5000	-	-	-
Anti-Missile	2	1000	-	-	-
Weapons Systems	1	4000	-	-	-
Gunnery	5	5000	-	-5 (Wis)	+2 (+2 Predict)
Totals	17	28,000	+0		

*always operating

Model/M1 Robot Brain

TL12. Cr23,600. A fairly universal 'brain' used in many types of robots, with a reasonable intelligence, a few basic skills, and the ability to learn as it works. This model currently has enough data storage to hold up to 10,000 experience points. More storage capacity may be added as needed. Only the basic programming itself is provided. Additional skill programs or other software must be purchased and installed separately. Twenty of the brains 28 total PP points are constantly devoted to supporting its intelligence, leaving only 8 PP free for use with other programs.

Computer Core

Units:	Synaptic x100
Size:	24.3vl (10% reduction due to miniaturization)
Cost	Cr15,000
Total PP	28
Max PP	11
EP:	1.08 (10% reduction due to miniaturization)
CPU Output:	1000 (Model/1 Master Computer)

Data Storage

Units	Synaptic x10
Storage Capacity	10,000XP
Size:	0.135vl
Cost	Cr2,500

Software

Programming	*Cost*	*PP*	Notes
Low Autonomous Logic	Cr7000	10	Int +2, Dex +2
Full Verbal Command	Cr5000	10	Int +2
Cost	Cr12,000	20	

Abilities

Str -, Dex +2, Con -, Int 8 (-1), Wis 0 (-5), Edu 1 (-5), Cha 0 (-5), Soc (-5)

Total Cost:	Cr29,500 (Cr23,600)
Total Size:	24.435vl
Total EP:	1.08

Standard Vehicles and Robots

All of the following vehicles and robots are commonly available (unless otherwise noted), and have been designed from the ground up using the T20 vehicle design system. Vehicles may be used as described, or be customized using the design system rules.

Vehicle and Robots Table:

Vehicle/Robot	*TL*	*Cost*	*Size*	*Max Speed*	*SI*	*AC*
Personal Robot	13	Cr98,801.2	100vl	10kph	14	10
Battledress	13	Cr71,655.2	300vl	10kph	25	23
Jeep	5	Cr2760	1000vl	120kph	35	10
Ground Car	5	Cr5440	2000vl	150kph	50	9
Small Cargo Truck	5	Cr12,320	5000vl	120kph	57	8
Wheeled ATV	12	Cr49,680	10,000vl	100kph	65	8
Tracked ATV	12	Cr48,080	10,000vl	80kph	65	8
Wheeled AFV	12	Cr71,080	10,000vl	100kph	65	14
Tracked AFV	12	Cr69,480	10,000vl	80kph	64	14
Hovercraft	7	Cr347,200	8000vl	150kph	61	11
Primitive Biplane	4	Cr11,840	1000vl	200kph	35	10
Cargo Plane	4	Cr364,000	10,000vl	600kph	65	8
Cargo Jet	7	MCr1.794	12,000vl	1320kph	69	8
Helicopter	5	Cr82,760	5000vl	250kph	55	8
Air/raft	8	Cr273,200	6000vl	120kph	57	8
Pressurized Air/raft	8	Cr376,000	8000vl	120kph	61	8
GCarrier	8	Cr506,880	10,000vl	120kph	65	14
Speeder	8	MCr3.950	8000vl	1320kph	61	8
Grav Belt	12	Cr9,292	200vl	120kph	12	11
Small Steamship	4	Cr334,600	150,000vl	60kph	104	2
Hydrofoil	7	Cr197,200	60,000vl	100kph	86	6
Submersible	6	MCr1.872	500,000vl	40kph (20kph)	148	2

ROBOTS AND AUGMENTED ARMOR

Personal Service Robot (Percy)

Medium (Intelligent) Robot

TL13, Cr98,801.2, 100vl. The personal service robot, (PSR), also called a Purser (Per-Ser) or just simply a Percy, is an early robotic design that first begins to appear with the development of the synaptic computers. Its vaguely human-like appearance combined with its protocol, etiquette, and personality interfaces make the Percy well suited for a wide range of tasks that require constant interfacing with people in the performance of their duties. In private use, the Percy serves admirably as a butler, housekeeper, cook, or similar repetitive or remedial tasks. In commercial use PSRs are found in positions as waiters, cooks, and janitors. Percys also undertake jobs that may be too hazardous for a person, but which are not too complex for the Percy's limited programming. The Percy can operate for up to 72 hours before its fuel cells will require refueling.

Combat Statistics

Str 10, Dex 12, Wis 0, Int 8, Cha 10, Edu 5, Soc 0

Initiative: +0 Agility: 0 AC: 10 AR: 0 SI: 14

Off-road: 7.5kph, Very Slow: 1kph, Slow: 2.5kph, **Cruising: 5kph**, Fast: 7.5kph, Maximum: 10kph

TL13 Design Specifications

Installed Components	*Size*	*Cost*	*EP*	*CPU/SP*	*Range*
100vl Chassis	+100	100	-	-	
Drive Train, Legged (2)	-2.814	301.5	-0.067	-	
Adv. Fuel Cell	-9	600	+6	-	
Fuel	-21.6	-	-	-	72 hours
Holovideo Visual	-1.5	2000	-0.1	-	100m
Auditory Sensors	-0.2	200	-0.01	-	50m
Olfactory Sensor	-0.5	1500	-0.05	-	1km
Sensors, Enhanced Tactile	-4	12,000	-0.6	-	
Voder	-0.5	1200	-0.03	-	
Appendage (Str 10, Dex 10)	-5	10,000	-1		
Appendage (Str 10, Dex 10)	-5	10,000	-1		
Model/M1 Robot Brain (Int 8)	-24.435	23,600	-1.08	-	
Totals	*+25.451*	*Cr61,501.5*			

Software Installed	*PP*	*Cost*	*Notes*
Personality Interface (Cha 10)	5*	50,000	Cha 10
Library Data Inter.	1*	3000	Edu +4
Valet	2	3000	
Cooking	2	2000	P/Cooking-2
Driving	2	2000	Driving-2 (Ground Car)
Cleaning	2	2000	P/Janitorial-2

* Must constantly be running

Totals	-	*123,501.5 (Cr98,801.2 with 20% standard design discount)*

Battle Dress

Large Augmented Armor

TL13, Cr71,655.2, 300vl. Battle Dress is a suit of personal armor similar in construction to Combat Armor. What sets Battle Dress apart is the fact that it is fully powered, in effect being a personal vehicle that is worn rather than driven.

Battle Dress consists of an armored frame, servo-assisted limbs, a sensor package and (sometimes) built-in weaponry. The armor is available in various configurations, from light, fast recon suits to heavy assault configurations capable of stopping almost any weapon on the battlefield. However, even the heaviest Battle Dress does not turn the wearer into an invulnerable tank. Battle Dress-equipped troops still function as infantry (albeit infantry who can shrug off smallarms fire and even some support weapons); they can thus go where tanks cannot, make use of low cover etc. Battle Dress requires special training to use and is not available to civilians.

The statistics given here are for standard TL 13 medium Battle Dress.

Battle Dress

Class: Augmented Armor	**EP Output:** 12 (5.655 excess)	
Cost: Cr71,655.2	**Agility:** 4 (+4 EP)	
Tech Level: 13	**Initiative:** +5 (+5 agility)	
Size: Large (300vl)	**AC:** 23 (+10 armor, +4 agility, -1 Size)	
Streamlining: Standard	**AR:** 10	
Pressurized? Yes	**SI:** 25	
Climate Control? Yes	**Visual:** Holovideo (1km), Infrared (1km), Light Intensification (1km)	
Drive Train: Legged (2)		
Crew: 1		
Passengers: 0	**Sensors:** Auditory (50m), Tactile	
Cargo Space: 3.7vl		
Fuel: 28.8vl		
Range: 48 hours	**Comm.:** 2-way Radio (5km)	
Speeds:		
Acceleration = 1kph		
Offroad = 7.5kph	Very Slow = 1kph	Slow = 2.5kph
Cruising = 5kph	Fast = 7.5kph	Maximum = 10kph
Other Equipment: 2 appendages (STR 20/+5, DEX 10/+0).		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL13 Design Specifications

Installed Components	*Size*	*Cost*	*EP*	*Range*
300vl Chassis	+300	300	-	-
Control Systems	-110	275	-	-
TL13 Armor (AR10)	-66	3594	-	-
Pressurized Interior	-15	375	-0.375	-
Climate Control	-3	150	-0.03	
Drive Train, Legged (2)	-8.4	900	-0.2	-
Adv. Fuel Cell	-18	1200	+12	-
Fuel	-28.8	-	-	-
Appendage (Str 20, Dex 10)	-10	20,000	-2	-
Tactile Sensor	-1	3000	-0.2	-
Appendage (Str 20, Dex 10)	-10	20,000	-2	-
Tactile Sensor	-1	3000	-0.2	-
Holovideo Visual	-24.3	36,000	-1.26	1km
LI Video	-	-	-	-
IR Video	-	-	-	-
Holo Display	-0.1	500	-0.05	
Auditory Sensors	-0.2	200	-0.01	50m
Radio, 2-way	-0.5	75	-0.02	5km
Totals	*+14*	*Cr89,569 (Cr71,655.2 with 20% standard design discount)*		

GROUND VEHICLES

Jeep

Large Ground Vehicle

TL5, Cr2760, 1000vl. A self-powered wheeled vehicle based on the ground car (see below) concept, but designed for off-road and rugged terrain use. Typically, a jeep has a cruising range of 600km at a speed of 60 kph, and has a maximum speed of 120 kph. Off-road performance is better than the standard ground car, though jeeps (other than specialist luxury models) lack creature comforts to the point where some are truly excruciating to drive. Fuel for a jeep depends on local tech level and fuel sources; it is usually chemical fuel (hydrocarbons or hydrogen), or an electric battery. A jeep can carry a driver and up to three additional passengers plus luggage (124vl). Luxury models (which are as comfortable as any ground car on the market) may be available at higher prices. The basic jeep is unpressurized, and may indeed be open-topped. Jeeps are designed to be somewhat tolerant of atmospheric and environmental conditions; they will not usually malfunction when transferred to another world, so long as it is reasonably similar to their world of origin.

Jeep

Class: Ground Vehicle	**EP Output:** 20 (7.9 excess)	
Cost: Cr2760	**Agility:** 1 (+1 EP)	
Tech Level: 5	**Initiative:** +1 (+1 agility)	
Size: Large (1000vl)	**AC:** 10 (+1 agility, -1 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 35	
Climate Control? No	**Visual:** Headlights (Beam 12m), Brakelights (Area 1.5m)	
Drive Train: Wheeled (4)		
Crew: 1		
Passengers: 3	**Sensors:**	
Cargo Space: 124vl		
Fuel: 100vl		
Range: 600km	**Comm.:**	
Speeds:		
Acceleration = 12kph		
Offroad = 20kph	Very Slow = 12kph	Slow = 30kph
Cruising = 60kph	Fast = 90kph	Maximum = 120kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL5 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
1000vl Chassis	+1000	1000	-
Controls	-200	500	-
Drive Train, Wheeled (4)	-144	600	-12
Int. Combustion Power Plant	-100	1000	+20
Fuel	-100	-	-
Passengers Seating (3)	-330	300	-
2 Headlights, Beam (12m)	-1.6	40	-0.08
2 Brakelights, Illumination	-0.4	10	-0.02
Cargo/Luggage	-124	-	-
Totals	*0*	*Cr3450 (Cr2760 with 20% standard design discount)*	

Ground Car

Large Ground Vehicle

TL5, Cr5440, 2000vl. An ordinary self-powered wheeled vehicle suitable for local use in civilized areas or on roads. Typically, a ground car has a cruising range of 1050 km at a speed of 75 kph, and has a maximum speed of 150 kph. If capable of off-road travel at all, speed is generally limited to 15 kph. Fuel for a ground car depends on local tech level and fuel sources; it is usually chemical fuel (hydrocarbons or hydrogen), or an electric battery. Most ground cars require a driver, although at higher tech levels some luxury models may be equipped to steer themselves (and on highly civilized worlds, driving under human control is illegal in cities). A car can carry five additional passengers plus luggage (268vl). Other models (convertibles, sports models, limousines, trucks, motorcycles, unicycles, vans, etc.) may be available at varying prices. The basic ground car is unpressurized. Ground cars are mass production items manufactured for a specific world; they will tend to malfunction when transferred to a world not similar to their world of origin.

At TL7, an optional Climate Control system becomes available for a cost of Cr800. It requires 20vl of space and 0.2EP of power.

Ground Car

Class: Ground Vehicle	**EP Output:** 35 (4.9 excess)	
Cost: Cr5440	**Agility:** 0	
Tech Level: 5	**Initiative:** +0	
Size: Large-Huge (2000vl)	**AC:** 9 (-1 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 50	
Climate Control? TL7 Option	**Visual:** Headlights (Beam 12m), Brakelights (Area 1.5m)	
Drive Train: Wheeled (4)		
Crew: 1		
Passengers: 5	**Sensors:**	
Cargo Space: 268vl		
Fuel: 245vl		
Range: 1050km	**Comm.:**	
Speeds:		
Acceleration = 15kph		
Offroad = 25kph	Very Slow = 15kph	Slow = 37kph
Cruising = 75kph	Fast = 112kph	Maximum = 150kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL5 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
2000vl Chassis	+2000	2000	-
Controls	-400	1000	-
Drive Train, Wheeled (4)	-360	1500	-30
Int. Combustion Power Plant	-175	1750	+35
Fuel	-245	-	-
Passengers Seating (5)	-550	500	-
2 Headlights, Beam (12m)	-1.6	40	-0.08
2 Brakelights, Illumination	-0.4	10	-0.02
Cargo/Luggage	-268	-	-
Totals	*+0*	*Cr6800 (Cr5440 with 20% standard design discount)*	

Small Cargo Truck

Huge Ground Vehicle

TL5, Cr12,320, 5000vl. A typical, no-frills commercial delivery/cargo truck with a 2500kg cargo capacity. The truck only has room for one passenger other than the driver. These cargo trucks have an average speed of 60kph and are capable of top speeds reaching 120kph. At cruising speed, a cargo truck has a range of 480km.

At TL7, an optional Climate Control system becomes available for a cost of Cr2000. It requires 50vl of space and 0.5EP of power.

Small Cargo Truck

Class: Ground Vehicle	**EP Output:** 65 (4.9 excess)	
Cost: Cr12,320	**Agility:** 0	
Tech Level: 5	**Initiative:** +0	
Size: Huge (5000vl)	**AC:** 8 (-2 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 57	
Climate Control? TL7 Option	**Visual:** Headlights (Beam 12m), Brakelights (Area 1.5m)	
Drive Train: Wheeled (6)		
Crew: 1		
Passengers: 1	**Sensors:**	
Cargo Space: 2523vl		
Fuel: 260vl		
Range: 480km	**Comm.:**	
Speeds:		
Acceleration = 12kph		
Offroad = 12kph	Very Slow = 12kph	Slow = 40kph
Cruising = 60kph	Fast = 80kph	Maximum = 120kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL5 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
5000vl Chassis	+5000	5000	-
Controls	-1000	2500	-
Drive Train, Wheeled (6)	-780	4500	-60
Int. Combustion Power Plant	-325	3250	+65
Fuel	-260	-	-
Passengers Seating (1)	-110	100	-
2 Headlights, Beam (12m)	-1.6	40	-0.08
2 Brakelights, Illumination	-0.4	10	-0.02
Cargo/Luggage	-2523	-	-
Totals	*+0*	*Cr15,400 (Cr12,320 with 20% standard design discount)*	

Wheeled All Terrain Vehicle

Huge Ground Vehicle

TL12, Cr49,680, 10,000vl. An 8-wheeled vehicle intended for world surface exploration, or for transport across undeveloped areas. An all terrain vehicle (abbreviated ATV) has a range of 5000 km, cruises on roads at 50 kph, and can achieve a maximum speed of 100 kph. Off roads, speed depends on terrain; on open plain, it will approach normal road performance while in difficult terrain average speed will be 25 kph or less. An ATV may be powered by a battery recharged from a ship's power plant, or it may contain a small fusion pack requiring hydrogen or water for fuel. The ATV is designed to serve on many different worlds under widely varying conditions, including vacuum and insidious atmospheres, and high or low gravity. An ATV requires one driver and may carry up to 16 passengers. The interior of the vehicle is fully pressurized and contains complete (though cramped) eating, sleeping, and travel facilities for eight. The wheeled ATV typically has 8 large, gel-filled tires. These are self-sealing and provide sufficient buoyancy to allow the ATV to float in reasonably calm water. Slow headway can be made using water jet propulsion.

Wheeled All Terrain Vehicle (ATV)

Class: Ground Vehicle	**EP Output:** 120 (6.4 excess)	
Cost: Cr52,880	**Agility:** 0	
Tech Level: 12	**Initiative:** +0	
Size: Huge (10,000vl)	**AC:** 8 (-2 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? Yes	**SI:** 65	
Climate Control? Yes	**Visual:** Headlights (Beam 12m), Brakelights (Area 1.5m)	
Drive Train: Wheeled (8)		
Crew: 1		
Passengers: 8 (16)	**Sensors:**	
Cargo Space: 2138vl		
Fuel: 600vl		
Range: 5000km	**Comm.:**	
Speeds:		
Acceleration = 10kph		
Offroad = 25kph	Very Slow = 10kph	Slow = 25kph
Cruising = 50kph	Fast = 75kph	Maximum = 100kph
Other Equipment: Galley facilities for 16, fresher.		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL12 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
10,000vl Chassis	+10,000	10,000	-
Pressurized Interior	-500	12,500	-12.5
Climate Control	-100	5,000	-1
Drive Train, Wheeled (8)	-1400	10,000	-100
Advance Fuel Cell	-180	12,000	+120
Fuel	-600	-	-
Controls	-2000	5000	-
Passengers Seating (8)	-880	800	-
Passengers Bunks (8)	-1200	2000	-
Galley Facilities (8)	-800	4000	-
Fresher Facilities (1)	-200	750	-
2 Headlights, Beam (12m)	-1.6	40	-0.08
2 Brakelights, Illumination	-0.4	10	-0.02
Cargo/Luggage	-2138	-	-
Totals	*+0*	*Cr62,100 (Cr49,680 with 20% standard design discount)*	

Tracked All Terrain Vehicle

Huge Ground Vehicle

TL12, Cr48,080, 10,000vl. The tracked ATV is a somewhat slower version of the wheeled ATV, but with better off-road speed and handling. An all terrain vehicle (abbreviated ATV) has a range of 5000 km, cruises on roads at 40 kph, and can achieve a maximum speed of 80 kph. Off roads, speed depends on terrain; on open plain, it will approach normal road performance, while in difficult terrain, average speed will be 25 kph or less. An ATV may be powered by a battery recharged from a ship's power plant, or it may contain a small fusion pack, requiring hydrogen or water for fuel. The ATV is designed to serve on many different worlds under widely varying conditions, including vacuum and insidious atmospheres, and high or low gravity. A tracked ATV requires one driver, and may carry up to 16 passengers. The interior of the vehicle is fully pressurized and contains complete (though cramped) eating, sleeping, and travel facilities for eight. Harsh terrain performance is better than for the wheeled variant, but a tracked ATV cannot float.

Tracked All Terrain Vehicle (ATV)

Class: Ground Vehicle	**EP Output:** 180 (6.4 excess)	
Cost: Cr51,280	**Agility:** 0	
Tech Level: 12	**Initiative:** +0	
Size: Huge (10,000vl)	**AC:** 8 (-2 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? Yes	**SI:** 65	
Climate Control? Yes	**Visual:** Headlights (Beam 12m), Brakelights (Area 1.5m)	
Drive Train: Tracked (2)		
Crew: 1		
Passengers: 8 (16)	**Sensors:**	
Cargo Space: 1483vl		
Fuel: 1125vl		
Range: 5000km	**Comm.:**	
Speeds:		
Acceleration = 8kph		
Offroad = 25kph	Very Slow = 8kph	Slow = 20kph
Cruising = 40kph	Fast = 60kph	Maximum = 80kph
Other Equipment: Galley facilities for 16, fresher.		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL12 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
Chassis	+10,000	10,000	-
Pressurized Interior	-500	12,500	-12.5
Climate Control	-100	5,000	-1
Drive Train, Tracked (2)	-1440	2,000	-160
Advance Fuel Cell	-270	18,000	+180
Fuel	-1125	-	-
Controls	-2000	5000	-
Passengers Seating (8)	-880	800	-
Passengers Bunks (8)	-1200	2000	-
Galley Facilities (8)	-800	4000	-
Fresher Facilities (1)	-200	750	-
2 Headlights, Beam (12m)	-1.6	40	-0.08
2 Brakelights, Illumination	-0.4	10	-0.02
Cargo/Luggage	-1483	-	-
Totals	*+0*	*Cr60,100 (Cr48,080 with 20% standard design discount)*	

Wheeled Armored Fighting Vehicle

Huge Ground Vehicle

TL12, Cr71,080, 10,000vl. Many designs of armored fighting vehicle (abbreviated AFV) exist, at a range of tech levels and capabilities. This representative design is similar to the wheeled ATV, and can be used as an exploration vehicle. It has a range of 5000 km, cruises on roads at 50 kph, and can achieve a maximum speed of 100 kph. Off roads, speed depends on terrain; on open plain, it will approach normal road performance, while in difficult terrain, average speed will be 13 kph or less. An AFV may be powered by a battery recharged from a ship's power plant, or it may contain a small fusion pack, requiring hydrogen or water for fuel. Mid-tech AFVs are local to a single world; higher-tech versions are usually designed to be tolerant of varying conditions and can thus serve on many worlds and under widely varying conditions, including vacuum and insidious atmospheres, and high or low gravity. An AFV requires one driver, may carry one additional crewmember that operates the weapon system, and is capable of transporting up to 22 soldiers. The interior of the vehicle is fully pressurized. Like its ATV cousin, the Wheeled AFV can float and make headway in calm water.

Wheeled Armored Fighting Vehicle (AFV)

Class: Ground Vehicle	**EP Output:** 120 (2.2 excess)	**Heavy Manned Turret:** Medium Lasers (x3), Attack Bonus +0, Damage 5d10.
Cost: Cr71,080	**Agility:** 0	
Tech Level: 12	**Initiative:** +0	
Size: Huge (10,000vl)	**AC:** 14 (+6 armor, -2 size)	
Streamlining: Standard	**AR:** 6	
Pressurized? Yes	**SI:** 65	
Climate Control? Yes	**Visual:** Headlights (Beam 12m), Brakelights (Area 1.5m)	
Drive Train: Wheeled (8)		
Crew: 1		
Passengers: 22	**Sensors:**	
Cargo Space: 798vl		
Fuel: 600vl		
Range: 5000km	**Comm.:**	
Speeds: Acceleration = 10kph		
Offroad = 25kph	Very Slow = 10kph	Slow = 25kph
Cruising = 50kph	Fast = 75kph	Maximum = 100kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL12 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
Chassis	+10,000	10,000	-
TL12 Armor (AR6)	-1400	15,600	-
Pressurized Interior	-500	12,500	-12.5
Climate Control	-100	5,000	-1
Drive Train, Wheeled (8)	-1400	10,000	-100
Advance Fuel Cell	-180	12,000	+120
Fuel	-600	-	-
Controls	-2000	5000	-
Passengers Seating (22)	-2420	2200	-
2 Headlights, Beam (12m)	-1.6	40	-0.08
2 Brakelights, Illumination	-0.4	10	-0.02
Heavy Manned Turret	-600	6000	-1.2
Medium Lasers (3)	(-300)	10,500	-3
Cargo/Luggage	-798	-	-
Totals	*+0*	*Cr88,850 (Cr71,080 with 20% standard design discount)*	

Tracked Armored Fighting Vehicle

Huge Ground Vehicle

TL12, Cr69,480, 10,000vl. The tracked AFV is a somewhat slower version of the wheeled AFV, but with better off-road speed and handling. It has a range of 5000 km, cruises on roads at 40 kph, and can achieve a maximum speed of 80 kph. Off roads, speed depends on terrain; on open plain, it will approach normal road performance, while in difficult terrain, average speed will be 20 kph or less. An AFV may be powered by a battery recharged from a ship's power plant, or it may contain a small fusion pack, requiring hydrogen or water for fuel. The AFV is designed to serve on many different worlds under widely varying conditions, including vacuum and insidious atmospheres, and high or low gravity. An AFV requires one driver, may carry one additional crewmember that operates the weapon system, and is capable of transporting up to 22 soldiers. The interior of the vehicle is fully pressurized but has no eating, sleeping, etc facilities for four. Tracked AFVs do not float.

Tracked Armored Fighting Vehicle (AFV)

Class: Ground Vehicle	**EP Output:** 180 (2.2 excess)		**Heavy Manned Turret:** Medium Lasers (x3), Attack Bonus +0, Damage 5d10.
Cost: Cr69,480	**Agility:** 0		
Tech Level: 12	**Initiative:** +0		
Size: Huge (10,000vl)	**AC:** 14 (+6 armor, -2 size)		
Streamlining: Standard	**AR:** 6		
Pressurized? Yes	**SI:** 65		
Climate Control? Yes	**Visual:** Headlights (Beam 12m), Brakelights (Area 1.5m)		
Drive Train: Tracked (2)			
Crew: 1			
Passengers: 22	**Sensors:**		
Cargo Space: 143vl			
Fuel: 1125vl			
Range: 5000km	**Comm.:**		
Speeds:			
Acceleration = 8kph			
Offroad = 25kph	Very Slow = 8kph	Slow = 20kph	
Cruising = 40kph	Fast = 60kph	Maximum = 80kph	
Other Equipment:			

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL12 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
Chassis	+10,000	10,000	-
TL12 Armor (AR6)	-1400	15,600	-
Pressurized Interior	-500	12,500	-12.5
Climate Control	-100	5,000	-1
Drive Train, Tracked (2)	-1440	2,000	-160
Advance Fuel Cell	-270	18,000	+180
Fuel	-1125	-	-
Controls	-2000	5000	-
Passengers Seating (22)	-2420	2200	-
2 Headlights, Beam (12m)	-1.6	40	-0.08
2 Brakelights, Illumination	-0.4	10	-0.02
Heavy Manned Turret	-600	6000	-1.2
Medium Lasers (3)	(-300)	10,500	-3
Cargo/Luggage	-143	-	-
Totals	*+0*	*86,850 (69,480 with 20% standard design discount)*	

AIR CUSHION VEHICLES

Hovercraft

Huge Air Cushion Vehicle

TL7, Cr347,200, 8000vl. Hovercraft are supported on a cushion of air (at about 1 to 3 meters altitude). Usable only on worlds with an atmosphere of 4 or greater, a hovercraft is capable of cruise speeds of 75kph, with bursts of speed up to 150kph. Distance between refuelings is 375km. Hovercraft may move over both land and water with equal ease, but encounter difficulty with broken ground, precipices, or storms. A crew of one is sufficient to operate the vehicle; hovercraft can carry up to 15 passengers plus the operator. Cargo capacity is 2905kg. No armor or weaponry is generally provided.

Hovercraft

Class: Air Cushion Vehicle	**EP Output:** 400 (98.47 excess)	
Cost: Cr347,200	**Agility:** 3	
Tech Level: 7	**Initiative:** +3 (+3 agility)	
Size: Huge (8000vl)	**AC:** 11 (-2 size, +3 agility)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 61	
Climate Control? Yes	**Visual:** Spotlight (Beam 120m)	
Drive Train: Air Cushion		
Crew: 1		
Passengers: 15	**Sensors:** Radar (5km)	
Cargo Space: 2905vl		
Fuel: 500vl		
Range: 375km	**Comm.:** 2-way Radio (500km)	
Speeds:		
Acceleration = 15kph		
Offroad = 47kph	Very Slow = 15kph	Slow = 37kph
Cruising = 75kph	Fast = 112kph	Maximum = 150kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL7 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
8000vl Chassis	+8000	8000	-
Climate Control	-80	4000	-0.8
Drive Train, Air Cushion	-450	126,000	-300
Turbine Power Plant	-800	40,000	+400
Fuel	-500	-	-
Controls	-1600	4000	-
Passengers Seating (15)	-1650	1500	-
Spotlight, Beam (120m)	-8	200	-0.4
Radar	-5	250,000	-0.25
2-way Radio (500km)	-2	300	-0.08
Cargo/Luggage	-2905	-	-
Totals	*+0*	*Cr434,000 (Cr347,200 with 20% standard design discount)*	

AIRCRAFT

Primitive Biplane

Large Aircraft

TL5, Cr11,840, 1000vl. A very small early model aircraft. It can achieve a cruise speed of 100kph, with bursts up to a maximum of 200kph; range is 300km or roughly 3 hours flying time at cruising speed. The biplane's engine depends on chemical fuel. The plane carries two; the pilot and a passenger, and can also carry up to 549kg of cargo.

Primitive Biplane

Class: Aircraft	**EP Output:** 14 (4 excess)	
Cost:	**Agility:** 1	
Tech Level: 5	**Initiative:** +1 (+1 agility)	
Size: Large (1000vl)	**AC:** 10 (+1 agility, -1 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 35	
Climate Control? No	**Visual:**	
Drive Train: Propeller		
Crew: 1		
Passengers: 1	**Sensors:**	
Cargo Space: 549vl		
Fuel: 21vl		
Range: 300km	**Comm.:**	
Speeds:		
Acceleration = 20kph		
Offroad = n/a	Stall = 20kph	Slow = 50kph
Cruising = 100kph	Fast = 150kph	Maximum = 200kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL5 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
1000vl Chassis	+1000	1000	-
Drive Train, Propeller	-50	12,500	-10
Int. Combustion Power Plant	-70	700	+14
Fuel	-21	-	-
Controls	-200	500	-
Passengers Seats (1)	-110	100	-
Cargo/Luggage	-549	-	-
Totals	*+0*	*Cr14,800 (Cr11,840 with 20% standard design discount)*	

Cargo Plane

Huge Aircraft

TL5, Cr364,000, 10,000vl. A twin propeller monowing aircraft intended for cargo transport. The plane cruises at 300kph (maximum speed is 600kph) with a range of 3600km. Fuel is standard chemical fuel. The craft requires a crew of two (only one of whom needs pilot skill and the appropriate vehicle feat) and carry six passengers and roughly 2 metric tons of cargo.

Cargo Plane

Class: Aircraft	**EP Output:** 330 (29.92 excess)	
Cost: Cr364,000	**Agility:** 0	
Tech Level: 5	**Initiative:** +0	
Size: Huge (10,000vl)	**AC:** 8 (-2 size)	
Streamlining: Partial	**AR:** 0	
Pressurized? No	**SI:** 65	
Climate Control? No	**Visual:**	
Drive Train: Propeller (2)		
Crew: 2		
Passengers: 6	**Sensors:**	
Cargo Space: 1948vl		
Fuel: 1980vl		
Range: 3600km	**Comm.:** 2-way Radio (500km)	
Speeds:		
Acceleration = 60kph		
Offroad = n/a	Stall = 60kph	Slow = 150kph
Cruising = 300kph	Fast = 450kph	Maximum = 600kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL5 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
10,000vl Chassis	+10,000	10,000	-
Partial Streamlining	-	10,000	-
Drive Train, Propeller (2)	-1650	412,500	-300
Int Combustion Power Plant	-1650	16,500	+330
Fuel	-1980	-	-
Controls	-2000	5000	-
Passengers Seats (7)	-770	700	-
2-way Radio (500km)	-2	300	-0.08
Cargo/Luggage	-1948	-	-
Totals	*+0*	*Cr455,000 (Cr364,000 with 20% standard design discount)*	

Cargo Jet

Huge Aircraft

TL7, MCr1.794, 12,000vl. A twin jet monowing aircraft intended for cargo transport. The plane cruises at 660kph, has a maximum safe speed of 1100kph (technically 1320 but limited by the airframe configuration) with a range of 3960km. Fuel is standard chemical jet fuel. The craft requires a crew of two, only one of whom needs pilot skill and the appropriate vehicle feat, carries up to six passengers and roughly 5 metric tons of cargo.

Cargo Jet

Class: Aircraft	**EP Output:** 230 (14.67 excess)	
Cost: Cr1,794,400	**Agility:** 0	
Tech Level: 6	**Initiative:** +0	
Size: Huge (12,000vl)	**AC:** 8 (-2 size)	
Streamlining: Airframe	**AR:** 0	
Pressurized? Yes	**SI:** 69	
Climate Control? No	**Visual:**	
Drive Train: Jet (2)		
Crew: 2		
Passengers: 6	**Sensors:** Radar (5km)	
Cargo Space: 5218vl		
Fuel: 345vl		
Range: 3960km	**Comm.:** 2-way Radio (500km)	
Speeds:		
Acceleration = 132kph		
Offroad = n/a	Stall = 132kph	Slow = 330kph
Cruising = 660kph	Fast = 990kph	Maximum = 1320kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL6 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
12,000vl Chassis	+12,000	12,000	-
Airframe	-	36,000	-
Pressurized Interior	-600	15,000	-15
Drive Train, Jet (2)	-2200	MCr1.9	-200
Turbine Power Plant	-460	23,000	+230
Fuel	-345	-	-
Controls	-2400	6000	-
Passengers Seats (7)	-770	700	-
Radar	-5	250,000	-0.25
2-way Radio (500km)	-2	300	-0.08
Cargo/Luggage	-5218	-	-
Totals	*+0*	*Cr2,243,000 (Cr1,794,400 with 20% standard design discount)*	

Helicopter

Huge Aircraft

TL5, Cr82,760, 5,000vl. Single engine rotary wing aircraft capable of vertical take-off and landing, as well as maneuvering in tight places. The helicopter can cruise at 125kph with a top speed of 250kph; range is 750km at cruising speed or roughly 6 hours. The vehicle requires a crew of 1 (the pilot) and can carry 7 passengers and up to roughly additional 1 metric ton of cargo.

Helicopter

Class: Aircraft	**EP Output:** 225 (15 excess)	
Cost: Cr82,760	**Agility:** 0	
Tech Level: 5	**Initiative:** +0	
Size: Huge (5000vl)	**AC:** 8 (-2 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 55	
Climate Control? No	**Visual:**	
Drive Train: Rotary Wing		
Crew: 1		
Passengers: 7	**Sensors:**	
Cargo Space: 905vl		
Fuel: 675vl		
Range: 750km	**Comm.:**	
Speeds:		
Acceleration = 25kph		
Offroad = n/a	Very Slow = 25kph	Slow = 62kph
Cruising = 125kph	Fast = 187kph	Maximum = 250kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL5 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
5000vl Chassis	+5,000	5,000	-
Drive Train, Rotary WIng	-525	84,000	-210
Int Combustion Power Plant	-1125	11,250	+225
Fuel	-675	-	-
Controls	-1000	2500	-
Passengers Seats (7)	-770	700	-
Cargo/Luggage	-905	-	-
Totals	*+0*	*Cr103,450 (Cr82,760 with 20% standard design discount)*	

GRAV VEHICLES

Air/raft

Huge Grav Vehicle

TL8, Cr273,200, 6000vl. A light anti-gravity ("grav") vehicle which uses null-grav modules (often known as "lifters") to counteract gravity for lift and propulsion. An air/raft can cruise at 60kph (but is extremely subject to wind effects), with some capable of higher speed to about 120kph. An air/raft can reach orbit in several hours (number of hours equal to planetary size digit in the UWP); passengers must wear vac suits for this journey. Interplanetary travel in an air/raft is not possible. Range on a world is effectively unlimited, requiring refueling once per week. An air/raft can carry the pilot and up to 3 passengers plus roughly 4 metric tons of cargo. They are usually unpressurized and open-topped.

Air/raft

Class: Grav Vehicle	**EP Output:** 10 (2.8 excess)	
Cost: Cr273,200	**Agility:** 0	
Tech Level: 8	**Initiative:** +0	
Size: Huge (6000vl)	**AC:** 8 (-2 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 57	
Climate Control? No	**Visual:**	
Drive Train: Grav		
Crew: 1		
Passengers: 3	**Sensors:**	
Cargo Space: 4001.2vl		
Fuel: 420vl		
Range: 1 week	**Comm.:**	
Speeds:		
Acceleration = 12kph		
Offroad = n/a	Very Slow = 12kph	Slow = 30kph
Cruising = 60kph	Fast = 90kph	Maximum = 120kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL8 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
6000vl Chassis	+6000	6000	-
Drive Train, Grav	-28.8	331,200	-7.2
Turbine Power Plant	-20	1000	+10
Fuel	-420	-	-
Controls	-1200	3000	-
Passengers Seats (3)	-330	300	-
Cargo/Luggage	-4001.2	-	-
Totals	*+0*	*Cr341,500 (Cr273,200 with 20% standard design discount)*	

Pressurized Air/raft

Huge Grav Vehicle

TL8, Cr376,000, 8000vl. A slightly larger, enclosed and pressurized version of the basic air/raft. Performance, cargo and passenger capacities are roughly the same as the basic air/raft.

Pressurized Air/raft

Class: Grav Vehicle	**EP Output:** 21 (0.6 excess)	
Cost: Cr376,000	**Agility:** 0	
Tech Level: 8	**Initiative:** +0	
Size: Huge (8000vl)	**AC:** 8 (-2 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? Yes	**SI:** 61	
Climate Control? Yes	**Visual:**	
Drive Train: Grav		
Crew: 1		
Passengers: 3	**Sensors:**	
Cargo Space: 4627.6		
Fuel: 882vl		
Range: 1 week	**Comm.:**	
Speeds:		
Acceleration = 12kph		
Offroad = n/a	Very Slow = 12kph	Slow = 30kph
Cruising = 60kph	Fast = 90kph	Maximum = 120kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL8 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
8000vl Chassis	+8000	8000	-
Pressurized Interior	-400	10,000	-10
Climate Control	-80	4,000	-0.8
Drive Train, Grav	-38.4	441,600	-9.6
Turbine Power Plant	-42	2100	+21
Fuel	-882	-	-
Controls	-1600	4000	-
Passengers Seats (3)	-330	300	-
Cargo/Luggage	-4627.6	-	-
Totals	*+0*	*Cr470,000 (376,000 with 20% standard design discount)*	

GCarrier

Huge Grav Vehicle

TL8, Cr506,880, 10,000vl. An enclosed military or quasi-military grav vehicle. The GCarrier is an armored air/raft type vehicle intended originally for troop carrier duties. Performance is similar to that of the air/raft, but the vehicle generally has a gun mount and is armored. It requires a crew of one (with pilot skill and the Vessel/grav feat), plus a gunner for the craft's weapon, if any. It can carry 14 persons (including the driver and gunner), plus roughly 1.1 metric tons of cargo.

GCarrier

Class: Grav Vehicle	**EP Output:** 30 (0.3 excess)	**Heavy Manned Turret:** Medium Lasers (x3), Attack Bonus +0, Damage 5d10.
Cost: Cr506,880	**Agility:** 0	
Tech Level: 8	**Initiative:** +0	
Size: Huge (10,000vl)	**AC:** 14 (+6 armor, -2 size)	
Streamlining: Standard	**AR:** 6	
Pressurized? Yes	**SI:** 65	
Climate Control? Yes	**Visual:**	
Drive Train: Grav		
Crew: 2		
Passengers: 12	**Sensors:**	
Cargo Space: 1092vl		
Fuel: 1260vl		
Range: 1 week	**Comm.:**	
Speeds:		
Acceleration = 12kph		
Offroad = n/a	Very Slow = 12kph	Slow = 30kph
Cruising = 60kph	Fast = 90kph	Maximum = 120kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL8 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
10,000vl Chassis	+10,000	10,000	-
TL8 Armor (AC6)	-2800	28,200	-
Pressurized Interior	-500	12,500	-12.5
Climate Control	-100	5,000	-1
Drive Train, Grav	-48	552,000	-12
Turbine Power Plant	-60	3000	+30
Fuel	-1260	-	-
Controls	-2000	5000	-
Passengers Seats (14)	-1540	1400	-
Heavy Manned Turret	-600	6000	-1.2
Medium Lasers (3)	(-300)	10,500	-3
Cargo/Luggage	-1092	-	-
Totals	*+0*	*Cr633,600 (Cr506,880 with 20% standard design discount)*	

Speeder

Huge Grav Vehicle

TL8, MCr3.950, 8000vl. A streamlined grav-powered craft intended for high-speed transport between points on a world's surface. Similar in principle to the air/raft and the GCarrier, the speeder is streamlined and optimized for speed. It is capable of 720 kph cruise speed, with a top speed of 1320kph (though maximum safe speed is only 1100kph), and has a virtually unlimited range. Refueling is required only once per week. The speeder carries a pilot (who requires the pilot skill and the Vessel/grav feat), a single passenger, and 238kg of cargo. The speeder is capable of reaching orbit within an hour.

Speeder

Class: Grav Vehicle	**EP Output:** 117 (0.2 excess)	
Cost: Cr3,950,240	**Agility:** 0	
Tech Level: 8	**Initiative:** +0	
Size: Huge (8000vl)	**AC:** 8 (-2 size)	
Streamlining: Airframe	**AR:** 0	
Pressurized? Yes	**SI:** 61	
Climate Control? Yes	**Visual:**	
Drive Train: Grav		
Crew: 1		
Passengers: 1	**Sensors:**	
Cargo Space: 238vl		
Fuel: 4872vl		
Range: 1 week	**Comm.:**	
Speeds:		
Acceleration = 132kph		
Offroad = n/a	Very Slow = 132kph	Slow = 330kph
Cruising = 660kph	Fast = 990kph	Maximum = 1320kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL8 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
8000vl Chassis	+8000	8000	-
Airframe	-	24,000	-
Pressurized Interior	-400	10,000	-10
Climate Control	-80	4,000	-0.8
Drive Train, Grav	-424	MCr4.876	-106
Turbine Power Plant	-234	11,700	+117
Fuel	-4914	-	-
Controls	-1600	4000	-
Passengers Seats (1)	-110	100	-
Cargo/Luggage	-238	-	-
Totals	*+0*	*Cr4,937,800 (Cr3,950,240 with 20% standard design discount)*	

Grav Belt

Medium Grav Vehicle

TL12, Cr9292, 200vl. Personal anti-gravity transportation using a single null-gravity module and a personal harness. Performance is similar in speed to the air/raft, but with a four-week operational range.

Grav Belt

Class: Grav Vehicle	**EP Output:** 1 (0.76 excess)	
Cost: Cr9292	**Agility:** 1	
Tech Level: 12	**Initiative:** +1 (+1 agility)	
Size: Medium (200vl)	**AC:** 11 (+1 agility)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 12	
Climate Control? No	**Visual:**	
Drive Train: Grav		
Crew: 1		
Passengers: 0	**Sensors:**	
Cargo Space: 53.94vl		
Fuel: 33.6		
Range: 4 weeks	**Comm.:**	
Speeds:		
Acceleration = 12kph		
Offroad = n/a	Very Slow = 12kph	Slow = 30kph
Cruising = 60kph	Fast = 90kph	Maximum = 120kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL12 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
200vl Chassis	+200	200	-
Drive Train, Grav	-0.96	11,040	-0.24
Adv Fuel Cell Power Plant	-1.5	100	+1
Fuel	-33.6	-	-
Controls	-110	275	-
Cargo/Luggage	-53.94	-	-
Totals	*+0*	*Cr11,615 (Cr9292 with 20% standard design discount)*	

WATERCRAFT

Small Steamship

Colossal Watercraft

TL4, Cr334,600, 150,000vl. Vessels of this type vary widely; most are capable of 30 kph for up to a week of travel, and a maximum speed of 60kph. Fuel is some form of basic combustible. The ship can carry a crew of five, ten passengers, and approximately 46 metric tons of cargo.

Small Steamship

Class: Watercraft	**EP Output:** 460 (10 excess)	
Cost: Cr334,600	**Agility:** 0	
Tech Level: 4	**Initiative:** +0	
Size: Colossal (150,000vl)	**AC:** 2 (-8 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 104	
Climate Control? No	**Visual:**	
Drive Train: Surface Water		
Crew: 5		
Passengers: 10	**Sensors:**	
Cargo Space: 46,730vl		
Fuel: 19,320vl		
Range: 1 week	**Comm.:**	
Speeds:		
Acceleration = 6kph		
Offroad = n/a	Very Slow = 6kph	Slow = 15kph
Cruising = 30kph	Fast = 45kph	Maximum = 60kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL4 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
150,000vl Chassis	+150,000	150,000	-
Drive Train, Surface Water	-11,250	56,250	-450
Steam Power Plant	-11,500	11,500	+460
Fuel	-19,320	-	-
Controls	-30,000	75,000	-
Passenger Small Cabins (15)	-30,000	120,000	-
Galley Facilities (8)	-800	4000	-
Fresher Facilities (2)	-400	1500	-
Cargo/Luggage	-46,730	-	-
Totals	*+0*	*Cr418,250 (Cr334,600 with 20% standard design discount)*	

Hydrofoil

Gargantuan Watercraft

TL7, Cr197,200, 60,000vl. The hydrofoil can cruise at 50kph, with bursts of speed to 100kph. The ship's engines depend on local fuel sources, such as hydrocarbons or electric batteries; with a full tank of fuel, a hydrofoil can operate for a week at cruising speed. A crew of three operates the craft, which carries eight passengers and nearly 5 metric tons of cargo.

Hydrofoil

Class: Watercraft	**EP Output:** 310 (10 excess)	
Cost: Cr197,200	**Agility:** 0	
Tech Level: 7	**Initiative:** +0	
Size: Gargantuan (60,000vl)	**AC:** 6 (-4 size)	
Streamlining: Standard	**AR:** 0	
Pressurized? No	**SI:** 86	
Climate Control? No	**Visual:**	
Drive Train: Surface Water		
Crew: 3		
Passengers: 8	**Sensors:**	
Cargo Space: 4,860vl		
Fuel: 13,020vl		
Range: 1 week	**Comm.:**	
Speeds:		
Acceleration = 10kph		
Offroad = n/a	Very Slow = 10kph	Slow = 25kph
Cruising = 50kph	Fast = 75kph	Maximum = 100kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL7 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
60,000vl Chassis	+60,000	60,000	-
Drive Train, Surface Water	-7500	37,500	-300
Turbines	-620	31,000	+310
Fuel	-13,020	-	-
Controls	-12,000	30,000	-
Passenger Small Cabins (11)	-22,000	88,000	-
Cargo/Luggage	-4,860	-	-
Totals	*+0*	*Cr246,500 (Cr197,200 with 20% standard design discount)*	

Submersible

Colossal Watercraft

TL6, MCr1.872, 500,000vl. Underwater vessels intended to avoid surface weather conditions for safety and convenience. On worlds with large water percentages (especially level A) submersibles ply the routes between underwater domed cities. The submersible is capable of a maximum speed of 40kph on the surface in good weather, and about half that underwater. It has an average 9-day endurance (72 hours submerged), and depends on local energy sources for refueling or recharging. It has a crew of five and facilities for ten passengers and approximately 51 metric tons of cargo.

Submersible

Class: Watercraft	**EP Output:** 2650 (25 excess) / 1650 (25 excess)	
Cost:	**Agility:** 0	
Tech Level: 6	**Initiative:** +0	
Size: Colossal (500,000vl)	**AC:** 2 (-8 size)	
Streamlining: No	**AR:** 0	
Pressurized? Yes	**SI:** 148	
Climate Control? No	**Visual:**	
Drive Train: Water Surface/Subsurface		
Crew: 5		
Passengers: 10	**Sensors:**	
Cargo Space: 51,030vl		
Fuel: 178,200vl		
Range: 216 hours / 72 hours	**Comm.:**	
Speeds: Acceleration = 4kph		
Underwater = 20kph	Very Slow = 4kph	Slow = 10kph
Cruising = 20kph	Fast = 30kph	Maximum = 40kph
Other Equipment:		

TAS Form 3.1v (Condensed) **Vehicle Data (Commercial)**

TL6 Design Specifications

Installed Components	*Size*	*Cost*	*EP*
500,000vl Chassis	+500,000	500,000	-
Pressurized Interior	-25,000	625,000	-625
Drive Train, Surface Water	-25,000	125,000	-1000
Drive Train, Subsurface Water	-20,000	250,000	-2000
Int Combustion Power Plant	-8250	82,500	+1650
Crude Batteries	-76,320	381,600	+2650
Fuel	-178,200	-	-
Controls	-100,000	250,000	-
Passengers Small Cabins (15)	-15,000	120,000	-
Galley Facilities (8)	-800	4000	-
Fresher Facilities (2)	-400	1500	-
Cargo/Luggage	-51,030	-	-
Totals	*+0*	*Cr2,339,600 (Cr1,871,680 with 20% standard design discount)*	

Smallcraft Designs

TABLE: Smallcraft

Type	*TL*	*Cost*	*Size*	*Acceleration*	*SI*	*AC*
Launch (lifeboat)	9	MCr11.282	20 tons	1-G	77	12
Ship's Boat	9	MCr33.552	30 tons	6-G	80	15
Slow Boat	9	MCr27.842	30 tons	3-G	80	14
Pinnace	10	MCr48.402	40 tons	5-G	82	16
Slow Pinnace	9	MCr28.882	40 tons	2-G	82	14
Modular Cutter	9	MCr15.16	50 tons	2-G	92	11
ATV Module	-	MCr1.8	30 tons	-	-	-
Fuel Module	-	MCr1	30 tons	-	-	-
Open Module	-	MCr2	30 tons	-	-	-
Shuttle	10	MCr55.902	95 tons	3-G	96	13
Fighter	9	MCr11.88	15 tons	6-G	77	17

Launch (Lifeboat)

Small Spacecraft

TL9, MCr11.282, 20 tons. The Launch is a small, slow vessel capable of fulfilling a wide range of roles from cargo and passenger transfer to lifeboat, search-and-rescue or starport utility work. Attempts to use a Launch as weapons platform is generally unsuccessful due to a lack of maneuverability. Typically a launch will be capable of 1G acceleration, has an operational duration of 4 weeks before needing to refuel, and can carry approximately 8 tons of cargo. It requires a crew of two, at least one of whom must have a Pilot skill rank of one or higher, and takes 5 months to build.

Launch

Class: Smallcraft	**EP Output:** 0.4 (0.2 excess)
Tech Level: 9	**Agility:** 1 (+1 EP)
Size: Small (20 tons)	**Initiative:** +1 (+1 agility)
Streamlining: Streamlined	**AC:** 12 (+1 agility, +1 size)
Jump Range: None	**Repulsors:** None
Acceleration: 1-G	**Nuclear Dampers:** None
Fuel: 0.4 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 2	**AR:** 0
Staterooms: 0	**SI:** 77
Small Cabins: 1	**Main Computer:** Model/2
Bunks: 0	**Sensor Range:** Short (Model/2)
Couches: 2	**Comm. Range:** Short (Model/2)
Low Berths: 0	
Cargo Space: 8.1 tons	**Cost:** MCr11.282 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 200kph	Maximum = 375kph
Other Equipment: Fresher, missile magazine	

Triple Turret: empty

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

TL9 Design Specifications

	Size	*Cost*	*EP*	*Notes*
20-ton streamlined cylinder hull	+20	MCr2.1	-	-
Bridge Controls	-4	MCr0.1	-	-
Model/2 Computer	-0.2	MCr8	-	Model/2
Flight Avionics	-0.8	(MCr1.8)	-	Model/2
Short Range Sensors	-0.6	(MCr1.2)	-	Model/2
Short Range Communications	-0.4	(MCr1)	-	Model/2
1-G Acceleration	-0.4	MCr0.6	-0.2 EP	-
TL9 Fusion Power Plant	-0.6	MCr1.8	+0.4 EP	-
Fuel	-0.4	-	-	-
2 Small Craft Couches	-1	MCr0.05	-	-
1 Small Cabin	-2	MCr0.25	-	-
Fresher	-0.5	MCr0.002	-	-
1 Hardpoint	-	MCr0.1	-	-
Triple Turret	-	MCr1	-	-
Missile Magazine	-1	MCr0.1	-	-
Cargo	-8.1	-	-	-
Totals	*+0*	*MCr14.102 (MCr11.282 with 20% standard design discount)*		

Ship's Boat

Small Spacecraft

TL9, MCr33.522, 30 tons. Larger and much faster than the Launch, the Ship's Boat has little room for cargo and is highly expensive. They are mainly used as "prestige" passenger shuttles, for military personnel transfers between vessels, and as rescue craft. The vessel requires a crew of two, at least one of whom must have at least a Pilot skill rank of one or higher, and requires 5 months to build.

Ship's Boat

Class: Smallcraft	**EP Output:** 4 (1.2 excess)
Tech Level: 9	**Agility:** 4 (+4 EP)
Size: Small (30 tons)	**Initiative:** +4 (+4 agility)
Streamlining: Streamlined	**AC:** 15 (+4 agility, +1 size)
Jump Range: None	**Repulsors:** None
Acceleration: 6-G	**Nuclear Dampers:** None
Fuel: 4 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 2	**AR:** 0
Staterooms: 0	**SI:** 80
Small Cabins: 1	**Main Computer:** Model/3
Bunks: 0	**Sensor Range:** Medium (Model/3)
Couches: 2	**Comm. Range:** Medium (Model/3)
Low Berths: 0	
Cargo Space: 1.8 tons	**Cost:** MCr33.522 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 200kph	Maximum = 375kph
Other Equipment: Fresher, missile magazine	

Triple Turret: empty

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

TL9 Design Specifications

	Size	*Cost*	*EP*	*Notes*
30-ton streamlined cylinder hull	+30	MCr3.15	-	-
Bridge Controls	-6	MCr0.15	-	-
Model/3 Computer	-0.3	MCr15.3	-1 EP	Model/3
Flight Avionics	-0.8	(MCr1.8)	-	Model/2
Medium Range Sensors	-0.9	(MCr1.8)	-	Model/3
Medium Range Communications	-0.6	(MCr1.5)	-	Model/3
6-G Acceleration	-5.1	MCr2.55	-1.8 EP	-
TL9 Fusion Power Plant	-6	MCr18	+4 EP	-
Fuel	-4	-	-	-
2 Small Craft Couches	-1	MCr0.05	-	-
1 Small Cabin	-2	MCr0.25	-	-
Fresher	-0.5	MCr0.002	-	-
1 Hardpoint	-	MCr0.1	-	-
Triple Turret	-	MCr1	-	-
Missile Magazine	-1	MCr0.1	-	-
Cargo	-1.8	-		
Totals	*+0*	*MCr40.652 (MCr32.522 with 20% standard design discount)*		

Slow Boat

Small Spacecraft

TL9, MCr27.842, 30 tons. The Slow Boat is more affordable than its faster cousin, and cargo space is better. These craft are often used by larger merchant ships. The vessel requires a crew of two, at least one of whom must have at least a Pilot skill rank of one or higher, and requires 5 months to build.

Slow Boat

Class: Smallcraft	**EP Output:** 3 (1.1 excess)	**Triple Turret:** empty
Tech Level: 9	**Agility:** 3 (+3 EP)	
Size: Small (30 tons)	**Initiative:** +3 (+3 agility)	
Streamlining: Streamlined	**AC:** 14 (+3 agility, +1 size)	
Jump Range: None	**Repulsors:** None	
Acceleration: 3-G	**Nuclear Dampers:** None	
Fuel: 3 tons	**Meson Screens:** None	
Duration: 4 weeks	**Black Globes:** None	
Crew: 2	**AR:** 0	
Staterooms: 0	**SI:** 80	
Small Cabins: 1	**Main Computer:** Model/3	
Bunks: 0	**Sensor Range:** Medium (Model/3)	
Couches: 2	**Comm. Range:** Medium (Model/3)	
Low Berths: 0		
Cargo Space: 7 tons	**Cost:** MCr24.842 (new)	
Atmospheric Speeds:	NoE = 275kph	
Cruising = 200kph	Maximum = 375kph	
Other Equipment: Fresher, missile magazine		

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

TL9 Design Specifications

	Size	*Cost*	*EP*	*Notes*
30-ton streamlined cylinder hull	+30	MCr3.15	-	-
Bridge Controls	-6	MCr0.15	-	-
Model/3 Computer	-0.3	MCr15.3	-1 EP	Model/3
Flight Avionics	-0.8	(MCr1.8)	-	Model/2
Medium Range Sensors	-0.9	(MCr1.8)	-	Model/3
Medium Range Communications	-0.6	(MCr1.5)	-	Model/3
3-G Acceleration	-2.4	MCr1.2	-0.9 EP	-
TL9 Fusion Power Plant	-4.5	MCr13.5	+3 EP	-
Fuel	-3	-	-	-
2 Small Craft Couches	-1	MCr0.05	-	-
1 Small Cabin	-2	MCr0.25	-	-
Fresher	0.5	MCr0.002	-	-
1 Hardpoint	-	MCr0.1	-	-
Triple Turret	-	MCr1	-	-
Missile Magazine	-1	MCr0.1	-	-
Cargo	-7	-	-	-
Totals	*+0*	*MCr 34.802 (MCr 27.842 with 20% standard design discount)*		

Pinnace

Small Spacecraft

TL10, MCr48.402, 40 tons. A larger craft designed for high performance in atmosphere or in space, the Pinnace is fairly uncommon among small craft due to its high cost. Requires a crew of two.

Pinnace

Class: Smallcraft	**EP Output:** 4 (2 excess)
Tech Level: 10	**Agility:** 5 (+5 EP)
Size: Small (40 tons)	**Initiative:** +5 (+5 agility)
Streamlining: Streamlined	**AC:** 16 (+5 agility, +1 size)
Jump Range: None	**Repulsors:** None
Acceleration: 5-G	**Nuclear Dampers:** None
Fuel: 6 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 2	**AR:** 0
Staterooms: 0	**SI:** 82
Small Cabins: 1	**Main Computer:** Model/4
Bunks: 0	**Sensor Range:** Long (Model/4)
Couches: 2	**Comm. Range:** Medium (Model/3)
Low Berths: 0	
Cargo Space: 3.7 tons	**Cost:** MCr48.402 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 200kph	Maximum = 375kph
Other Equipment: Fresher, missile magazine	

TAS Form 3.1 (Condensed)

Triple Turret: empty

Ship's Data (Commercial)

TL10 Design Specifications

	Size	*Cost*	*EP*	*Notes*
40-ton streamlined cylinder hull	+40	MCr4.2	-	-
Bridge Controls	-8	MCr0.2	-	-
Model/4 Computer	-0.4	MCr24.8	-2 EP	Model/4
Flight Avionics	-0.8	(MCr1.8)	-	Model/2
Long Range Sensors	-1.2	(MCr2.4)	-	Model/4
Medium Range Communications	-0.8	(MCr2)	-	Model/3
5-G Acceleration	-5.6	MCr2.8	-2 EP	-
TL9 Fusion Power Plant	-9	MCr27	+6 EP	-
Fuel	-6	-	-	-
2 Small Craft Couches	-1	MCr0.05	-	-
1 Small Cabin	-2	MCr0.25	-	-
Fresher	-0.5	MCr0.002	-	-
1 Hardpoint	-	MCr0.1	-	-
Triple Turret	-	MCr1	-	-
Missile Magazine	-1	MCr0.1	-	-
Cargo	-3.7	-	-	-
Totals	*+0*	*MCr 60.502 (MCr48.402 with 20% standard design discount)*		

Slow Pinnace

Small Spacecraft

TL9, MCr28.882, 40 tons. The Slow Pinnace carries far more cargo than its faster cousin, and at a lower price. Performance in atmosphere is still good, and with the extra cargo capacity of a Slow Boat in a hull only 10 tons larger, the Slow Pinnace sees some use as a cargo lighter for merchant ships that cannot enter atmosphere. Requires a crew of two.

Slow Pinnace

Class: Smallcraft	**EP Output:** 3 (1.2 excess)
Tech Level: 9	**Agility:** 3 (+3 EP)
Size: Small (40 tons)	**Initiative:** +3 (+3 agility)
Streamlining: Streamlined	**AC:** 14 (+3 agility, +1 size)
Jump Range: None	**Repulsors:** None
Acceleration: 2-G	**Nuclear Dampers:** None
Fuel: 3 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 2	**AR:** 0
Staterooms: 0	**SI:** 82
Small Cabins: 1	**Main Computer:** Model/3
Bunks: 0	**Sensor Range:** Medium (Model/3)
Couches: 2	**Comm. Range:** Medium (Model/3)
Low Berths: 0	
Cargo Space: 15.4 tons	**Cost:** MCr28.882 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 200kph	Maximum = 375kph
Other Equipment: Fresher, missile magazine	

Triple Turret: empty

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

TL9 Design Specifications

	Cost	*Size*	*EP*	*Notes*
40-ton streamlined cylinder hull	+40	MCr4.2	-	-
Bridge Controls	-8	MCr0.2	-	-
Model/3 Computer	-0.3	MCr15.3	-1 EP	Model/3
Flight Avionics	-0.8	(MCr1.8)	-	Model/2
Medium Range Sensors	-0.9	(MCr1.8)	-	Model/3
Medium Range Communications	-0.6	(MCr1.5)	-	Model/3
2-G Acceleration	-2	MCr1.4	-0.8 EP	-
TL9 Fusion Power Plant	-4.5	MCr13.5	+3 EP	-
Fuel	-3	-	-	-
2 Small Craft Couches	-1	MCr0.05	-	-
1 Small Cabin	-2	MCr0.25	-	-
Fresher	-0.5	MCr0.002	-	-
1 Hardpoint	-	MCr0.1	-	-
Triple Turret	-	MCr1	-	-
Missile Magazine	-1	MCr0.1	-	-
Cargo	15.4	-	-	-
Totals		*+0*	*MCr 36.102 (MCr 28.882 with 20% standard design discount)*	

Modular Cutter

Small Spacecraft

TL9, MCr15.16, 50 tons. The Modular Cutter is a highly versatile design used in many Port Authority, mercantile and military applications. The 30-ton module bay can carry a range of standard and custom modules (purchased separately) for cargo transfer, passenger or more specialist applications. Requires a crew of two.

Modular Cutter

Class: Smallcraft	**EP Output:** 1 (no excess)	**Triple Turret:** empty
Tech Level: 9	**Agility:** 0	
Size: Small (50 tons)	**Initiative:** +0	
Streamlining: Streamlined	**AC:** 11 (+1 size)	
Jump Range: None	**Repulsors:** None	
Acceleration: 2-G	**Nuclear Dampers:** None	
Fuel: 1 tons	**Meson Screens:** None	
Duration: 4 weeks	**Black Globes:** None	
Crew: 2	**AR:** 0	
Staterooms: 0	**SI:** 92	
Small Cabins: 1	**Main Computer:** Model/2	
Bunks: 0	**Sensor Range:** Close (Model/1)	
Couches: 3	**Comm. Range:** Close (Model/1)	
Low Berths: 0		
Cargo Space: 0.5 tons	**Cost:** MCr15.16 (new)	
Atmospheric Speeds:	NoE = 275kph	
Cruising = 200kph	Maximum = 375kph	
Other Equipment:		

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

TL9 Design Specifications

	Size	*Cost*	*EP*	*Notes*
50-ton streamlined cylinder hull	+50	MCr5.25	-	-
Bridge Controls	-10	MCr0.25	-	-
Model/2 Computer	-0.2	MCr5.8	-	Model/2
Flight Avionics	-0.8	(MCr1.8)	-	Model/2
Close Range Sensors	-0.3	(MCr0.6)	-	Model/1
Close Range Communications	-0.2	(MCr0.5)	-	Model/1
2-G Acceleration	-2.5	MCr1.75	-1 EP	-
TL9 Fusion Power Plant	-1.5	MCr4.5	+1 EP	-
Fuel	-1	-	-	-
2 Small Craft Couches	-1.0	MCr0.05	-	-
1 Small Cabin	-2	MCr0.25	-	-
1 Hardpoint	-	MCr0.1	-	-
Triple Turret	-	MCr1	-	-
Cargo	-0.5	-	-	-
Module Options				
30 ton ATV Module (w/ATV)	-30	MCr1.8	-	
30 ton Fuel Module	-30	MCr1	-	
30 ton Open Module	-30	MCr2	-	
Totals	*+0*	*MCR 18.95 (MCr 15.16 with 20% standard design discount)*		

Shuttle

Small Spacecraft

TL10, MCr55.902, 95 tons. The Shuttle is a bulk cargo or passenger transfer craft. Reasonably fast, shuttles can undertake almost any task required of them and can be customized to meet an even wider range of needs. Requires a crew of two. Takes 7 months to build.

Shuttle

Class: Smallcraft	**EP Output:** 7 (2.15 excess)
Tech Level: 10	**Agility:** 2 (+2 EP)
Size: Small (95 tons)	**Initiative:** +2 (+2 agility)
Streamlining: Streamlined	**AC:** 13 (+2 agility, +1 size)
Jump Range: None	**Repulsors:** None
Acceleration: 3-G	**Nuclear Dampers:** None
Fuel: 7 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 2	**AR:** 0
Staterooms: 0	**SI:** 96
Small Cabins: 1	**Main Computer:** Model/4
Bunks: 0	**Sensor Range:** Long (Model/4)
Couches: 2	**Comm. Range:** Long (Model/4)
Low Berths: 0	
Cargo Space: 43.6 tons	**Cost:** MCr55.902 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 200kph	Maximum = 375kph
Other Equipment: Fresher, missile magazine	

Triple Turret: empty

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

TL10 Design Specifications

	Size	*Cost*	*EP*	*Notes*
95-ton streamlined wedge hull	+95	MCr11.4	-	-
Bridge Controls	-19	MCr0.475	-	-
Model/4 Computer	-0.4	MCr21.2	-2 EP	Model/4
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Long Range Sensors	-1.2	(MCr2.4)	-	Model/4
Medium Range Communications	-0.8	(MCr2)	-	Model/4
3-G Acceleration	-7.6	MCr3.8	-2.85 EP	-
TL9 Fusion Power Plant	-10.5	MCr31.5	+7 EP	-
Fuel	-7	-	-	-
2 Small Craft Couches	-1	MCr0.05	-	-
1 Small Cabin	-2	MCr0.25	-	-
Fresher	-0.5	MCr0.002	-	-
1 Hardpoint	-	MCr0.1	-	-
Triple Turret	-	MCr1	-	-
Missile Magazine	-1	MCr0.1	-	-
Cargo	-43.6	-	-	-
Totals	*+0*	*MCR 69.877 (MCr 55.902 with 20% standard design discount)*		

Fighter

Small Spacecraft

TL9, MCr11.88, 15 tons. Fighters come in a range of sizes, from 15 or 20-ton light models up to 50-ton strike fighters. The 15-ton light fighter is the commonest design in use. Extremely fast and maneuverable, fighters are however very fragile and are primarily useful for screening and patrol work, and for policing merchant traffic. Even en masse, fighters are little threat to a major warship, but to an unruly Free Trader or a small commerce raider they may be an effective deterrent.

Fighter

Class: Smallcraft	**EP Output:** 1.9 (1 excess)
Tech Level: 9	**Agility:** 6 (+6 EP)
Size: Small (15 tons)	**Initiative:** +6 (+6 agility)
Streamlining: Streamlined	**AC:** 17 (+6 agility, +1 size)
Jump Range: None	**Repulsors:** None
Acceleration: 6-G	**Nuclear Dampers:** None
Fuel: 1.9 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 1	**AR:** 0
Staterooms: 0	**SI:** 77
Small Cabins: 0	**Main Computer:** Model/1
Bunks: 0	**Sensor Range:** Close (Model/1)
Couches: 1	**Comm. Range:** Close (Model/1)
Low Berths: 0	
Cargo Space: 2.2 tons	**Cost:** MCr11.88 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 200kph	Maximum = 375kph
Other Equipment: None	

Triple Turret: empty

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

TL9 Design Specifications

	Size	*Cost*	*EP*	*Notes*
15-ton streamlined wedge hull	+15	MCr1.8	-	-
Bridge Controls	-4	MCr0.1	-	-
Model/1 Computer	-0.1	MCr2	-	Model/1
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Close Range Sensors	-0.3	(MCr0.6)	-	Model/1
Close Range Communications	-0.2	(MCr0.5)	-	Model/1
6-G Acceleration	-2.55	MCr1.275	-0.9 EP	-
TL9 Fusion Power Plant	-2.85	MCr8.55	+1.9 EP	-
Fuel	-1.9	-	-	-
1 Small Craft Couches	-0.5	MCr0.025	-	-
1 Hardpoint	-	MCr0.1	-	-
Triple Turret	-	MCr1	-	-
Cargo	-2.2	-	-	-
Totals	*+0*	*MCr 14.85 (MCr 11.88 with 20% standard design discount)*		

Starship Designs

The following are all starship designs common in Charted Space. Crew requirements are minimal, and for maximum efficiency extra crew should be carried. Typically these personnel include extra engineers, a backup pilot (or a dedicated pilot to avoid the strain and distraction of having to pilot and astrogate a starship). Larger ships may have specialist command personnel, small craft pilots, technicians, cargo handlers, additional stewards etc, and any vessel mounting weapons will need gunners to operate them.

TABLE: Common Starships and Spacecraft

Ship	*TL*	*Cost*	*Size*	*Acceleration*	*Jump*	*Cargo*
Scout/Courier	11	MCr42.578	100 tons	2-G	2	20
Seeker	11	*	100 tons	1-G	2	35
Far Trader	11	MCr68.138	200 tons	2-G	2	66
Free Trader	9	MCr51.36	200 tons	1-G	1	96
Safari Ship	11	MCr67.884	200 tons	1-G	2	50
System Defense Boat	14	MCr201.16	200 tons	6-G	-	18.3
Yacht	9	MCr75.074	200 tons	1-G	1	47
Corsair	11	*	400 tons	3-G	2	159.9
Laboratory Ship	11	MCr191.662	400 tons	1-G	2	32.4
Patrol Cruiser	12	MCr227.76	400 tons	4-G	3	24.8
Subsidized Merchant	9	MCr96.426	400 tons	1-G	1	236.5
Subsidized Liner	12	MCr238.386	600 tons	1-G	3	202.4
Mercenary Cruiser	12	MCr412.675	800 tons	3-G	3	165.2

Scout/Courier (Type S)

Medium-Size Starship

The Type S Scout/Courier is the most commonly seen ship in Charted Space. Small, cheap, and reasonably economical to operate, these ships have become a workhorse for both the government and military fleets; some are encountered in commercial use. Most Scout/Couriers are actually former Scout Service vessels either purchased as surplus from the government or are assigned for the private use of former Scouts currently on Detached Duty. In return for use of the ship the Scouts (and the ship itself) are subject to recall at any time for temporary or indefinite duty, as the Scout service requires.

The ship itself is built using the smallest available hull for a starship, 100-tons. The vessel carries a Maneuver drive capable of up to 2-G acceleration and a Jump-2 drive. The power plant provides just enough energy to power the maneuver drives or the Jump drive. If laser or energy weapons are installed, a larger power plant will be needed. Most ex-Scout vessels have had their powerful computer and sensor arrays removed and replaced with a standard Model/1bis computer. 4 staterooms are available for crew and passengers. Small cargoes may also be carried in the ship's compact 25-ton cargo hold. The vessel also carries a small vehicle bay, usually containing an air/raft.

The Scout/Courier requires a crew of one to operate; the pilot who must assume the duties of pilot and astrogator, and also oversees the highly automated drive section. A second crewmember is desirable. The Type S costs MCr42.578 new, and takes 5 months to build.

Scout/Courier

Class: Starship, type S	**EP Output:** 4 (2 excess)
Tech Level: 11	**Agility:** 2 (+2 EP)
Size: Medium (100 tons)	**Initiative:** +2 (+2 agility)
Streamlining: Streamlined	**AC:** 12 (+2 agility)
Jump Range: 1 x Jump-2	**Repulsors:** 0
Acceleration: 2-G	**Nuclear Dampers:** 0
Fuel: 24 tons	**Meson Screens:** 0
Duration: 4 weeks	**Black Globes:** 0
Crew: 1	**AR:** 0
Staterooms: 4	**SI:** 100
Small Cabins: 0	**Main Computer:** Model/1bis
Bunks: 0	**Sensor Range:** Close (Model/1)
Couches: 0	**Comm. Range:** Close (Model/1)
Low Berths: 0	
Cargo Space: 20 tons	**Cost:** MCr42.578 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 825kph	Maximum = 1100kph
Other Equipment: Air/raft, fuel scoops.	

Double Turret: empty.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
100-ton Hull (Wedge)	+100	MCr12	-	-
Bridge	-20	MCr0.5	-	-
Computer	-0.1	MCr4	-	Model/1bis
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.3	(MCr0.6)	-	Model/1
Communications	-0.2	(MCr.0.5)	-	Model/1
Jump Drive 2	-3	MCr12	-2	-
Jump Fuel	-20	-	-	-
Maneuver Drive 2	-5	MCr3.5	-2	-
TL9 Power Plant	-6	MCr18	+4	-
Power Plant Fuel	-4	-	-	-
Fuel Scoops	-	MCr0.1	-	-
1 Hard Point	-	MCr0.1	-	-
Double Turret	-	MCr0.75	-	-
Air/Raft	-5	MCr0.273	-	-
Staterooms (4)	-16	MCr2	-	-
Cargo	-20	-	-	-
Totals	*+0*	*MCr53.223 (MCr42.578 with 20% standard design discount)*		

Seeker (type J)

Medium-Size Starship

The Type J Seeker is adapted from the standard Scout/Courier design to create a vessel suitable for lone prospectors or small teams. Ore sampling equipment is fitted, and the air-raft is usually replaced with a pressurized buggy for ground expeditions. The Seeker requires a crew of one to operate, the pilot who may assume the duties of both pilot and Astrogator. If built new, the ship would cost MCr34.498 and takes 9 months to build, but most are highly modified Scout/Couriers. Seekers do not fetch very high sale prices; around MCr20 depending on the state of the craft.

Seeker

Class: Starship, type J	**EP Output:** 2 (0.5 excess)
Tech Level: 11	**Agility:** 1
Size: Medium (100 tons)	**Initiative:** +1
Streamlining: Streamlined	**AC:** 11 (+1 agility)
Jump Range: 1 x Jump-2	**Repulsors:** None
Acceleration: 1-G	**Nuclear Dampers:** None
Fuel: 22 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 1	**AR:** 0
Staterooms: 2	**SI:** 100
Small Cabins: 0	**Main Computer:** Model/1bis
Bunks: 0	**Sensor Range:** Close (Model/1)
Couches: 0	**Comm. Range:** Close (Model/1)
Low Berths: 0	
Cargo Space: 35 tons	**Cost:** see description
Atmospheric Speeds: Cruising = 825kph	NoE = 275kph Maximum = 1100kph
Other Equipment: Air/raft.	

Double Turret: Single Mining Laser; Attack Bonus +1 (+1 USP), Damage: 1d6, Range Increment: 15,000km.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
100-ton Hull (Wedge)	+100	MCr12	-	-
Bridge	-20	MCr0.5	-	-
Computer	-0.1	MCr4	-	Model/1bis
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.3	(MCr0.6)	-	Model/1
Communications	-0.2	(MCr.0.5)	-	Model/1
Jump Drive 2	-3	MCr12	-2	-
Jump Fuel	-20	-	-	-
Maneuver Drive 1	-2	MCr3	-1	-
TL9 Power Plant	-3	MCr9	+2	-
Power Plant Fuel	-2	-	-	-
1 Hard Point	-	MCr0.1	-	-
Double Turret	-	MCr0.75	-	-
Mining Laser	-1	MCr0.5	-0.5	-
Air/Raft	-5	MCr0.273	-	-
Staterooms (2)	-8	MCr1	-	-
Cargo	-35	-	-	-
Totals	*+0*	*MCr43.123 (MCr34.498 with 20% standard design discount)*		

Far Trader (Type A2)

Medium-Size Starship

The Jump-2 Far Trader sacrifices some cargo space for engines and fuel, meaning that it cannot really compete on a main. However, A2s can be encountered almost anywhere. They are particularly common in backwater regions where larger vessels are uneconomical. On the frontier, many Far Traders are armed. The Far Trader requires a crew of four: the pilot, astrogator and engineer to operate the ship along with a medic/steward to attend to the passengers. The ship cost MCr68.138 new, and takes 9 months to build.

Far Trader

Class: Starship, type A2	**EP Output:** 4
Tech Level: 11	**Agility:** 0
Size: Medium (200 tons)	**Initiative:** +0
Streamlining: Streamlined	**AC:** 10
Jump Range: 1 x Jump-2	**Repulsors:** None
Acceleration: 2-G	**Nuclear Dampers:** None
Fuel: 44 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 4	**AR:** 0
Staterooms: 10	**SI:** 115
Small Cabins: 0	**Main Computer:** Model/1bis
Bunks: 0	**Sensor Range:** Close (Model/1)
Couches: 0	**Comm. Range:** Close (Model/1)
Low Berths: 4	
Cargo Space: 66 tons	**Cost:** MCr68.138 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 825kph	Maximum = 1100kph
Other Equipment: Air/raft	

Double Turret: Empty.
Double Turret: Empty.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
200-ton Hull (Wedge)	+200	MCr24	-	-
Bridge	-20	MCr1	-	-
Computer	-0.1	MCr4	-	Model/1bis
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.3	(MCr0.6)	-	Model/1
Communications	-0.2	(MCr.0.5)	-	Model/1
Jump Drive 2	-6	MCr24	-4	-
Jump Fuel	-40	-	-	-
Maneuver Drive 2	-10	MCr7	-4	-
TL9 Power Plant	-6	MCr18	+4	-
Power Plant Fuel	-4	-	-	-
2 Hard Points	-	MCr0.2	-	-
2 Double Turrets	-	MCr1.5	-	-
Staterooms (10)	-40	MCr5	-	-
Low Berths (4)	-2	MCr0.2	-	-
Air/Raft	-5	MCr0.273	-	-
Cargo	-66	-	-	-
Totals	*+0*	*MCr85.173 (MCr68.138 with 20% standard design discount)*		

Free Trader (Type A)

Medium-Size Starship

Jump-1 Free Traders, of Type A and other designs, are very common starships. They ply the Jump-1 mains making a living from speculative trade and picking up the odd small shipment after the Corporate freighters have passed through. Many Free Traders are heavily modified as a result of their advancing age and non-standard refits. On the frontier, most vessels will be armed with at least a single laser. The Free Trader requires a crew of four: pilot, astrogator and engineer to operate the ship along with a medic/steward to attend to the passengers. The ship cost MCr51.36 new, and takes 9 months to build.

Free Trader

Class: Starship, type A	**EP Output:** 2
Tech Level: 9	**Agility:** 0
Size: Medium (200 tons)	**Initiative:** +0
Streamlining: Streamlined	**AC:** 10
Jump Range: 1 x Jump-1	**Repulsors:** None
Acceleration: 1-G	**Nuclear Dampers:** None
Fuel: 22 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 4	**AR:** 0
Staterooms: 10	**SI:** 115
Small Cabins: 0	**Main Computer:** Model/1
Bunks: 0	**Sensor Range:** Close (Model/1)
Couches: 0	**Comm. Range:** Close (Model/1)
Low Berths: 20	
Cargo Space: 96 tons	**Cost:** MCr51.36 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 825kph	Maximum = 1100kph
Other Equipment: None.	

No turrets or weapons installed.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
200-ton Hull (Wedge)	+200	MCr24	-	-
Bridge	-20	MCr1	-	-
Computer	-0.1	MCr2	-	Model/1
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.3	(MCr0.6)	-	Model/1
Communications	-0.2	(MCr.0.5)	-	Model/1
Jump Drive 1	-4	MCr16	-2	-
Jump Fuel	-20	-	-	-
Maneuver Drive 1	-4	MCr6	-2	-
TL9 Power Plant	-3	MCr9	+2	-
Power Plant Fuel	-2	-	-	-
2 Hard Points	-	MCr0.2	-	-
Staterooms (10)	-40	MCr5	-	-
Low Berths (20)	-10	MCr1	-	-
Cargo	-96	-	-	-
Totals	*+0*	*MCr64.2 (MCr51.36 with 20% standard design discount)*		

Safari Ship (Type K)

Medium-Size Starship

The Safari Ship is somewhat less common than other small vessels. Its most common function is as a “poor person’s yacht”; a small personal transport with a modest cargo capacity. However, this is not its designed function. Safari ships are intended to be used as a mobile base from which to conduct private exploration, surveying, hunting (of a photographic or lethal sort) and safari missions. Accommodation is fairly luxurious, reflecting the fact that many owners hire themselves and their ship to parties of wealthy people seeking a nice, safe adventure in the wilds. Cargo space can be configured to include pens for captured wildlife, and separate climate control exists for the cargo bay to keep catches alive. The Safari Ship requires a crew of three: pilot/astrogator and engineer to operate the ship along with a medic/steward to attend to the passengers. The ship costs MCr67.884 when new and takes 9 months to build.

Safari Ship

Class: Starship, type K	**EP Output:** 4 (+2 excess)
Tech Level: 11	**Agility:** +1 (+1 EP)
Size: Medium (200 tons)	**Initiative:** +1 (+1 agility)
Streamlining: Streamlined	**AC:** 11 (+1 agility)
Jump Range: 1 x Jump-2	**Repulsors:** None
Acceleration: 1-G	**Nuclear Dampers:** None
Fuel: 44 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 3	**AR:** 0
Staterooms: 11	**SI:** 115
Small Cabins: 0	**Main Computer:** Model/1bis
Bunks: 0	**Sensor Range:** Close (Model/1)
Couches: 0	**Comm. Range:** Close (Model/1)
Low Berths: 0	
Cargo Space: 50 tons	**Cost:** MCr67.884 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 825kph	Maximum = 1100kph
Other Equipment: Air/raft, 20-ton launch	

No turrets or weapons installed.

TAS Form 3.1 (Condensed) **Ship’s Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
200-ton Hull (Flattened Sphere)	+200	MCr16	-	-
Bridge	-20	MCr1	-	-
Computer	-0.1	MCr4	-	Model/1bis
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.3	(MCr0.6)	-	Model/1
Communications	-0.2	(MCr.0.5)	-	Model/1
Jump Drive 2	-6	MCr24	-4	-
Jump Fuel	-40	-	-	-
Maneuver Drive 1	-4	MCr6	-2	-
TL9 Power Plant	-6	MCr18	+4	-
Power Plant Fuel	-4	-	-	-
2 Hard Points	-	MCr0.2	-	-
Staterooms (11)	-44	MCr5.5	-	-
Air/Raft	-5	MCr0.273	-	-
20-ton Launch	-20	MCr9.842	-	-
Launch Hanger	-	MCr0.04	-	-
Cargo	-50	-	-	-
Totals	*+0*	*MC84.855 (MCr67.884 with 20% standard design discount)*		

System Defense Boat (type SDB)

Medium-Size Spaceship

A system defense boat, or SDB, is a ship that is used exclusively for planetary and star system defense, trading off the lack of jump drives for heavy armor, faster acceleration, and heavier weaponry in its place. There is no real 'standard' design for SDBs, as they are often of local manufacture or may be former starships pressed into local defense forces after having their jump drives removed. Most such conversions have additional armament and upgrades installed. Most SDBs are streamlined allowing them to also be used for orbital and air support for local ground troops.

If the need arises to move an SDB to another star system, it will usually be loaded onto a bulk freighter and shipped as large cargo, but this is very slow and inefficient and is not wise if the SDB is expected to go into action immediately upon arrival. In cases where rapid deployment at the destination is needed, *Jump Pods* can be built and strapped to the SDB, providing it with temporary jump capability. Upon arrival, the pods can be quickly and easily jettisoned, allowing the ship to move into action immediately. The pod would contain Jump drives large enough to Jump both the SDB and the pod itself, along with the requisite fuel needed to make the Jump.

A generic TL14 SDB like the one detailed here would cost MCr201.16 new, and take 11 months to build. It requires a crew of 6: Captain, Pilot, Engineer, 2 gunners and a missile technician who doubles as medic.

System Defense Boat

Class: Spacecraft, type SDB	**EP Output:** 36 (12 excess)
Tech Level: 14	**Agility:** 6 (+6 EP)
Size: Medium (200 tons)	**Initiative:** +6 (+6 agility)
Streamlining: Airframe	**AC:** 30 (+6 agility, +14 armor)
Jump Range: None	**Repulsors:** None
Acceleration: 6-G	**Nuclear Dampers:** None
Fuel: 36 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 6	**AR:** 14
Staterooms: 4	**SI:** 115
Small Cabins: 0	**Main Computer:** Model/8
Bunks: 0	**Sensor Range:** System-wide (Mod/7)
Couches: 0	**Comm. Range:** System-wide (Mod/8)
Low Berths: 0	
Cargo Space: 18.3 tons	**Cost:** MCr201.16 (new)
Atmospheric Speeds: Cruising = 4425kph	NoE = 1475kph Maximum = 5900kph
Other Equipment: Missile Magazines (x3), 60 Missiles.	

TAS Form 3.1 (Condensed)

Triple Turret: Missile Racks (x3), Attack Bonus +2 (+2 USP), Damage 2d6.
Triple Turret: Beam Lasers (x3), Attack Bonus +3 (+3 USP), Damage 3d8.

Ship's Data (Commercial)

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
200-ton Hull	+200	MCr24	-	-
Airframe	-10	MCr2.4	-	-
Armor (AR14)	-15	MCr1.8	-	-
Bridge	-20	MCr1	-	-
Computer	-0.8	MCr87.2	-9	Model/8
Flight Avionics	-1.2	(MCr2.7)	-	Model/3
Sensors	-2.1	(MCr4.2)	-	Model/7
Communications	-1.6	(MCr4)	-	Model/8
Maneuver Drive 6	-34	MCr17	-12	-
TL13 Power Plant	-36	MCr108	+36	-
Power Plant Fuel	-36	-	-	-
2 Hard Points	-	MCr0.2	-	-
Triple Turret	-	MCr1	-	-
Missile Rack (x3)	-3	MCr2.25	-	-
Triple Turret	-	MCr1	-	-
Missile Magazine (x3)	-3	MCr0.3	-	-
60 Missiles	-	MCr0.3	-	-
Beam Laser (x3)	-3	MCr3	-3	-
Staterooms (4)	-16	MCr2	-	-
Cargo	-18.3	-	-	-
Totals	*+0*	*MCr251.45 (MCr201.16 with 20% standard design discount)*		

Yacht (type Y)

Medium-Size Starship

A Yacht is not a commercially viable vessel. It serves as personal transport for a rich individual, and sometimes as their home. As status symbols, many yachts are finely decorated and contain expensive furnishings, paintings and so on. Many are armed. The Yacht requires a crew of three to operate, the pilot (who doubles as astrogator), an engineer and a medic/steward to attend to the passengers. The ship cost MCr75.074 new, and takes 11 months to build.

Yacht

Class: Starship, type Y	**EP Output:** 2
Tech Level: 9	**Agility:** 0
Size: Medium (200 tons)	**Initiative:** +0
Streamlining: Streamlined	**AC:** 10
Jump Range: 1 x Jump-1	**Repulsors:** None
Acceleration: 1-G	**Nuclear Dampers:** None
Fuel: 22 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 3	**AR:** 0
Staterooms: 14	**SI:** 115
Small Cabins: 0	**Main Computer:** Model/1
Bunks: 0	**Sensor Range:** Close (Model/1)
Couches: 0	**Comm. Range:** Close (Model/1)
Low Berths: 0	
Cargo Space: 47 tons	**Cost:** MCr75.074 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 825kph	Maximum = 1100kph
Other Equipment: Air/raft, tracked ATV, 30 ton ship's boat.	

No turrets or weapons installed.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
200-ton Hull (Cone)	+200	MCr22	-	-
Bridge	-20	MCr1	-	-
Computer	-0.1	MCr2	-	Model/1
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.3	(MCr0.6)	-	Model/1
Communications	-0.2	(MCr.0.5)	-	Model/1
Jump Drive 1	-4	MCr16	-2	-
Jump Fuel	-20	-	-	-
Maneuver Drive 1	-4	MCr6	-2	-
TL9 Power Plant	-3	MCr9	+2	-
Power Plant Fuel	-2	-	-	-
1 Hard Points	-	MCr0.1	-	-
Staterooms (14)	-56	MCr7	-	-
30-ton Ship's Boat	-30	MCr30.362	-	-
Ship's Boat Hanger	-	MCr0.06	-	-
ATV (Tracked)	-8	MCr0.047	-	-
Air/Raft	-5	MCr0.273	-	-
Cargo	-47	-	-	-
Totals	*+0*	*MCr93.842 (MCr75.074 with 20% standard design discount)*		

Corsair (type P)

Medium-Size Starship

A corsair has one purpose – to attack merchant ships and take their cargo. Though the ship has good cargo capacity, it is not viable in normal commerce. Some Corsairs are constructed for use by mercenary units, as transport and support. Without a merc license it is almost impossible to find (legal) funding for a Corsair. The vessel is fast and well armed but not quite up to military standards – a warship of the same tonnage would defeat it in a straight fight. Of course, pirates never fight fair… The Corsair requires a crew of six to operate, the pilot, an astrogator, 3 engineers and a medic. The ship cost MCr156.44 new, and takes 14 months to build.

Corsair

Class: Starship, type P	**EP Output:** 15
Tech Level: 11	**Agility:** 0
Size: Medium (400 tons)	**Initiative:** +0
Streamlining: Partial	**AC:** 10
Jump Range: 1 x Jump-2	**Repulsors:** None
Acceleration: 3-G	**Nuclear Dampers:** None
Fuel: 95 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 6	**AR:** 0
Staterooms: 10	**SI:** 145
Small Cabins: 0	**Main Computer:** Model/2
Bunks: 0	**Sensor Range:** Short (Model/2)
Couches: 0	**Comm. Range:** Short (Model/2)
Low Berths: 20	
Cargo Space: 159.9 tons	**Cost:** see description
Atmospheric Speeds:	NoE = 75kph
Cruising = 200kph	Maximum = 300kph
Other Equipment: Missile Magazine, 20 Missiles.	

TAS Form 3.1 (Condensed)

Triple Turret: Beam Lasers (x1), Attack Bonus +1 (+1 USP), Damage 1d8.
Triple Turret: Beam Lasers (x1), Attack Bonus +1 (+1 USP), Damage 1d8.
Triple Turret: Beam Lasers (x1), Attack Bonus +1 (+1 USP), Damage 1d8.
Triple Turret: Missile Racks (x3), Attack Bonus +2 (+2 USP), Damage 2d6.

Ship's Data (Commercial)

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
400-ton Hull (Cylinder)	+400	MCr40	-	-
Bridge	-20	MCr2	-	-
Computer	-0.2	MCr6.2	-	Model/2
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.6	(MCr1.2)	-	Model/2
Communications	-0.4	(MCr1)	-	Model/2
Jump Drive 2	-12	MCr48	-8	-
Jump Fuel	-80	-	-	-
Maneuver Drive 3	-32	MCr16	-12	-
TL9 Power Plant	-22.5	MCr67.5	+15	-
Power Plant Fuel	-15	-	-	-
4 Hard Points	-	MCr0.4	-	-
4 Triple Turrets	-	MCr4	-	-
3 Missile Racks	-3	MCr2.25	-	-
1 Missile Magazine	-1	MCr0.1	-	-
20 Missiles	(-1)	MCr0.1	-	-
3 Beam Lasers	-3	MCr3	-3	-
Staterooms (10)	-40	MCr5	-	-
Low Berths (20)	-10	MCr1	-	-
Cargo	-159.9	-	-	-
Totals	*+0*	*MCr195.55 (MCr156.44 with 20% standard design discount)*		

Laboratory Ship (type L)

Medium-Size Starship

Various types of laboratory ship exist; most are small, like the 400-ton design detailed here. The sole purpose of this vessel is scientific research; it cannot make its way in commerce, nor is it viable in combat. Lab ships are sometimes built to particular requirements, but are usually configurable to a user's immediate needs. The lab ship requires a crew of five; a pilot, astrogator, two engineers and a medic/steward to look after the research staff. There are 15 staterooms available for scientists, technicians and assistants, though some of these areas are usually turned into additional lab spaces. General lab equipment is assumed to be included with the ship's build cost, but very specialized equipment will have to be purchased separately. The ship costs MCr 192.622 new, and takes 11 months to build.

Laboratory Ship

Class: Starship, type L	**EP Output:** 8 (4 excess)
Tech Level: 11	**Agility:** 1 (+1 EP)
Size: Medium (400 tons)	**Initiative:** +1 (+1 agility)
Streamlining: Partial	**AC:** 11 (+1 agility)
Jump Range: 1 x Jump-2	**Repulsors:** None
Acceleration: 1-G	**Nuclear Dampers:** None
Fuel: 88 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 5	**AR:** 0
Staterooms: 20	**SI:** 145
Small Cabins: 0	**Main Computer:** Model/2
Bunks: 0	**Sensor Range:** Short (Model/2)
Couches: 0	**Comm. Range:** Short (Model/2)
Low Berths: 0	
Cargo Space: 32.4 tons	**Cost:** MCr192.622 (new)
Atmospheric Speeds: Cruising = 200kph	NoE = 75kph Maximum = 300kph
Other Equipment: Air/raft, 40 ton pinnace, 12 laboratories.	

No turrets or weapons installed.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
400-ton Hull (Cylinder)	+400	MCr40	-	-
Bridge	-20	MCr2	-	-
Computer	-0.2	MCr6.2	-	Model/2
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.6	(MCr1.2)	-	Model/2
Communications	-0.4	(MCr1)	-	Model/2
Jump Drive 2	-12	MCr48	-8	-
Jump Fuel	-80	-	-	-
Maneuver Drive 1	-8	MCr12	-4	-
TL9 Power Plant	-12	MCr36	+8	-
Power Plant Fuel	-8	-	-	-
4 Hard Points	-	MCr0.4	-	-
Staterooms (20)	-80	MCr10	-	-
40-ton Pinnace	-40	MCr45.552	-	-
Pinnace Hanger	-	MCr0.08	-	-
Air/Raft	-10	MCr0.546	-	-
12 Laboratories	-96	MCr40	-	-
Cargo	-32.4	-	-	-
Totals	*+0*	*MCr240.778 (MCr192.622 with 20%standard design discount)*		

Patrol Cruiser (type T)

Medium-Size Starship

The Patrol Cruiser is a very common escort and patrol ship encountered throughout Charted Space. Many are owned by mercenaries or private escort firms, but most are in Navy hands. The ship requires a crew of 12: Captain, pilot, astrogator, three engineers, four gunners, a medic and a missile technician. Eight troops are usually also carried for boarding and customs duty. Although there are 20 stateroom-equivalents aboard, only four are single-occupancy (these are used by the captain, astrogator, chief engineer and commander of troops. The rest of the crew share staterooms in pairs, with all the troops barracked in a triple-sized "sardine can" stateroom. The other 9 stateroom-equivalents are used as an armory, sickbay, wardroom and common areas for the overcrowded crew. The ship costs MCr227.76 new and takes 14 months to build.

Patrol Cruiser

Class: Starship, type P	**EP Output:** 26 (4 excess)
Tech Level: 12	**Agility:** 1 (+1 EP)
Size: Medium (400 tons)	**Initiative:** +1 (+1 agility)
Streamlining: Partial	**AC:** 11 (+1 agility)
Jump Range: 1 x Jump-3	**Repulsors:** None
Acceleration: 4-G	**Nuclear Dampers:** None
Fuel: 140 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew:	**AR:** 0
Staterooms: 20	**SI:** 145
Small Cabins: 0	**Main Computer:** Model/3
Bunks: 0	**Sensor Range:** Medium (Model/3)
Couches: 0	**Comm. Range:** Medium (Model/3)
Low Berths: 20	
Cargo Space: 24.8 tons	**Cost:** MCr227.76 (new)
Atmospheric Speeds: Cruising = 200kph	NoE = 75kph Maximum = 300kph
Other Equipment: Missile Magazines (6), 120 Missiles.	

Triple Turret: Missile Rack (x3), Attack Bonus +2 (+2 USP), Damage 2d6.
Triple Turret: Missile Rack (x3), Attack Bonus +2 (+2 USP), Damage 2d6.
Triple Turret: Beam Laser (x3), Attack Bonus +3 (+3 USP), Damage 3d8.
Triple Turret: Beam Laser (x3), Attack Bonus +3 (+3 USP), Damage 3d8.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
400-ton Hull (Cylinder)	+400	MCr40	-	-
Bridge	-20	MCr2	-	-
Computer	-0.3	MCr12.6	-1	Model/3
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.9	(MCr1.8)	-	Model/3
Communications	-0.6	(MCr1.5)	-	Model/3
Jump Drive 3	-16	MCr64	-12	-
Jump Fuel	-120	-	-	-
Maneuver Drive 4	-44	MCr22	-16	-
TL9 Power Plant	-39	MCr117	+26	-
Power Plant Fuel	-26	-	-	-
4 Hard Points	-	MCr0.4	-	-
4 Triple Turrets	-	MCr4	-	-
6 Beam Lasers	-6	MCr6	-6	-
6 Missile Racks	-6	MCr4.5	-	-
6 Missile Magazines	-6	MCr0.6	-	-
120 Missiles	(-6)	MCr0.6	-	-
Staterooms (20)	-80	MCr10	-	-
Low Berths (20)	-10	MCr1	-	-
Cargo	-24.8	-	-	-
Totals	*+0*	*MCr284.7 (MCr227.76 with 20% standard design discount)*		

Subsidized Merchant (type R)

Medium-Size Starship

The "Subbie" is built on the "cargo van" principle. Designed as little more than a cargo bay with engines, Subbies are very common on Jump-1 trade routes. Most ply a fixed route subsidized by the worlds on it, ensuring regular mail and freighting services. Many Subbies are armed and configured to carry mail. The Subsidized Merchant requires a crew of five to operate; the pilot, engineer, and an astrogator along with a medic and steward to attend to the passengers. Since the vessel is larger and carries more passengers than the Type A or A2, the steward has a full-time job. The medic often assists or doubles as an assistant to relieve the load on the chief engineer. The ship cost MCr98.426 new, and takes 14 months to build.

Subsidized Merchant

Class: Starship, type R	**EP Output:** 4
Tech Level: 9	**Agility:** 0
Size: Medium (400 tons)	**Initiative:** +0
Streamlining: Partial	**AC:** 10
Jump Range: 1 x Jump-1	**Repulsors:** None
Acceleration: 1-G	**Nuclear Dampers:** None
Fuel: 44 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 5	**AR:** 0
Staterooms: 13	**SI:** 145
Small Cabins: 0	**Main Computer:** Model/1
Bunks: 0	**Sensor Range:** Close (Model/1)
Couches: 0	**Comm. Range:** Close (Model/1)
Low Berths: 9	
Cargo Space: 236.5 tons	**Cost:** MCr98.426 (new)
Atmospheric Speeds:	NoE = 75kph
Cruising = 200kph	Maximum = 300kph
Other Equipment: 20 ton launch.	

No turrets or weapons installed.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
400-ton Hull (Cylinder)	+400	MCr40	-	-
Bridge	-20	MCr2	-	-
Computer	-0.1	MCr2	-	Model/1
Flight Avionics	-0.4	(MCr0.9)	-	Model/1
Sensors	-0.3	(MCr0.6)	-	Model/1
Communications	-0.2	(MCr.0.5)	-	Model/1
Jump Drive 1	-8	MCr32	-4	-
Jump Fuel	-40	-	-	-
Maneuver Drive 1	-8	MCr12	-4	-
TL9 Power Plant	-6	MCr18	+4	-
Power Plant Fuel	-4	-	-	-
2 Hard Points	-	MCr0.2	-	-
Staterooms (13)	-52	MCr6.5	-	-
Low Berths (9)	-4.5	MCr0.45	-	-
20-ton Launch	-20	MCr9.842	-	-
Launch Hanger	-	MCr0.04	-	-
Cargo	-236.5	-	-	-
Totals	*+0*	*MCr123.032 (MCr98.426 with 20%standard design discount)*		

Subsidized Liner (type M)

Medium-Size Starship

The Subsidized Liner is almost always tied to a fixed route. Liners carry cargo as well as passengers. Three hardpoints are fitted for turrets, but except out on the frontiers or in troubled regions, liners usually carry no armament. The Subsidized Liner requires a crew of eight: the pilot and astrogator along with 2 engineers, a medic, and 3 stewards to attend to the passengers. The ship cost MCr238.386 new, and takes 22 months to build.

Subsidized Liner

Class: Starship, type M	**EP Output:** 18 (12 excess)
Tech Level: 12	**Agility:** 2 (+2 EP)
Size: Medium (600 tons)	**Initiative:** +2 (+2 agility)
Streamlining: Streamlined	**AC:** 12 (+2 agility)
Jump Range: 1 x Jump-3	**Repulsors:** None
Acceleration: 1-G	**Nuclear Dampers:** None
Fuel: 198 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 8	**AR:** 0
Staterooms: 21	**SI:** 175
Small Cabins: 0	**Main Computer:** Model/3
Bunks: 0	**Sensor Range:** Medium (Model/3)
Couches: 0	**Comm. Range:** Medium (Model/3)
Low Berths: 20	
Cargo Space: 202.4 tons	**Cost:** MCr238.386 (new)
Atmospheric Speeds:	NoE = 275kph
Cruising = 825kph	Maximum = 1100kph
Other Equipment: 20 ton launch.	

No turrets or weapons installed.

TAS Form 3.1 (Condensed) **Ship's Data (Commercial)**

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
600-ton Hull (Cylinder)	+600	MCr63	-	-
Bridge	-20	MCr0.1	-	-
Computer	-0.3	MCr12.6	-1	Model/3
Flight Avionics	-0.8	(MCr1.8)	-	Model/2
Sensors	-0.9	(MCr1.8)	-	Model/3
Communications	-0.6	(MCr1.5)	-	Model/3
Jump Drive 3	-24	MCr96	-18	-
Jump Fuel	-180	-	-	-
Maneuver Drive 1	-12	MCr18	-6	-
TL9 Power Plant	-27	MCr81	+18	-
Power Plant Fuel	-18	-	-	-
3 Hard Points	-	MCr0.3	-	-
Staterooms (21)	-84	MCr10.5	-	-
Low Berths (20)	-10	MCr1	-	-
20-ton Launch	-20	MCr9.842	-	-
Launch Hanger	-	MCr0.04	-	-
Cargo	-202.4	-	-	-
Totals	*+0*	*MCr297.982 (MCr238.386 with 20% standard design discount)*		

Mercenary Cruiser (type MC)

Medium-Size Starship

Designed to fit the needs of mobile merc units, the Mercenary Cruiser can carry a platoon of ground troops or act as an escort-vessel-for-hire. The ship has a good Jump range and high acceleration for a non-Naval vessel. Almost all Mercenary Cruisers carry at least one weapons turret (up to 8 can be shipped) and most will have boat pilots for the cutters. This will raise the crew requirement beyond the minimum listed here. The Mercenary Cruiser requires a crew of eight: the pilot, astrogator, 5 engineers and a medic. The ship cost MCr412.675 new, and takes 25 months to build.

Mercenary Cruiser

Class: Starship, type MC	**EP Output:** 30
Tech Level: 12	**Agility:** 0
Size: Medium (800 tons)	**Initiative:** +0
Streamlining: Partial	**AC:** 10
Jump Range: 1 x Jump-3	**Repulsors:** None
Acceleration: 3-G	**Nuclear Dampers:** None
Fuel: 270 tons	**Meson Screens:** None
Duration: 4 weeks	**Black Globes:** None
Crew: 8	**AR:** 0
Staterooms: 25	**SI:** 205
Small Cabins: 0	**Main Computer:** Model/5
Bunks: 0	**Sensor Range:** Very Long (Mod/5)
Couches: 0	**Comm. Range:** Very Long (Mod/5)
Low Berths: 0	
Cargo Space: 165.2 tons	**Cost:** MCr412.675 (new)
Atmospheric Speeds:	NoE = 75kph
Cruising = 200kph	Maximum = 300kph
Other Equipment: Modular Cutter (x2).	

TAS Form 3.1 (Condensed)

Triple Turret: Empty.
Triple Turret: Empty.
Triple Turret: Empty.
Triple Turret: Empty.
Triple Turret: Empty.
Triple Turret: Empty.
Triple Turret: Empty.
Triple Turret: Empty.

Ship's Data (Commercial)

Design Specifications

Installed Components	*Tonnage*	*Cost*	*EP*	*Notes*
800-ton Hull (Sphere)	+800	MCr56	-	-
Bridge	-20	MCr4	-	-
Computer	-0.5	MCr36.5	-3	Model/5
Flight Avionics	-0.8	(MCr1.8)	-	Model/2
Sensors	-1.5	(MCr3)	-	Model/5
Communications	-1	(MCr2.5)	-	Model/5
Jump Drive 3	-32	MCr128	-24	-
Jump Fuel	-240	-	-	-
Maneuver Drive 3	-64	MCr32	-24	-
TL9 Power Plant	-45	MCr135	+30	-
Power Plant Fuel	-30	-	-	-
8 Hard Points	-	MCr0.8	-	-
8 Triple Turrets	-	MCr8	-	-
Staterooms (25)	-100	MCr12.5	-	-
Modular Cutter (2)	-100	MCr102.844	-	-
Cutter Hangers (2)	-	MCr0.02	-	-
Cargo	-165.2	-	-	-
Totals	*+0*	*MCr515.344 (MCr412.675 with 20% standard design discount)*		