

STARSHIPS

And SPACECRAFT

Judges Guild



A Playing Aid Approved For Use With **TRAVELLER**™
Science Fiction Role Playing System



by Dave Sering

No. 89

Three 22 x 34 inch Sheets, 25 mm Scale Three Color Deck Plans of all
Standard Traveller Starships and Auxiliaries, Complete Technical Data,
Ship's Papers and Layout Grid for Your own Starship Design.

\$5.50

Welcome Aboard!

As in the ancient days of ocean voyage on Terra, comfortable journeys between the islands of planets in the seas of space are now commonplace. This information has been provided to assist your rapid adjustment to ship board conditions. Starship accommodations have a degree of luxury undreamed of in even the most opulent of the old passenger steamships. The environment of your stateroom may be altered to your specifications. It is common practice to set the internal environment of your stateroom to duplicate the environment of the planet you embarked at. At your request the Ship's Steward will program the environment to gradually change over the course of the voyage until it matches the environment of your destination. The common rooms are normally kept at one standard gravity ($G_s = 10.0 \text{ m/sec/sec}$), with G2 illumination and Tn atmosphere. Conditions in the common rooms may be adjusted by concurrence of the passengers, though variance of more than 20% from standard may require the entertainment/exercise schedule to be modified.

Your stateroom has many built-in services and equipment. Some of the services include a large audio-video display connection with the Ship's Computer which may be utilized to give data displays of Ship's Status, communicate with the Ship's Crew, access the Ship's Library, and personal bio-physical monitoring. Accessory interface connections are provided so that private equipment may be utilized. Interior furnishings are modular and the passengers are encouraged to rearrange the furnishings to suit themselves. Color schemes and decoration may be altered to individual taste. Personal grooming equipment is built into the stateroom. Sanitary facilities are located in the nearby Fresher Cubicle. The sleeping platform, traditionally called a berth, is adjustable to individual comfort. It also has an important piece of emergency equipment built in, the emergency "Life Bubble". This is an inflatable plastic bag attached to an emergency life support module. It can support up to three people for as long as 10 hours. The "Life Bubble" is released automatically in emergencies or may be released manually. The Ship's Steward is legally required to ensure that each passenger is familiar with the "Life Bubble" and knows how to enter, seal, and operate it. Drills will be held in the tradition of the ancient seaborne "Lifeboat Drill". The location and operation of other Ship's Emergency Equipment will be demonstrated by the Ship's Steward.

Shipboard cuisine is of a uniformly high standard. The Ship's Steward is an accomplished Chef and supervises the preparation of all meals. Traditionally passengers take turns assisting in the preparation and serving of meals. Stewards also traditionally are willing to teach some of their secret culinary arts to appreciative passengers. Passengers are encouraged to demonstrate their own culinary skills. Passengers with special medical or religious dietary restrictions will consult with the Steward to ensure their requirements are known.

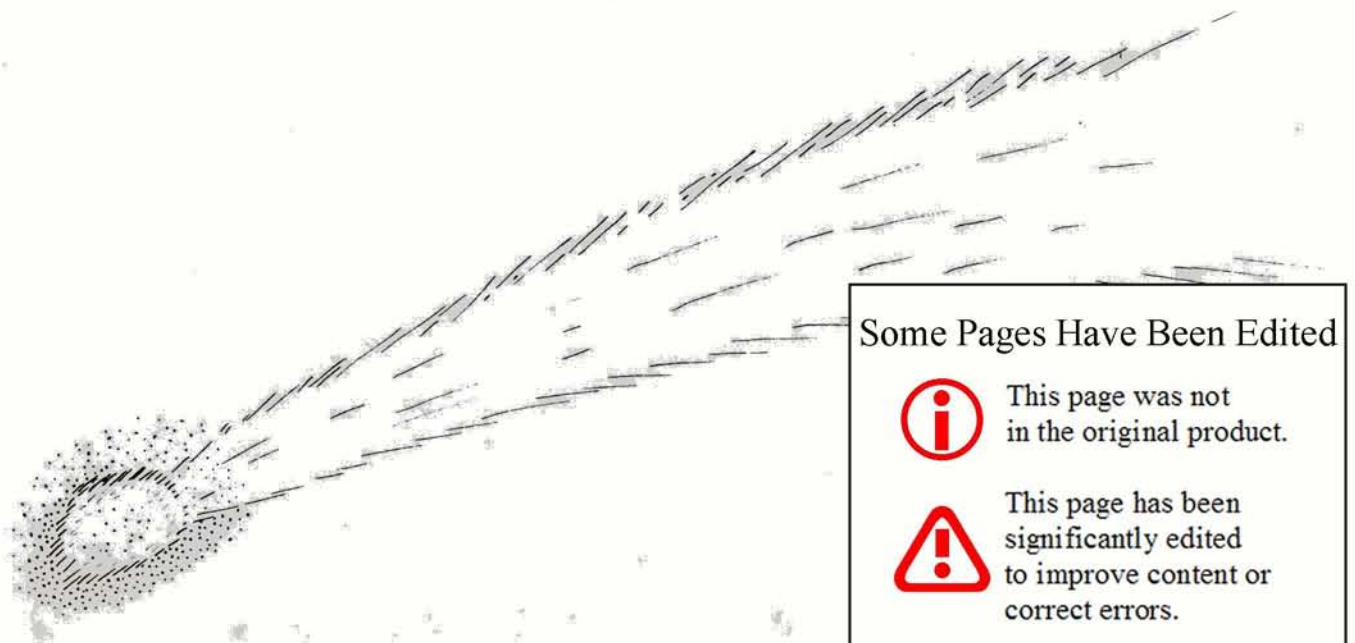
Tours of the Ship are another tradition and will be arranged by the Steward. Normally passengers remain in the passenger section. Operational and Security requirements limit passenger access to the Control Room and Engineering Sections. On those Vessels equipped with a Lifeboat, drills will be conducted on entering and launching.

Each Stateroom has a complete Ship's Manual clipped to the inside of the door. Please consult this manual to obtain operating instructions for all Ship's Equipment.

Thank you

Have a pleasant Voyage!

(The above information reprinted with permission of The Tri-Star Line, Homeport Gamma Cetus.)



SHIP'S TITLE PAPERS

Name of ship: _____

Class: _____ Hull: _____ Type: _____ Cost: CR _____

Naval Architect: _____

Builder: _____ Shipyard: _____

Construction started: _____ / _____ / _____ Construction completed: _____ / _____ / _____

OWNER

Name: _____ UPP: _____ Homeworld: _____

LIEN

NO LIEN: _____ LIEN: _____ HIJACKED: _____

I, _____ of _____, will pay
_____ of _____ the amount of
CR _____ for _____ months. Payment is due on the first day of each month and is to be
presented at _____.

PRINCIPAL: CR _____ APR _____

- A) Interest will only be collected on the principal for the length of time the principal is actually borrowed.
- B) Late payments carry an additional 1% charge of the normal monthly payment for every four (4) week period, or fraction thereof, until paid up-to-date.
- C) Non-payment for three (3) consecutive months shall be considered a hijacking of the Ship by the Borrower. Action may be waived by the Lien Holder if the Borrower contacts the Lien Holder and demonstrates temporary financial difficulties. This act of good faith on the part of the Borrower requires that the Lien Holder consult with the Borrower as to arrangements for the payments and all applicable late charges to be paid to the Lien Holder as quickly as possible. Seizure of the Ship shall be considered a last resort.
- D) The Borrower agrees not to sell the Ship without written permission of the Lien Holder. The Borrower also agrees that all tax forms and logs which the Borrower fill out, keeps, and/or gives any information concerning the Ship and/or the Borrower's finances shall be open to inspection to the Lien Holder at any time.

Borrower: _____ Lien Holder: _____

Date: _____ / _____ / _____ Date: _____ / _____ / _____



Ship Design Specifications

Name: _____

Owner: _____

Equipment	Type/Number	Tonnage	Cost CR.
Hull	_____	_____	_____
Jump Drive	_____	_____	_____
Maneuver Drive	_____	_____	_____
Power Plant	_____	_____	_____
Fuel Tankage	-----	_____	_____
Basic Controls	-----	20	_____
Computer	_____	_____	_____
Programs	-----	---	_____
Fire Control Equipment	_____	_____	_____
Staterooms	_____	_____	_____
Low Passage Berths	_____	_____	_____
Hardpoints	_____	---	_____
Single Turret	_____	---	_____
Double Turret	_____	---	_____
Triple Turret	_____	---	_____
Pulse Laser	_____	---	_____
Beam Laser	_____	---	_____
Missile Rack	_____	---	_____
Missiles	_____	_____	_____
Sandcaster	_____	---	_____
Sand Canister	_____	_____	_____
Ship's Boat	_____	_____	_____
Pinnacle	_____	_____	_____
Cutter	_____	_____	_____
Life Boat	_____	_____	_____
Air/Raft	_____	_____	_____
All Terrain Vehicle	_____	_____	_____
Streamlining	-----	---	_____
Cargo Capacity	-----	_____	-----
Custom Design	-----	---	_____
Naval Architect	-----	---	_____

Total Tonnage _____

Total Cost _____

Construction Time _____

Ship's Summary

Ship Name _____			Hull Type _____					
Owner _____			M Drive _____		G's Accel _____			
Bridge-(Pilot _____ Navigate _____)			J Drive _____		Jump _____			
Crew Staterooms _____			Power Plant _____					
Passenger Staterooms _____			Fuel _____ Tons					
Low Passage Berths _____			Hold _____ Tons					
Auxillaries _____								
Computer Model _____			Hard Points: _____					
Storage _____	CPU _____		Turret	Gunner	Beam	Pulse	Missile	Sand
Routine Program	Space		No.	Exp.	Laser	Laser	Launcher	Caster
Maneuver	1	_____	1.	_____	_____	_____	_____	_____
Jump 1	1	_____	2.	_____	_____	_____	_____	_____
Jump 2	2	_____	3.	_____	_____	_____	_____	_____
Jump 3	2	_____	4.	_____	_____	_____	_____	_____
Jump 4	2	_____	5.	_____	_____	_____	_____	_____
Jump 5	2	_____	6.	_____	_____	_____	_____	_____
Jump 6	2	_____	7.	_____	_____	_____	_____	_____
Library	1	_____	8.	_____	_____	_____	_____	_____
Navigation	1	_____	9.	_____	_____	_____	_____	_____
Generate	2	_____	10.	_____	_____	_____	_____	_____
Anti-Hijack	1	_____	11.	_____	_____	_____	_____	_____
			12.	_____	_____	_____	_____	_____
Defensive Program			13.	_____	_____	_____	_____	_____
Maneuver/Evade 1	1	_____	14.	_____	_____	_____	_____	_____
Maneuver/Evade 2	2	_____	15.	_____	_____	_____	_____	_____
Maneuver/Evade 3	3	_____	16.	_____	_____	_____	_____	_____
Maneuver/Evade 4	4	_____	17.	_____	_____	_____	_____	_____
Maneuver/Evade 5	2	_____	18.	_____	_____	_____	_____	_____
Maneuver/Evade 6	3	_____	19.	_____	_____	_____	_____	_____
Auto/Evade	1	_____	20.	_____	_____	_____	_____	_____
Return Fire	1	_____	21.	_____	_____	_____	_____	_____
Anti-Missile	2	_____	22.	_____	_____	_____	_____	_____
ECM	3	_____	23.	_____	_____	_____	_____	_____
			24.	_____	_____	_____	_____	_____
Offensive Programs			25.	_____	_____	_____	_____	_____
Predict 1	1	_____	26.	_____	_____	_____	_____	_____
Predict 2	2	_____	27.	_____	_____	_____	_____	_____
Predict 3	1	_____	28.	_____	_____	_____	_____	_____
Predict 4	3	_____	29.	_____	_____	_____	_____	_____
Predict 5	2	_____	30.	_____	_____	_____	_____	_____
Gunner Interact	1	_____	31.	_____	_____	_____	_____	_____
Target	1	_____	32.	_____	_____	_____	_____	_____
Selective 1	1	_____	33.	_____	_____	_____	_____	_____
Selective 2	2	_____	34.	_____	_____	_____	_____	_____
Selective 3	1	_____	35.	_____	_____	_____	_____	_____
Multi-Target 2	1	_____	36.	_____	_____	_____	_____	_____
Multi-Target 3	2	_____	37.	_____	_____	_____	_____	_____
Multi-Target 4	4	_____	38.	_____	_____	_____	_____	_____
Launch	1	_____	39.	_____	_____	_____	_____	_____
Double Fire	4	_____	40.	_____	_____	_____	_____	_____

Standard Ship Types



Type S Scout/Courier

10 meters



ATV



Air/Raft



Type A Free Trader

30 feet



Ship's Boat



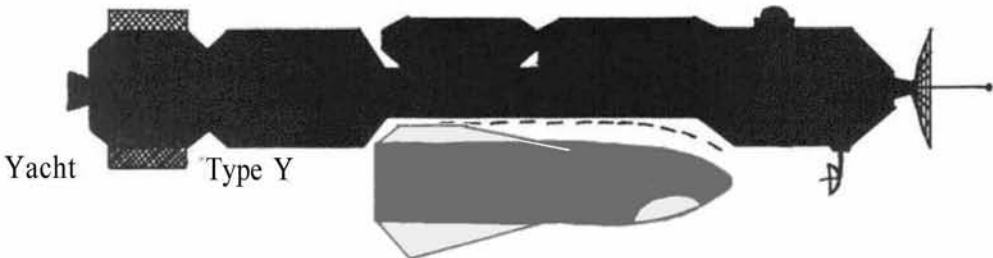
Type R Subsidised Merchant



Life Boat

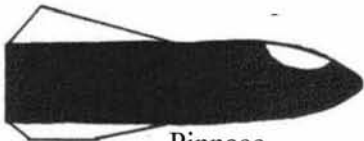


Type M Subsidised Merchant

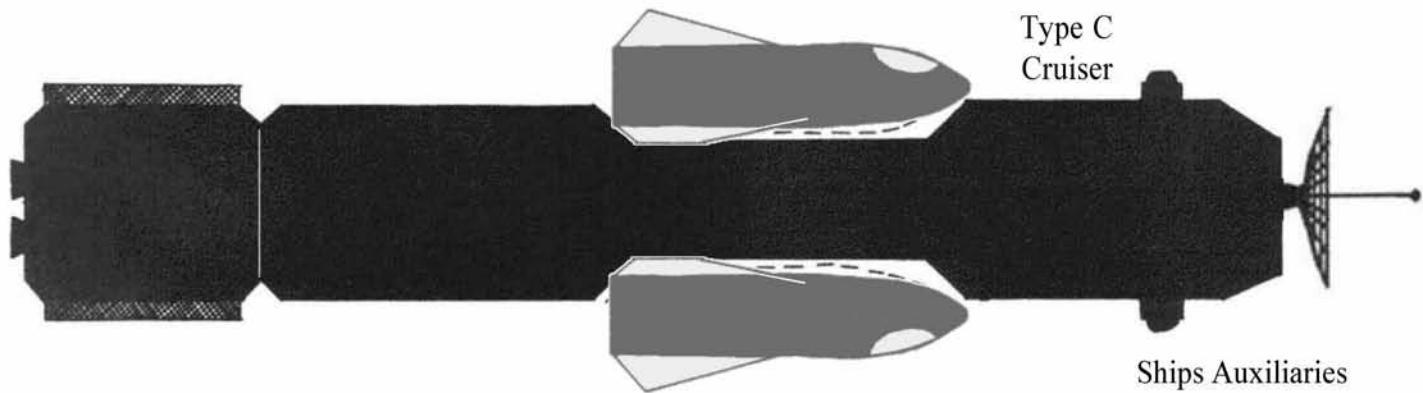


Yacht

Type Y



Pinnacle



Type C
Cruiser

Ships Auxiliaries

Shuttle



Cutter



Crew Roster

Name	Position (Exp.)	UPP	Salary
1.			
2.			
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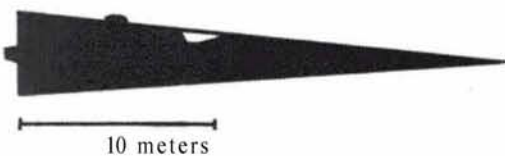
Ship's Summary

Ship Name _____	Hull Type <u>(100)</u>	Scout/Courier
Owner _____	M Drive <u>A</u>	G's Accel <u>2</u>
Bridge-(Pilot _____ Navigate _____)	J Drive <u>A</u>	Jump <u>2</u>
Crew Staterooms <u>4</u>	Power Plant <u>A</u>	Streamlined
Passenger Staterooms <u>None</u>	Fuel <u>40</u> Tons	
Low Passage Berths <u>None</u>	Hold <u>3</u> Tons	
Auxillaries <u>Air Raft</u>		

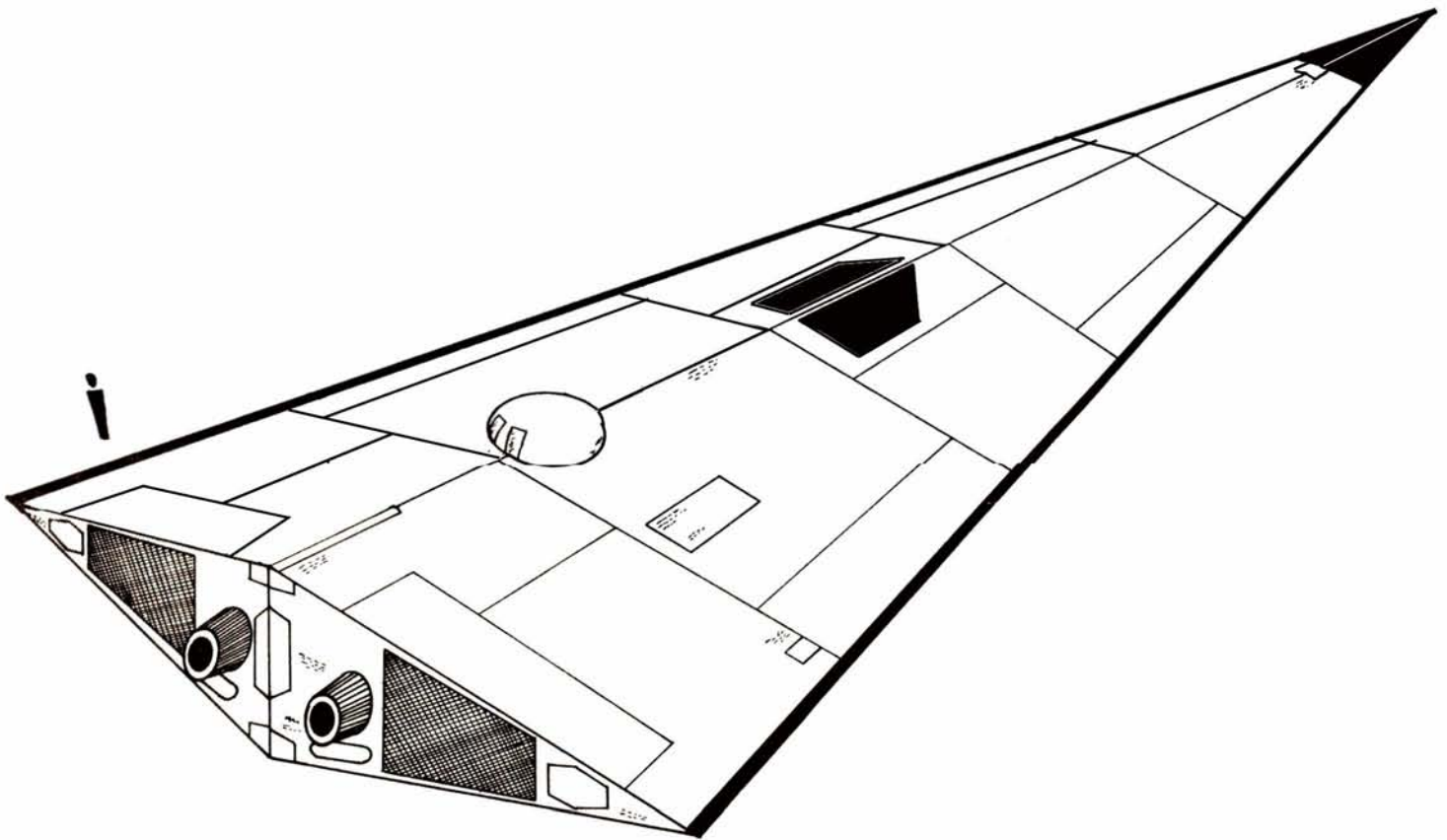
Computer Model One
 Storage 4 CPU 2

Hard Points: One

			Turret No.	Gunner Exp.	Beam Laser	Pulse Laser	Missile Launcher	Sand Caster
Routine Program	Space							
Maneuver	1	_____	1. *	_____	_____	_____	_____	_____
Jump 1	1	_____	2.	_____	_____	_____	_____	_____
Jump 2	2	_____	3.	_____	_____	_____	_____	_____
Jump 3	2	_____	4.	_____	_____	_____	_____	_____
Jump 4	2	_____	5.	_____	_____	_____	_____	_____
Jump 5	2	_____	6.	_____	_____	_____	_____	_____
Jump 6	2	_____	7.	_____	_____	_____	_____	_____
Library	1	_____	8.	_____	_____	_____	_____	_____
Navigation	1	_____	9.	_____	_____	_____	_____	_____
Generate	2	_____	10.	_____	_____	_____	_____	_____
Anti-Hijack	1	_____	11.	_____	_____	_____	_____	_____
			12.	_____	_____	_____	_____	_____
			13.	_____	_____	_____	_____	_____
Defensive Program			14.	_____	_____	_____	_____	_____
Maneuver/Evade 1	1	_____	15.	_____	_____	_____	_____	_____
Maneuver/Evade 2	2	_____	16.	_____	_____	_____	_____	_____
Maneuver/Evade 3	3	_____	17.	_____	_____	_____	_____	_____
Maneuver/Evade 4	4	_____	18.	_____	_____	_____	_____	_____
Maneuver/Evade 5	2	_____	19.	_____	_____	_____	_____	_____
Maneuver/Evade 6	3	_____	20.	_____	_____	_____	_____	_____
Auto/Evade	1	_____	21.	_____	_____	_____	_____	_____
Return Fire	1	_____	22.	_____	_____	_____	_____	_____
Anti-Missile	2	_____	23.	_____	_____	_____	_____	_____
ECM	3	_____	24.	_____	_____	_____	_____	_____
			25.	_____	_____	_____	_____	_____
Offensive Programs			26.	_____	_____	_____	_____	_____
Predict 1	1	_____	27.	_____	_____	_____	_____	_____
Predict 2	2	_____	28.	_____	_____	_____	_____	_____
Predict 3	1	_____	29.	_____	_____	_____	_____	_____
Predict 4	3	_____	30.	_____	_____	_____	_____	_____
Predict 5	2	_____	31.	_____	_____	_____	_____	_____
Gunner Interact	1	_____	32.	_____	_____	_____	_____	_____
Target	1	_____	33.	_____	_____	_____	_____	_____
Selective 1	1	_____	34.	_____	_____	_____	_____	_____
Selective 2	2	_____	35.	_____	_____	_____	_____	_____
Selective 3	1	_____	36.	_____	_____	_____	_____	_____
Multi-Target 2	1	_____	37.	_____	_____	_____	_____	_____
Multi-Target 3	2	_____	38.	_____	_____	_____	_____	_____
Multi-Target 4	4	_____	39.	_____	_____	_____	_____	_____
Launch	1	_____	40.	_____	_____	_____	_____	_____
Double Fire	4	_____						



Scout/Courier Type S



Scout/Courier Type S

Using the type 100 hull, the scout/courier is equipped with 4 staterooms (which may accommodate double occupancy in non-passenger service), suitable for the crew of one (pilot) and additional crew members or passengers as the situation dictates. No low berths are installed. The ship has a jump drive-A, maneuver drive-A, and power plant-A, giving it a capability of 2 G acceleration and the ability to make jump-2. The hold contains an air/raft in a specially fitted compartment, and three tons of cargo hold space. One double turret is installed at the vessel's single hardpoint, but no weaponry is included. Computer Model/1, with basic software package is installed. The hull is streamlined for atmospheric landings. Fuel tankage for 40 tons is included. Base price is set at CR 32,490,000.

Length: 26 meters (85 feet)

Span: 18 meters (59 feet)

Height: 4.5 meters (15 feet)

The Type S as built by M, C & S Engineering has the external hull form of a planar lifting body, optimised for hypersonic re-entry. Dual sets of landing jacks permit landing in either the vertical or horizontal mode. The Airlock and Engineering Section Access Door are arranged for entry in either mode. The Air Raft, carried as an auxiliary vehicle, can be launched and recovered in flight, even when loaded with cargo. Retractable scoops on the ventral surface may be deployed and used in either skim refueling or ramjet propulsion mode. The optional weapons hardpoint is located on the dorsal surface and is protected during re-entry by a retractable heat shield. The plans show this turret and its associated Fire Control equipment fitted.

Ship's Summary

Ship Name _____	Hull Type <u>(200)</u>	Free Trader
Owner _____	M Drive <u>A</u>	G's Accel <u>1</u>
Bridge-(Pilot _____ Navigate _____)	J Drive <u>A</u>	Jump <u>1</u>
Crew Staterooms <u>4</u>	Power Plant <u>A</u>	Streamlined
Passenger Staterooms <u>6</u>	Fuel <u>30</u> Tons	
Low Passage Berths <u>20</u>	Hold <u>82</u> Tons	
Auxillaries <u>None</u>		

Computer Model One
 Storage 4 CPU 2

Hard Points: Two

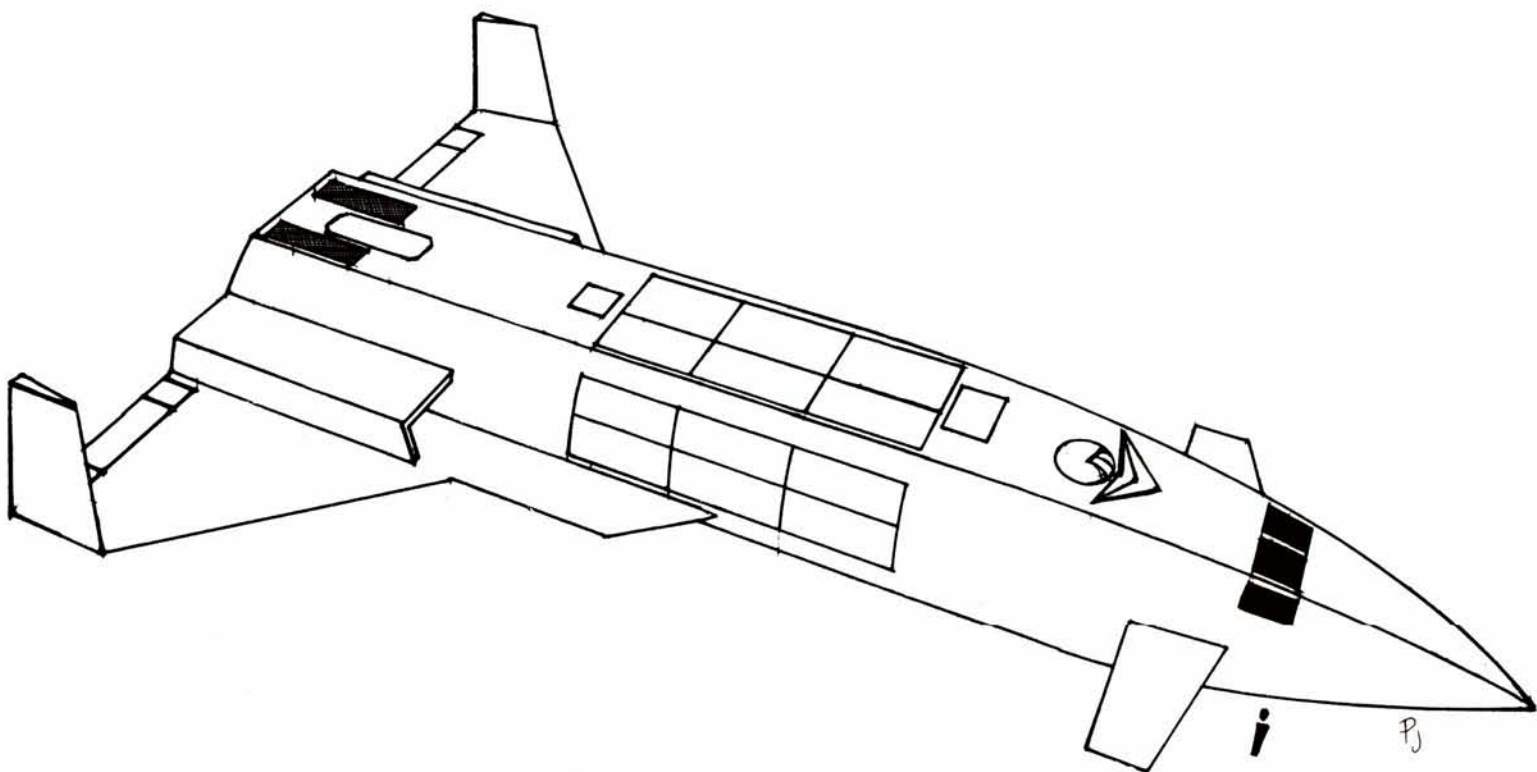
Routine Program		Space	Turret No.	Gunner Exp.	Beam Laser	Pulse Laser	Missile Launcher	Sand Caster
Maneuver		1	1. *					
Jump 1		1	2. *					
Jump 2		2	3.					
Jump 3		2	4.					
Jump 4		2	5.					
Jump 5		2	6.					
Jump 6		2	7.					
Library		1	8.					
Navigation		1	9.					
Generate		2	10.					
Anti-Hijack		1	11.					
			12.					
Defensive Program			13.					
Maneuver/Evade 1		1	14.					
Maneuver/Evade 2		2	15.					
Maneuver/Evade 3		3	16.					
Maneuver/Evade 4		4	17.					
Maneuver/Evade 5		2	18.					
Maneuver/Evade 6		3	19.					
Auto/Evade		1	20.					
Return Fire		1	21.					
Anti-Missile		2	22.					
ECM		3	23.					
			24.					
Offensive Programs			25.					
Predict 1		1	26.					
Predict 2		2	27.					
Predict 3		1	28.					
Predict 4		3	29.					
Predict 5		2	30.					
Gunner Interact		1	31.					
Target		1	32.					
Selective 1		1	33.					
Selective 2		2	34.					
Selective 3		1	35.					
Multi-Target 2		1	36.					
Multi-Target 3		2	37.					
Multi-Target 4		4	38.					
Launch		1	39.					
Double Fire		4	40.					



Type A Free Trader

10 meters

Free Trader Type A



Free Trader Type A

Using the type 200 hull, the free trader is equipped with ten staterooms (four for the crew: pilot, engineer, medic, and steward; six for high and middle passengers) and twenty low passage berths. Jump drive-A, maneuver drive-A, and power plant-A are all installed in the engineering section, giving the starship capability for acceleration of 1 G and jump-1. Fuel tankage for 30 tons and cargo hold for 82 tons is provided in the hull. Two hardpoints are specified in the hull, but do not have turrets or weaponry attached. Two tons of potential fire control space is held in reserve for later armament installation. Computer Model/1 with basic software package is installed. The hull is streamlined for atmospheric landings. Base price for the free trader is CR 37,080,000.

Length: 34 meters (112 feet)

Span: 24 meters (79 feet)

Height: 5.5 meters (18 feet)

The Type A from M, C & S Engineering has a streamlined semi-tubular body with canard control surfaces forward and the main lifting surfaces aft with vertical stabilizers mounted on the wing tips. Landing mode is horizontal only, appropriate landing jacks being provided on the ventral surface. A mounting point is provided for the collapsible cargo crane stowed attached to the inside of the upper cargo hatch. The ramjets at the base of each wing may also be used for skim refueling. Optional weapons hardpoints are located on the dorsal and ventral surfaces 14 meters (46 feet) from the bow and are protected during re-entry by retractable heat shields.

The Second Deck is the lower deck and is devoted to passengers accommodation. Avionics occupy the extreme bow area. Low Passage Berths are located next, with access through a detachable panel in Stateroom Five. Six staterooms for the passengers line the sides of this deck's central access corridor. The Fresher Cubicle is located at the forward or bow end of the corridor, with the Access Ladder to the deck above located at the rear or stern end. A computer-monitored hatch controls access to the upper deck. The Airlock is located on this deck opening to the left or part side of the ship.

The first Deck or upperdeck is the crew accommodation and the Control Room location. Avionics and Ship's Computer occupy the extreme bow. Next comes the Control Room. Aft of the Control Room is the access corridor between the staterooms of the Pilot and Engineer. The Common Room is next, containing a Fresher Cubicle and food preparation facilities. Further aft comes the pair of cabins for the Medic and Steward. At the end of the corridor are two hatches, one in the deck down to the passenger deck; and one in the aft bulkhead, giving access to the Cargo Hold and thence to the Engineering Section.

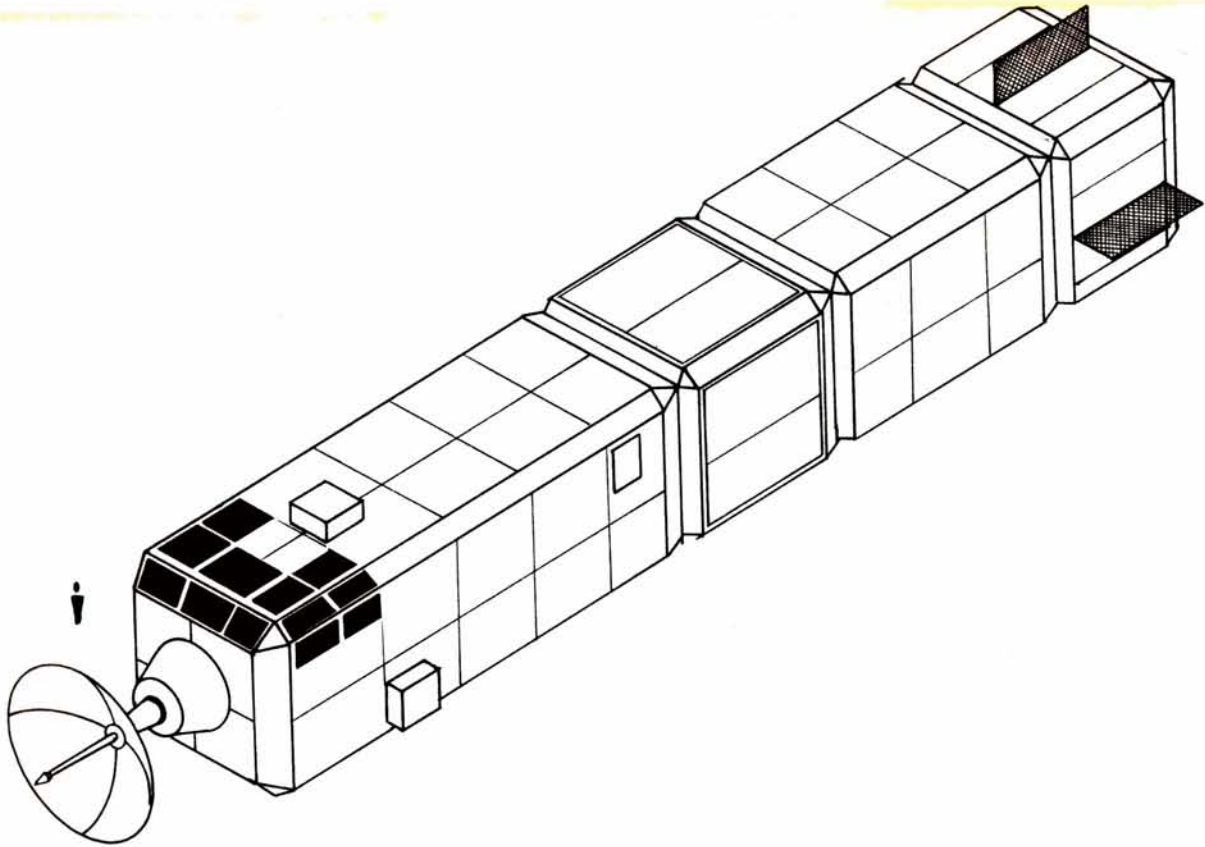
Ship's Summary

Ship Name _____	Hull Type <u>(600)</u>	Subsidized Merchant
Owner _____	M Drive <u>D</u>	G's Accel <u>1</u>
Bridge-(Pilot _____ Navigate _____)	J Drive <u>J</u>	Jump <u>3</u>
Crew Staterooms <u>9</u>	Power Plant <u>D</u>	
Passenger Staterooms <u>21</u>	Fuel <u>190</u> Tons	
Low Passage Berths <u>80</u>	Hold <u>124</u> Tons	
Auxillaries <u>None</u>		

Computer Model <u>Three</u>	Hard Points: <u>Three</u>	
Storage <u>9</u> CPU <u>5</u>		
Routine Program	Space	
Maneuver	1	1. *
Jump 1	1	2. *
Jump 2	2	3. *
Jump 3	2	4.
Jump 4	2	5.
Jump 5	2	6.
Jump 6	2	7.
Library	1	8.
Navigation	1	9.
Generate	2	10.
Anti-Hijack	1	11.
		12.
Defensive Program		13.
Maneuver/Evade 1	1	14.
Maneuver/Evade 2	2	15.
Maneuver/Evade 3	3	16.
Maneuver/Evade 4	4	17.
Maneuver/Evade 5	2	18.
Maneuver/Evade 6	3	19.
Auto/Evade	1	20.
Return Fire	1	21.
Anti-Missile	2	22.
ECM	3	23.
		24.
Offensive Programs		25.
Predict 1	1	26.
Predict 2	2	27.
Predict 3	1	28.
Predict 4	3	29.
Predict 5	2	30.
Gunner Interact	1	31.
Target	1	32.
Selective 1	1	33.
Selective 2	2	34.
Selective 3	1	35.
Multi-Target 2	1	36.
Multi-Target 3	2	37.
Multi-Target 4	4	38.
Launch	1	39.
Double Fire	4	40.



Subsidised Merchant Type M



Subsidised Merchant Type M

Using the type 600 hull, the type M subsidized merchant has 30 staterooms (nine for the crew: pilot, navigator, medic, three engineers and three stewards; 21 for the high and middle class passengers) and eighty low passage berths. The ship has jump drive-J, maneuver drive-D, and power plant-D, making it capable of jump-3, and 1 G acceleration. Computer Model/3 is installed adjacent to the bridge. Cargo capacity is set at 124 tons, and fuel tankage will contain 190 tons. Three hardpoints are specified for the hull, and three tons are reserved for fire control purposes. The hull is not streamlined for atmospheric landings base price for the type M is CR 219,870,000.

Length: 57 meters (187 feet)

Span: 8 meters (26.2 feet)

Height: 8 meters (26.2 feet)

The Type M as constructed by M, C & S Engineering is an efficient rectangular hull form. Lack of atmospheric streamlining permits the ship to be optimized for ease of maintainance, low construction cost, and increased internal capacity. This type has proved very popular on regular runs between established planets.

The lowest or Third Deck has 13 staterooms arranged on either side of a central corridor. The forward end of the corridor has the Access Ladder up to the Second Deck. The aft end opens into a small Common Room with two Fresher Cubicles. The middle or Second Deck also is devoted to passenger staterooms, 12 staterooms being arranged on either side of the central corridor. The forward end of the corridor has the ladder down to the lower deck. The aft end of the corridor opens into a large lounge. Two Fresher Cubicles are located here. Also the Access Ladder and hatch to the Crew Deck is located at the aft end of the corridor.

The upper or First Deck is devoted to crew and command functions. The Control Room is located at the very bow of the ship. The Computer and Avionics are located at the aft end of the Control Room. An axial corridor leads back from the Control Room with the staterooms for the Pilot and Navigator immediately to either side. Next comes the Crew's Lounge, including food preparation facilities. The corridor continues aft between the three staterooms for the Engineers, the Fresher Cubicle, and the Airlock. Immediately opposite the Airlock hatch is the Access Ladder and the computer monitored deck hatch to the lower decks. The central coridor continues on aft between the Low Passage Berths to the hatch in the rear bulkhead. This hatch leads into the access tunnel through the Cargo Hold and Fuel Tanks to the Engineering Section.

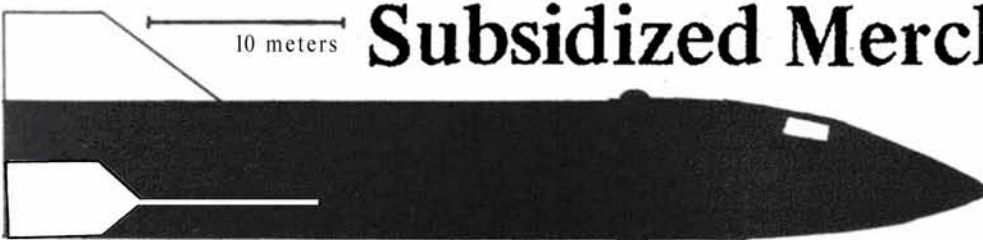
Ship's Summary

Ship Name _____	Hull Type <u>(400)</u>	Subsidized Merchant
Owner _____	M Drive <u>C</u>	G's Accel <u>1</u>
Bridge-(Pilot _____ Navigate _____)	J Drive <u>C</u>	Jump <u>1</u>
Crew Staterooms <u>5</u>	Power Plant <u>C</u>	Streamlined
Passenger Staterooms <u>8</u>	Fuel <u>50</u> Tons	
Low Passage Berths <u>9</u>	Hold <u>200</u> Tons	
Auxillaries <u>Life Boat</u>		

Computer Model One
 Storage 4 CPU 2

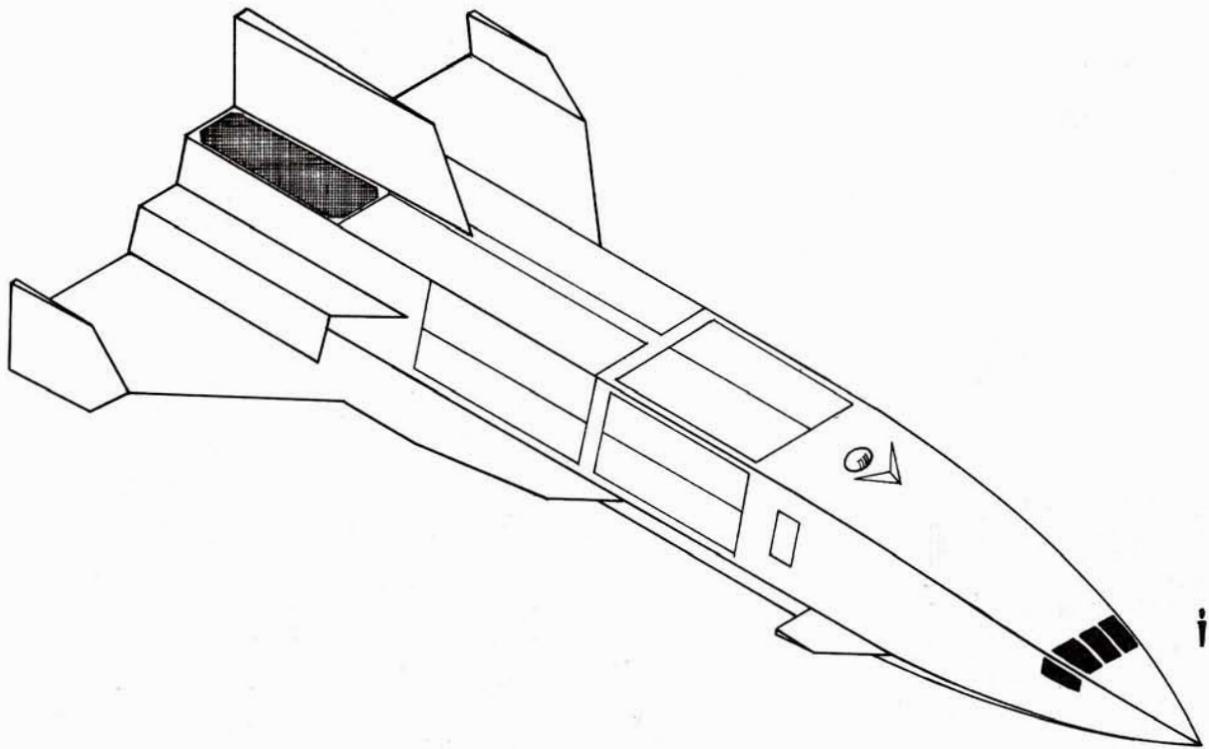
Hard Points: Two

	Routine Program	Space	Turret No.	Gunner Exp.	Beam Laser	Pulse Laser	Missile Launcher	Sand Caster
Maneuver		1	1. *					
Jump 1		1	2. *					
Jump 2		2	3.					
Jump 3		2	4.					
Jump 4		2	5.					
Jump 5		2	6.					
Jump 6		2	7.					
Library		1	8.					
Navigation		1	9.					
Generate		2	10.					
Anti-Hijack		1	11.					
			12.					
			13.					
Defensive Program			14.					
Maneuver/Evade 1		1	15.					
Maneuver/Evade 2		2	16.					
Maneuver/Evade 3		3	17.					
Maneuver/Evade 4		4	18.					
Maneuver/Evade 5		2	19.					
Maneuver/Evade 6		3	20.					
Auto/Evade		1	21.					
Return Fire		1	22.					
Anti-Missile		2	23.					
ECM		3	24.					
			25.					
Offensive Programs			26.					
Predict 1		1	27.					
Predict 2		2	28.					
Predict 3		1	29.					
Predict 4		3	30.					
Predict 5		2	31.					
Gunner Interact		1	32.					
Target		1	33.					
Selective 1		1	34.					
Selective 2		2	35.					
Selective 3		1	36.					
Multi-Target 2		1	37.					
Multi-Target 3		2	38.					
Multi-Target 4		4	39.					
Launch		1	40.					
Double Fire		4						



Type R Subsidised Merchant

Subsidized Merchant Type R



Subsidized Merchant Type R

Using the type 400 hull, the type R subsidized merchant is equipped with 13 staterooms (five for the crew: pilot, navigator, medic, steward and engineer; eight for the high and middle passengers) and nine low passage berths. The ship is equipped with jump drive-C, maneuver drive-C, and power plant-C, allowing 1 G acceleration and jump-1 interstellar flight. Cargo capacity is set at 200 tons, while fuel tankage will contain 50 tons. The hull is produced with two hardpoints, and is streamlined. A life boat is included as a ship's vehicle. Computer Model/1 is installed adjacent to the bridge. Base price for the type R is CR 100,035,000.

Length: 53 meters (174 feet)

Span: 24 meters (79 feet)

Height: 10 meters (33 feet)

The Type R from M, C & S Engineering has a semi-tubular body with canard control surfaces forward and main lifting surfaces aft with wing tip stabilizer plates. A large vertical stabilizer and rudder are mounted aft. Landing mode is horizontal only, appropriate landing jacks with built-in shock absorbers being provided on the ventral surface and wing tips. Mounting points are built in forward and aft of the dorsal cargo hatch for handling cranes. Scramjets, faired into the base of each wing, are convertible into skim refueling scoops. Hard points are built into the dorsal and ventral surfaces of the hull 18 meters (59 feet) back from the bow, provision for retractable re-entry heat shields being made at these points.

The accommodations section of the main hull occupies the forward third of the Fuselage. Passenger quarters occupy the lower of Second Deck. Avionics equipment fills the extreme nose of this level. Immediately aft of this is located the Low Passage Berths, with access to them via a removable panel in the forward wall of Stateroom Seven. The rest of the lower deck is occupied by the eight passenger Staterooms, lining the hull on either side of a central axial corridor. In the center of the corridor is a collapsible ladder leading to a hatch in the upper deck. At the extreme aft end of the corridor is located a Fresher Cubicle.

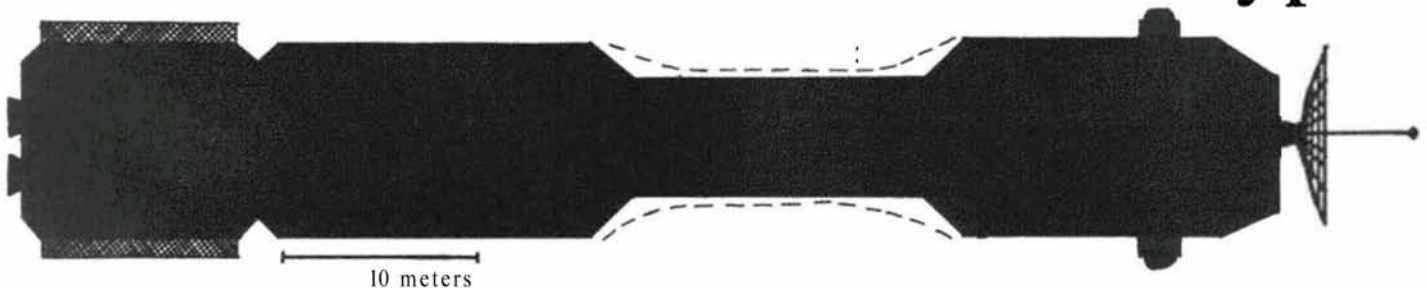
The upper level or First Deck contains the crew accommodations and the Control Room. The extreme bow contains Avionics and the Ship's Computer. Next aft comes the Control Room with a Fresher Cubicle at the rear. A central corridor leads aft between the five Crew Staterooms and Airlock. A hatch in the deck leads down to the lower level. Another hatch in the rear bulkhead leads into the forward section of the Cargo Hold. This forward section contains both cargo space and the Life Boat Bay. Further aft through the Cargo Hold lies access to the Engineering Section.

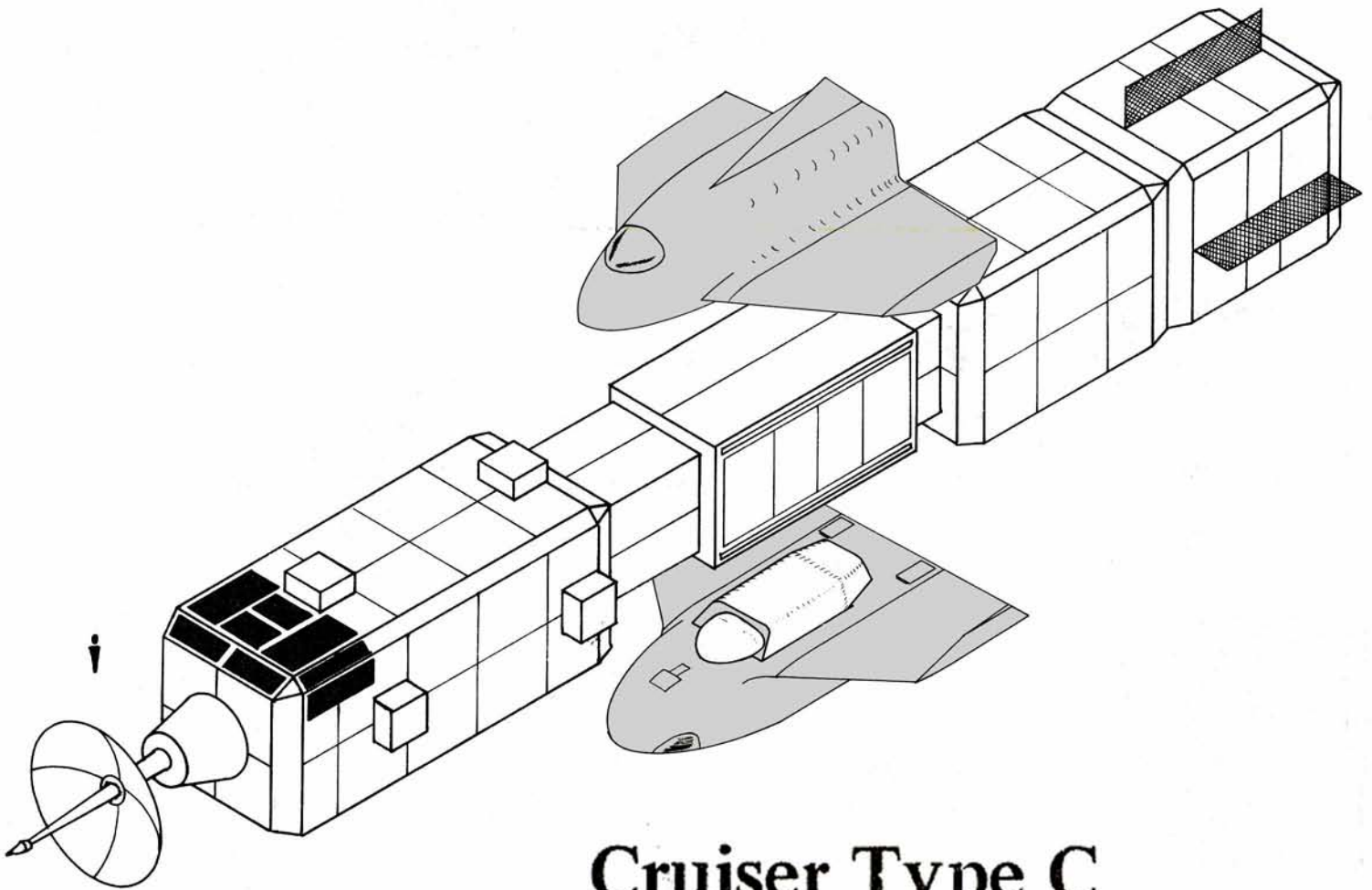
Ship's Summary

Ship Name _____	Hull Type <u>(800)</u> <u>Cruiser</u>
Owner _____	M Drive <u>M</u> G's Accel <u>3</u>
Bridge-(Pilot _____ Navigate _____)	J Drive <u>M</u> Jump <u>3</u>
Crew Staterooms <u>25</u>	Power Plant <u>M</u>
Passenger Staterooms <u>None</u>	Fuel <u>288</u> Tons
Low Passage Berths <u>None</u>	Hold <u>80</u> Tons
Auxillaries <u>Pinnacle, Pinnacle, Air Raft, All Terrain Vehicles, All Terrain Vehicle</u>	

Computer Model <u>Five</u>	Hard Points: <u>Eight</u>
Storage <u>25</u> CPU <u>12</u>	
Routine Program Space	Turret Gunner Beam Pulse Missile Sand No. Exp. Laser Laser Launcher Caster
Maneuver	1. *
Jump 1	2. *
Jump 2	3. *
Jump 3	4. *
Jump 4	5. *
Jump 5	6. *
Jump 6	7. *
Library	8. *
Navigation	9.
Generate	10.
Anti-Hijack	11.
	12.
Defensive Program	13.
Maneuver/Evade 1	14.
Maneuver/Evade 2	15.
Maneuver/Evade 3	16.
Maneuver/Evade 4	17.
Maneuver/Evade 5	18.
Maneuver/Evade 6	19.
Auto/Evade	20.
Return Fire	21.
Anti-Missile	22.
ECM	23.
	24.
Offensive Programs	25.
Predict 1	26.
Predict 2	27.
Predict 3	28.
Predict 4	29.
Predict 5	30.
Gunner Interact	31.
Target	32.
Selective 1	33.
Selective 2	34.
Selective 3	35.
Multi-Target 2	36.
Multi-Target 3	37.
Multi-Target 4	
Launch	
Double Fire	

Cruiser Type C





Cruiser Type C

Based on the type 800 hull, the type C cruiser is a quasi-military vessel designed for private or semi-military operations. It is equipped with 25 staterooms (five for the senior crew: commanding officer, pilot, navigator, medic, and chief engineer; double occupancy for the remaining 40 crew members: 8 gunners, 4 engineers, 3 galley cooks, 2 pinnace pilots, 2 pinnace gunners, 1 admin clerk, 2 medic/orderlies, 1 forward observer, plus 17 spaces for research personnel, technicians, or troops). No low berths are installed. The ship has jump drive-M, maneuver drive-M, and power plant-M, making it with capable of jump-3 and 3 G acceleration. Eighty tons of cargo space are allocated. Computer Model/5 is installed adjacent to the bridge, and 8 tons are allocated to fire control equipment. The cruiser has 8 hardpoints, each equipped with a triple turret, but weaponry is not initially installed. The hull is not streamlined. Fuel tankage amounts to 288 tons, including 48 tons available for refuelling the pinnaces. Hull compartmentalization contains two pinnaces, two ATVs and one Air/Raft. Base price for the type C cruiser is CR 419,670,000.

Length: 66 meters (216.5 feet)

Span: 8.2 meters (27 feet)

Height: 8.5 meters (28 feet)

The Type C constructed by M, C & S Engineering is especially rugged and has trippily redundant systems. All systems are modular-interlocking to facilitate damage control.

The lower or Third Deck has Ten Staterooms (Double Occupancy) arranged on either side of a central access corridor. A Common Room occupies the aftermost portion of the deck, having on Access Ladder to the deck above built into the wall on one side with two Fresher Cubicles built into the other. The middle or Second Deck has the ame arrangement as the lower deck with the exception of a hatch in the rear bulkhead which opens into the Central Structural Member.

The upper or First Deck has the Control Room located at the extreme bow. Ship's Computer and Avionics are built into the rear of the Control Room with a central corridor leading between the five Staterooms of the Command Crew on aft past the Airlock to a small Common Room. Here are located the Access Ladder to the lower decks and a Fresher Cubicle.

The Central Structural Member is a hollow box-girder construction joining the Engineering Section to the Personnel Section. The Cargo Holds are attached to it and it supports the Landing Pad for the Ship's Auxillary Vehicles.

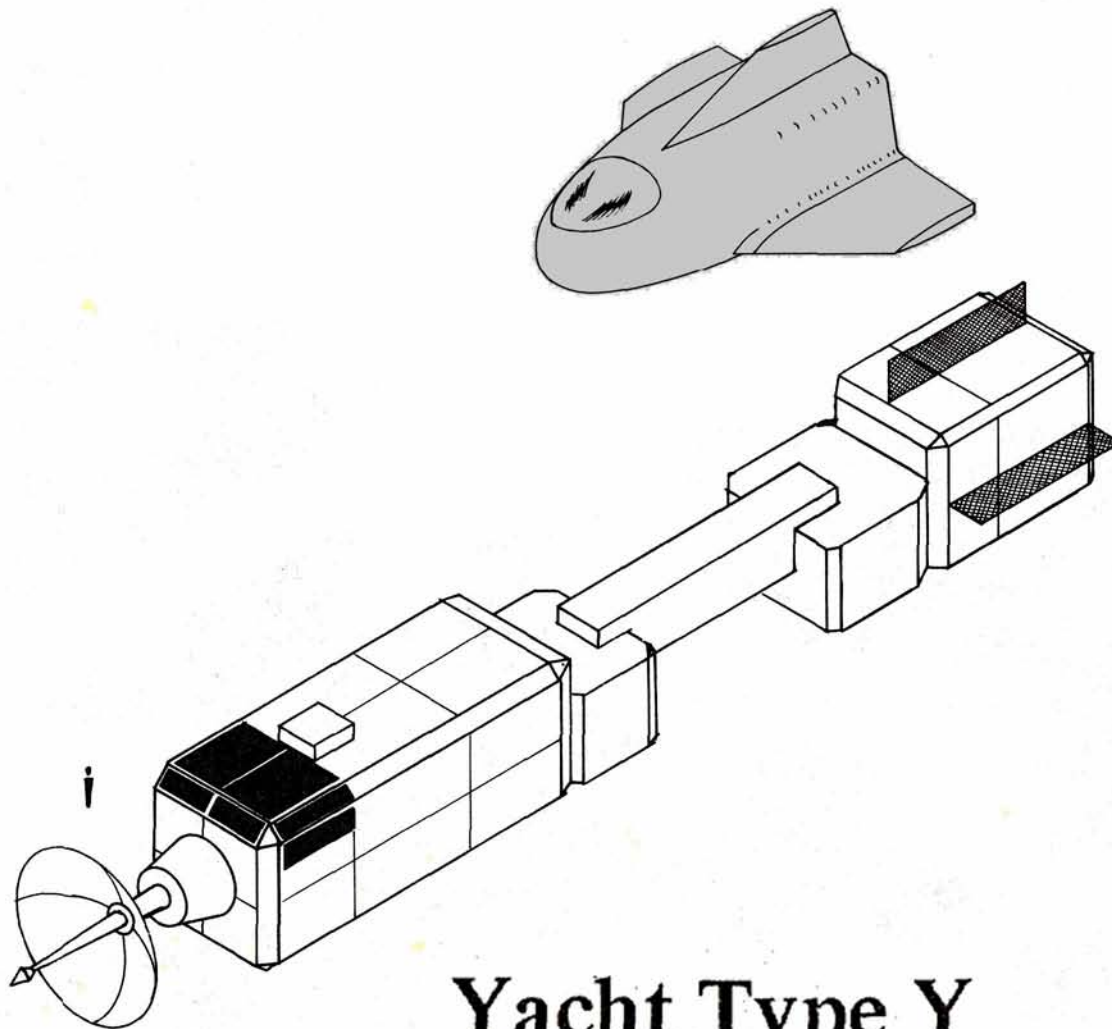
Ship's Summary

Ship Name _____	Hull Type <u>(200)</u> <u>Yacht</u>
Owner _____	M Drive <u>A</u> G's Accel <u>1</u>
Bridge-(Pilot _____ Navigate _____)	J Drive <u>A</u> Jump <u>1</u>
Crew Staterooms <u>4</u>	Power Plant <u>A</u>
Passenger Staterooms <u>11 (Double - Owner)</u>	Fuel <u>39</u> Tons
Low Passage Berths <u>None</u>	Hold <u>13</u> Tons
Auxillaries <u>Ship's Boat, Air Raft, All Terrain Vehicle</u>	

Computer Model <u>One</u>	Hard Points: <u>One</u>
Storage <u>4</u> CPU <u>2</u>	
Routine Program Space	Turret Gunner Beam Pulse Missile Sand No. Exp. Laser Laser Launcher Caster
Maneuver	1. *
Jump 1	2.
Jump 2	3.
Jump 3	4.
Jump 4	5.
Jump 5	6.
Jump 6	7.
Library	8.
Navigation	9.
Generate	10.
Anti-Hijack	11.
	12.
Defensive Program	13.
Maneuver/Evade 1	14.
Maneuver/Evade 2	15.
Maneuver/Evade 3	16.
Maneuver/Evade 4	17.
Maneuver/Evade 5	18.
Maneuver/Evade 6	19.
Auto/Evade	20.
Return Fire	21.
Anti-Missile	22.
ECM	23.
	24.
Offensive Programs	25.
Predict 1	26.
Predict 2	27.
Predict 3	28.
Predict 4	29.
Predict 5	30.
Gunner Interact	31.
Target	32.
Selective 1	33.
Selective 2	34.
Selective 3	35.
Multi-Target 2	36.
Multi-Target 3	37.
Multi-Target 4	38.
Launch	39.
Double Fire	40.



Yacht Type Y



Yacht Type Y

Based on the type 200 hull, the yacht is equipped with 16 staterooms (four for the crew: pilot, engineer, medic, and steward; eleven for the passengers). Note that two staterooms have been joined to make a suite for the owner-aboard. No low berths are installed. The yacht has jump drive-A, maneuver drive-A and power plant-A, allowing it 1 G of acceleration and jump-1. Computer Model/1 is installed adjacent to the bridge, and four tons of displacement are held in reserve for later use as the owner sees fit. Cargo capacity is 13 tons; fuel tankage is 39 tons, which includes one full refuelling load for the ship's boat. The hull is compartmented for the ship's boat, air/raft, and ATV which form the complement of ship's vehicles. The hull is not streamlined, and has one hardpoint, but no turret or weaponry is installed. Base price for the yacht is CR 59,490,000.

Length: 48 meters (157.5 feet)

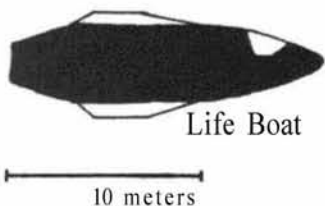
Span: 7.2 meters (23.5 feet)

Height: 7 meters (23 feet)

The Type Y built by M, C & S Engineering emphasizes compact luxury in a safe space-travelling craft. All systems are multiply redundant to ensure against failure. All fittings are of the highest quality. The full complement of ship's auxillary vehicles is provided so that the owner has personal transportation under all circumstances.

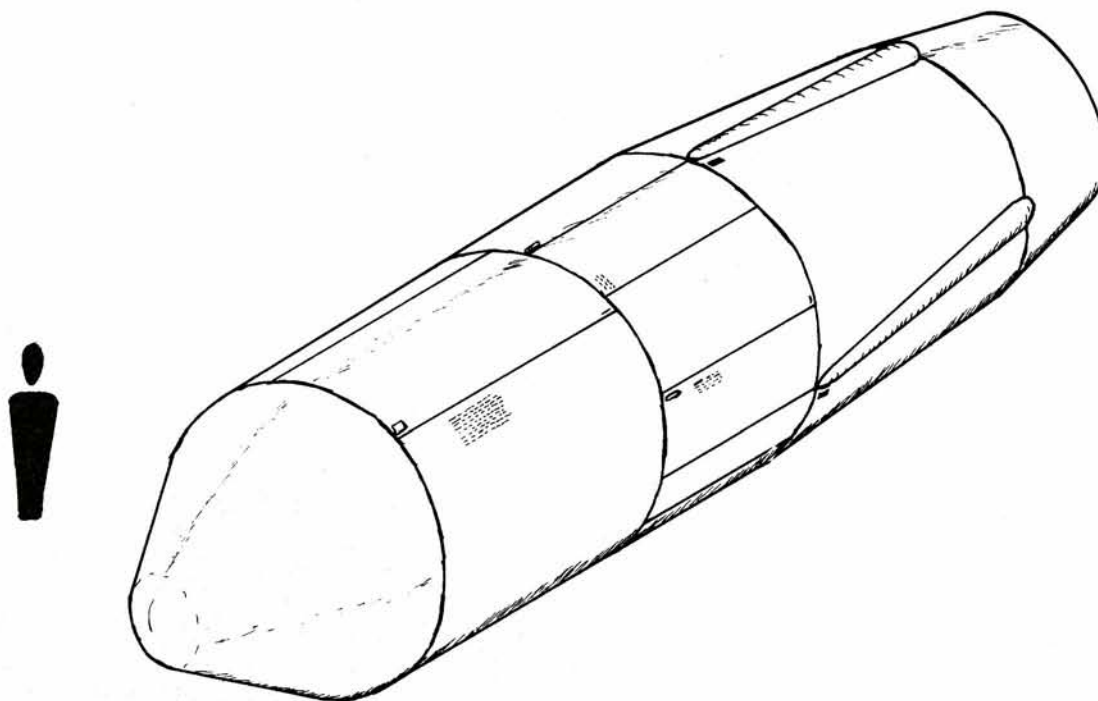
The lower or Second Deck is for passengers accomodations, ten luxury staterooms line the sides of the central axial corridor. A Fresher Cubicle is located at the extreme forward end of the corridor with the Airlock and a second Fresher Cubicle located at the aft end of the corridor. A collapsible Access Ladder on the side of the corridor leads up to the First Deck. The hatch in the after bulkhead leads into the Central Axial Structural Member, incorporating the Landing Pad for the Ship's Boat, Cargo Storage Modules, and storage for the other Ship's Auxillary Vehicles. The after end of this member gives access to the Engineering Section.

The upper or First Deck has the Control Room located at the extreme forward end. The Ship's Computer and Avionics are located against the rear of the Control Room. An access corridor leads back between the four Crew Staterooms to the Common Room. Two Fresher Cubicles are located on the port side of the Common Room and off-set to starboard in the rear wall is the door to the Owner's Stateroom. The double size Owner's Stateroom occupies the rest of the rear section of the First Deck.



Life Boat

10 meters



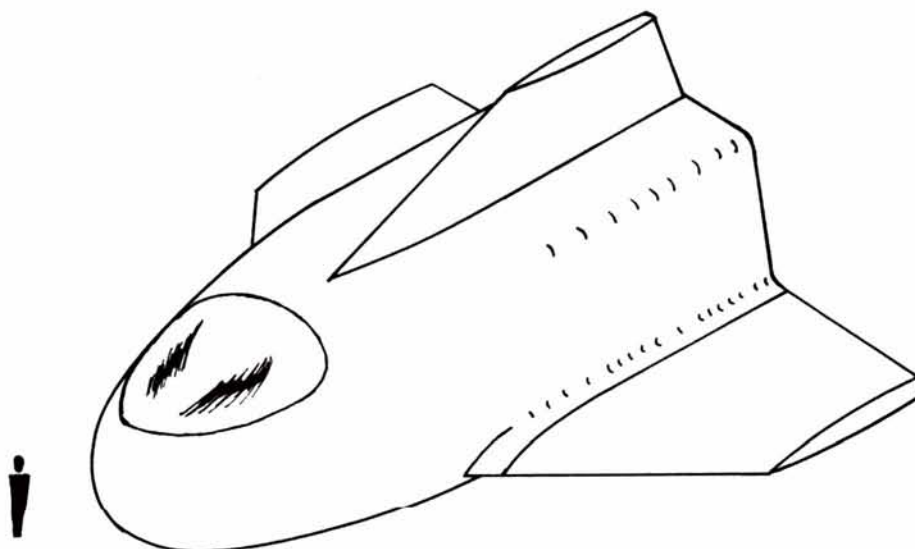
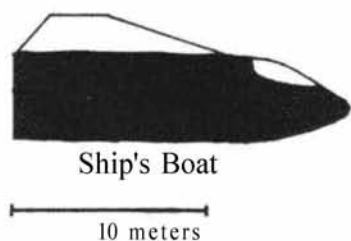
Life Boat

The life boat is an emergency device used to allow escape from danger, disaster, or calamity in space-going situations. Displacing 20 tons, it is capable of 1 G acceleration and can carry up to three conscious passengers. In addition, it contains five emergency low berths, each capable of holding four persons in cold sleep (all occupants of the same berth share the same survival throw upon revival: throw 6+ to survive with normal DMs as applicable). Thus a life boat can carry a total of 23 persons. Fuel tankage is 5 tons. Life boats are unarmed, and have a base price of CR 14,000,000.

Length: 10.5 meters (34.5 feet)

Diameter: 3.6 meters (12 feet)

Built to exceed all Interstellar Safety Regulations, the M, C & S Engineering Life Boat is capable of a safe re-entry to any habitable planet. Deployable stabilizers control descent to a safe landing. The built-in Distress Beacon has twice the regulation power. Also included is 600 kilograms (1,600 pounds) of survival gear, including a complete Universal Survival Manual.



Ship's Boat

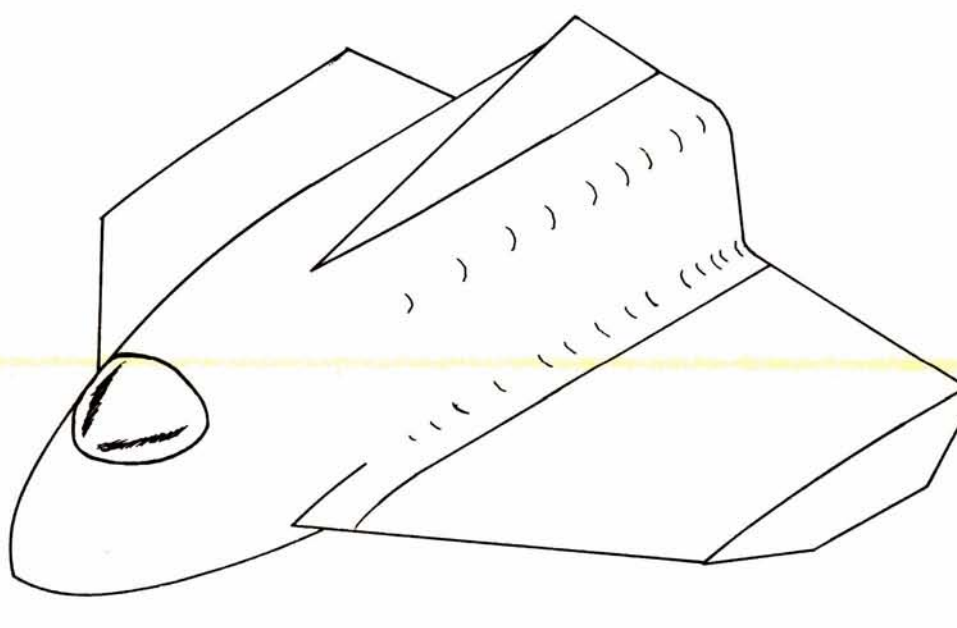
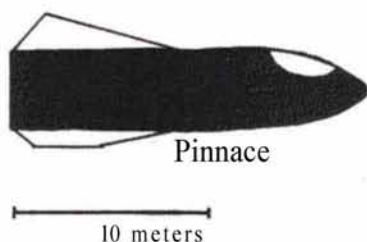
Designed to carry up to 5 passengers, the ship's boat displaces 30 tons, and is capable of accelerations of up to 6 Gs. It has a cargo capacity of 12 tons and fuel tankage of 9 tons. Ship's boats are usually unarmed, but have provision for the attachment of one beam or pulse laser; no turret is used, but the installation consumes 2 tons of cargo capacity. The base price for the ship's boat is CR 16,000,000.

Length: 14.25 meters (47 feet)

Span: 13 meters (43 feet)

Height: 6 meters (20 feet)

This vehicle is designed for reliable operation under rugged conditions. The hull form is optimised for maneuverability in atmosphere while carrying a heavy cargo load. While capable of repeated atmospheric re-entry, this craft normally travels at subsonic speeds in atmosphere. The wings and vertical stabilizer are foldable, reducing the Span to 6 meters (20 feet) and the Height to 5 meters (16.5 feet). The cargo hatch is located in the belly of the craft. This hatch may be removed and a special refueling package fitted in the opening. This package consists of a special streamlined airscoop, compressors and pumps, and a fuel storage tank capable of holding 10 tons.



Pinnacle

The pinnacle is a larger version of the ship's boat, capable of 5 Gs acceleration, carrying up to 8 passengers and displacing 40 tons. It has a fuel tank capacity of 12 tons and an equal cargo capacity. Pinnaces are usually armed with one beam or pulse laser in a non-turret mount. In some cases (about 15%), a missile launch rack is installed instead. Base price is CR 20,000,000.

Length: 17 meters (56 feet)

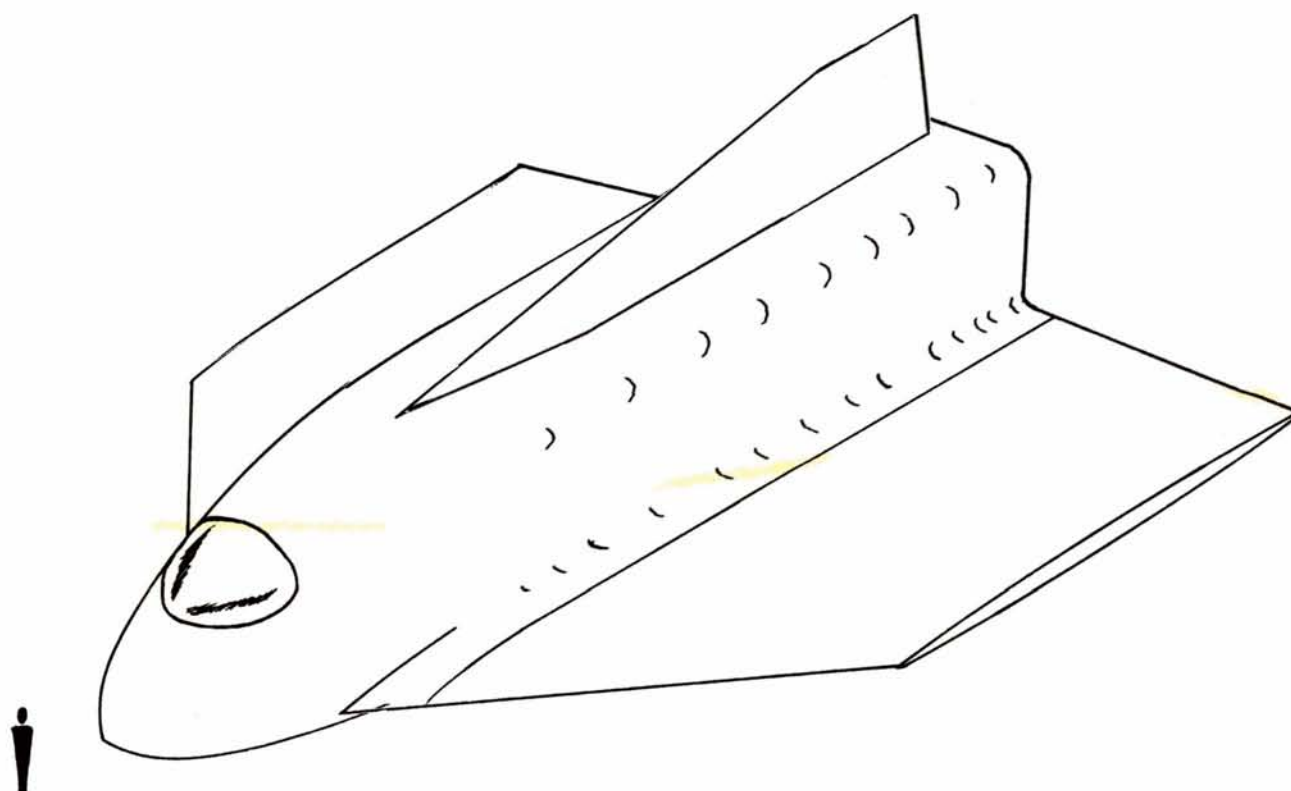
Span: 16 meters (52.5 feet)

Height: 7 meters (23 feet)

With a greater wing span and fuel capacity, this vessel has a greater maneuverability in atmosphere and a longer range. The wings fold to reduce the span to 8 meters (26 feet). The belly cargo hatch may be replaced with a refueling package with a 10 ton tank capacity. The vehicle shown in the plans has the port side position fitted with a special avionics package of planetary sensors. This position may have a weapon installed here as an option.



10 meters
Pinnacle



Pinnacle

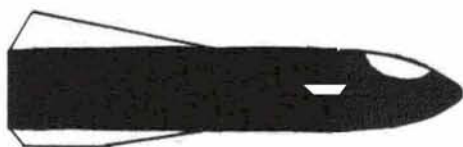
The pinnacle is a larger version of the ship's boat, capable of 5 Gs acceleration, carrying up to 8 passengers and displacing 40 tons. It has a fuel tank capacity of 12 tons and an equal cargo capacity. Pinnaces are usually armed with one beam or pulse laser in a non-turret mount. In some cases (about 15%), a missile launch rack is installed instead. Base price is CR 20,000,000.

Length: 23 meters (75 feet)

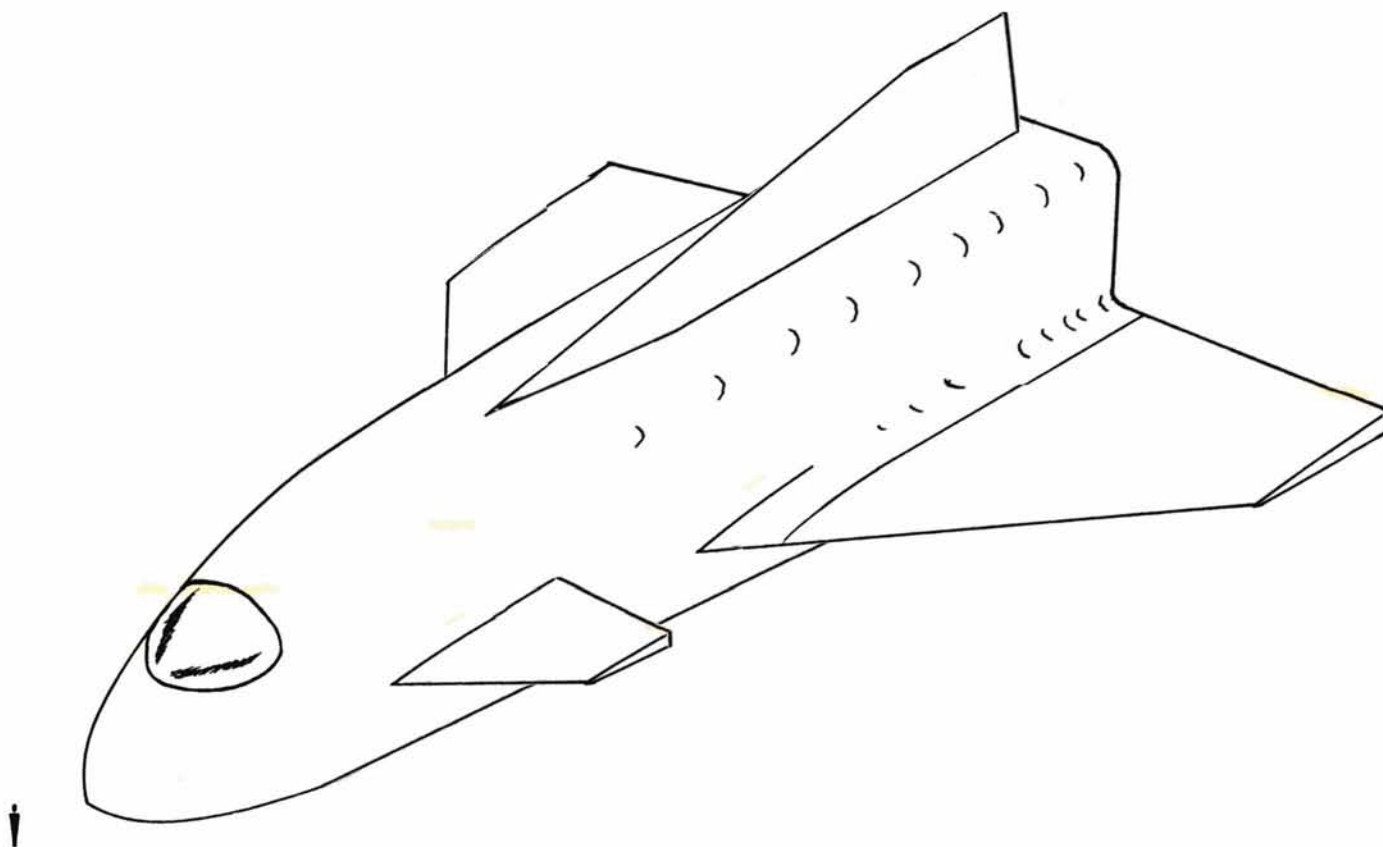
Span: 16 meters (52.5 feet)

Height: 8 meters (26 feet)

With a greater wing span and fuel capacity, this vessel has a greater maneuverability in atmosphere and a longer range. The wings fold to reduce the span to 8 meters (26 feet). The belly cargo hatch may be replaced with a refueling package with a 10 ton tank capacity. The vehicle shown in the plans has the port side position fitted with a special avionics package of planetary sensors. This position may have a weapon installed here as an option.



10 meters
Pinnacle



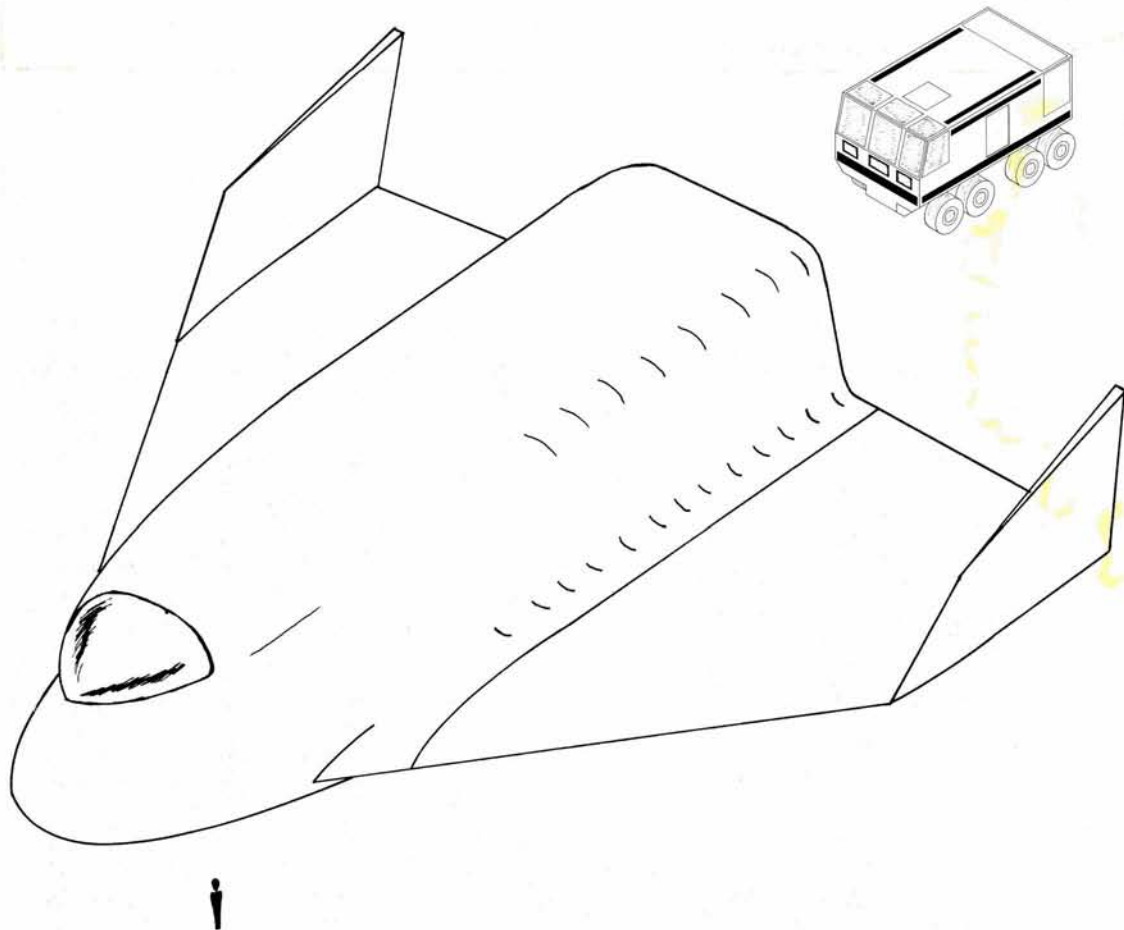
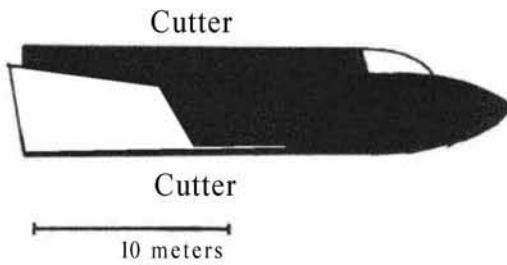
Assault Shuttle

The assault shuttle is a larger version of the ship's boat, capable of 5 Gs acceleration, carrying a crew of 2 and up to 30 combat troops. It displaces 40 tons. It has a fuel tank capacity of 3.8 tons. It can carry 20 tons of cargo in lieu of personnel. The assault shuttle is armed with a single pulse laser in a fixed mount. Base price is Cr43,700,000.

Length: 23 meters (78 feet)

Span: 16 meters (52.5 feet)

Height: 8 meters (2.6 feet)



Cutter

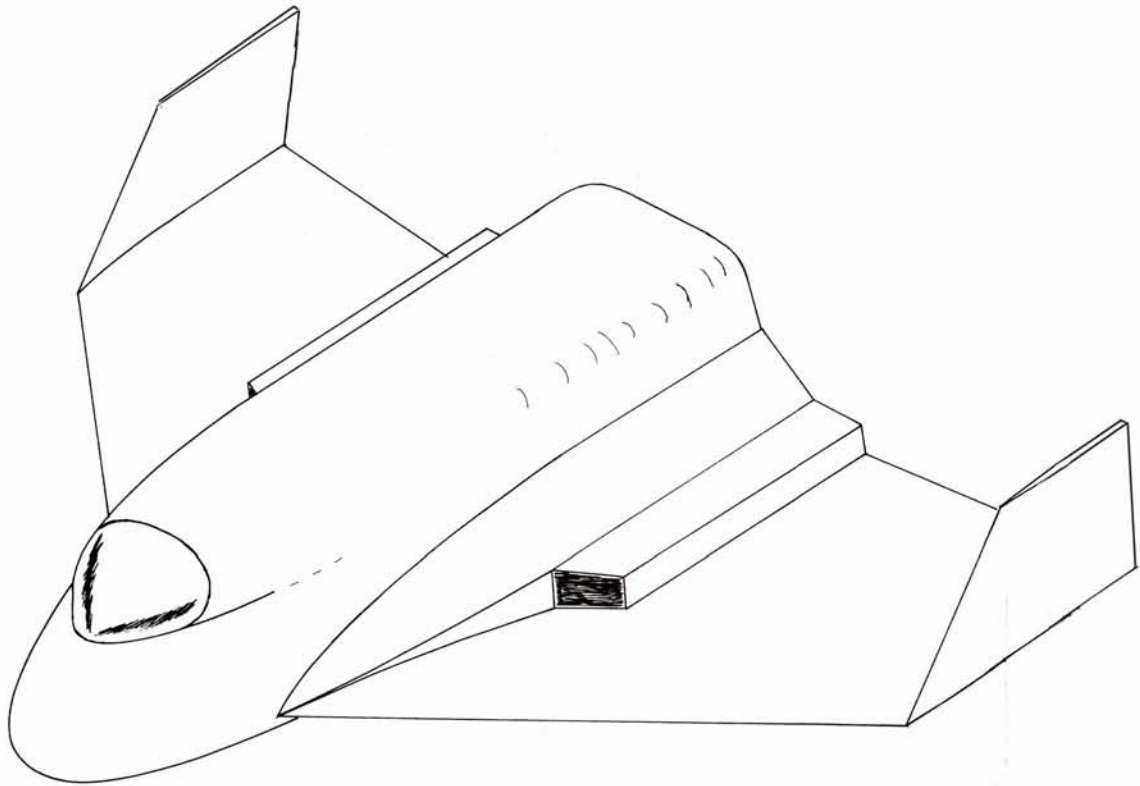
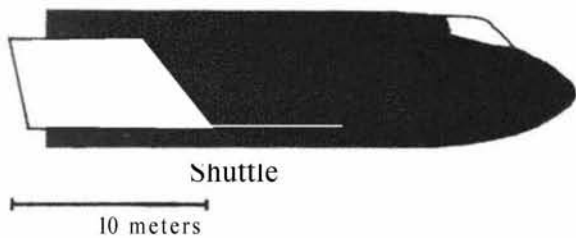
The cutter displaces 50 tons, carries up to 12 passengers, and is capable of accelerations of up to 4 Gs. Cargo hold capacity and fuel tankage each equal 15 tons. Standard armament is one beam laser. The base price for a standard cutter is set at CR 28,000,000.

Length: 26 meters (85 feet)

Span: 23 meters (75.5 feet)

Height 5 meters (16.5 feet)

The cutter built by M, C & S Engineering emphasizes controlled flight with heavy cargo load. A special refueling package can be fitted, including fuel tankage of 12 tons. The wings can be folded to reduce the Span to 11 meters (36 feet).



Shuttle

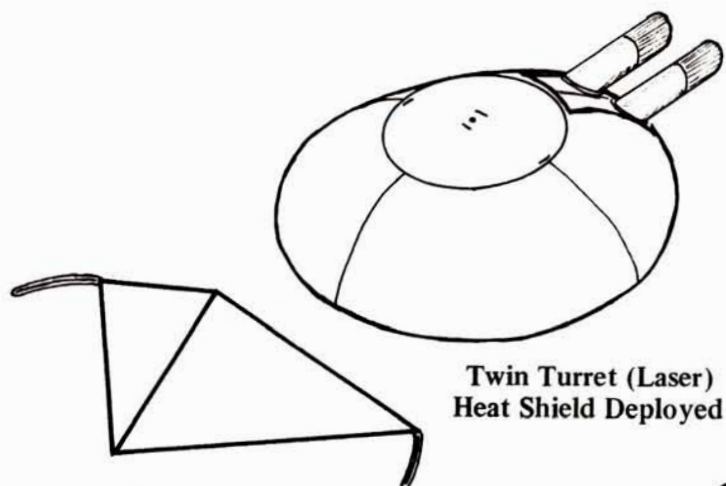
Access to planetary surfaces by ships incapable of landing themselves is made using shuttles which are present at a starport, or which are carried by the starship itself. Shuttles have a mass displacement of 95 tons, are capable of 3 Gs of acceleration, and can carry up to 30 passengers. They have a cargo hold capacity of 80 tons and fuel capacity of 9 tons. Shuttles are unarmed, and are capable of cargo transfer in vacuum. Base price for a shuttle is CR 33,000,000.

Length: 28 meters (92 feet)

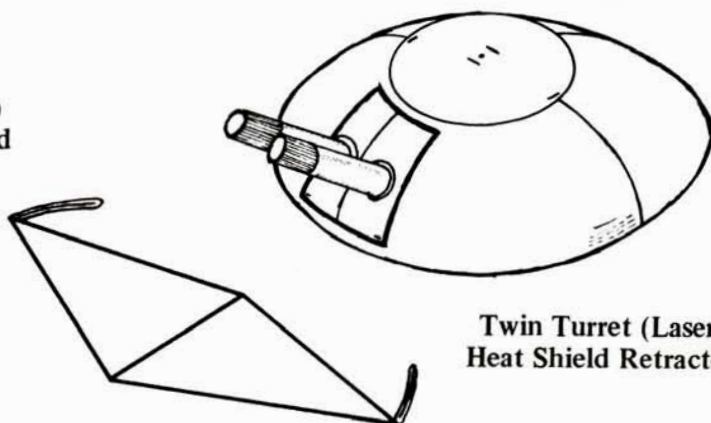
Span: 33 meters (108 feet)

Height: 7 meters (23 feet)

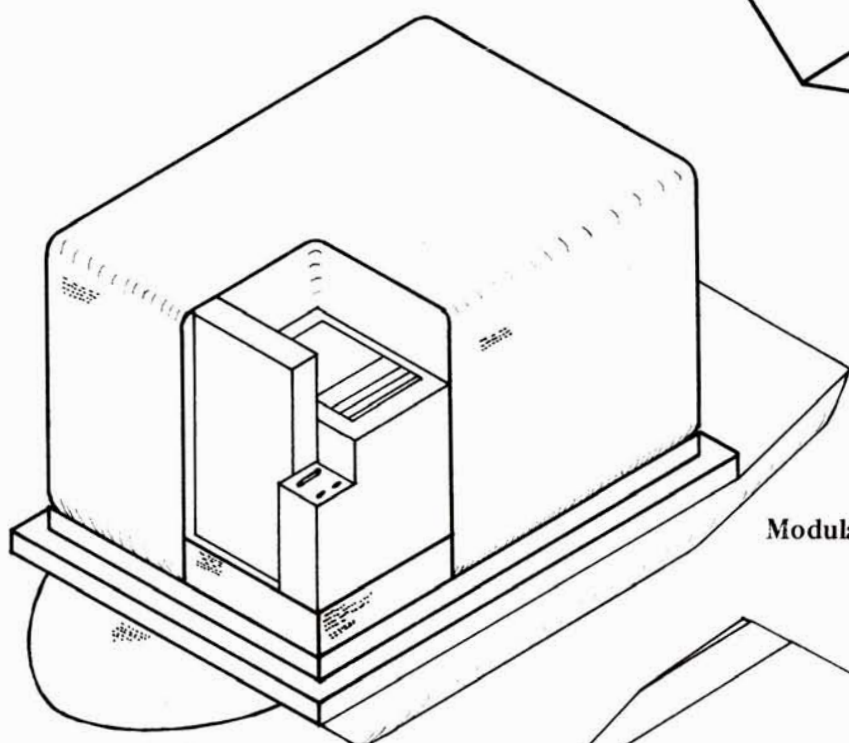
The Shuttle from M, C & S Engineering is a heavy load workhorse. The integral scramjets permit fuel economy during atmospheric flight but are not convertible to skim refueling. A special refueling scoop assembly is fitted to the dorsal surface, the internal tank capable of holding 60 tons. The rear wings may be folded to reduce the Span to 15 meters (49 feet).



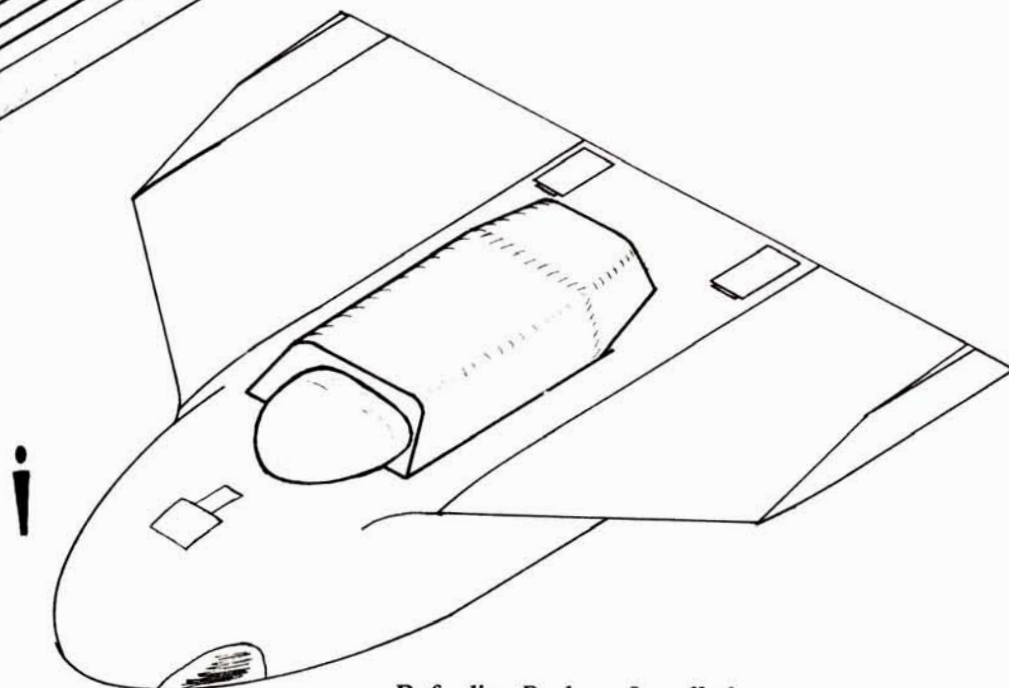
**Twin Turret (Laser)
Heat Shield Deployed**



**Twin Turret (Laser)
Heat Shield Retracted**



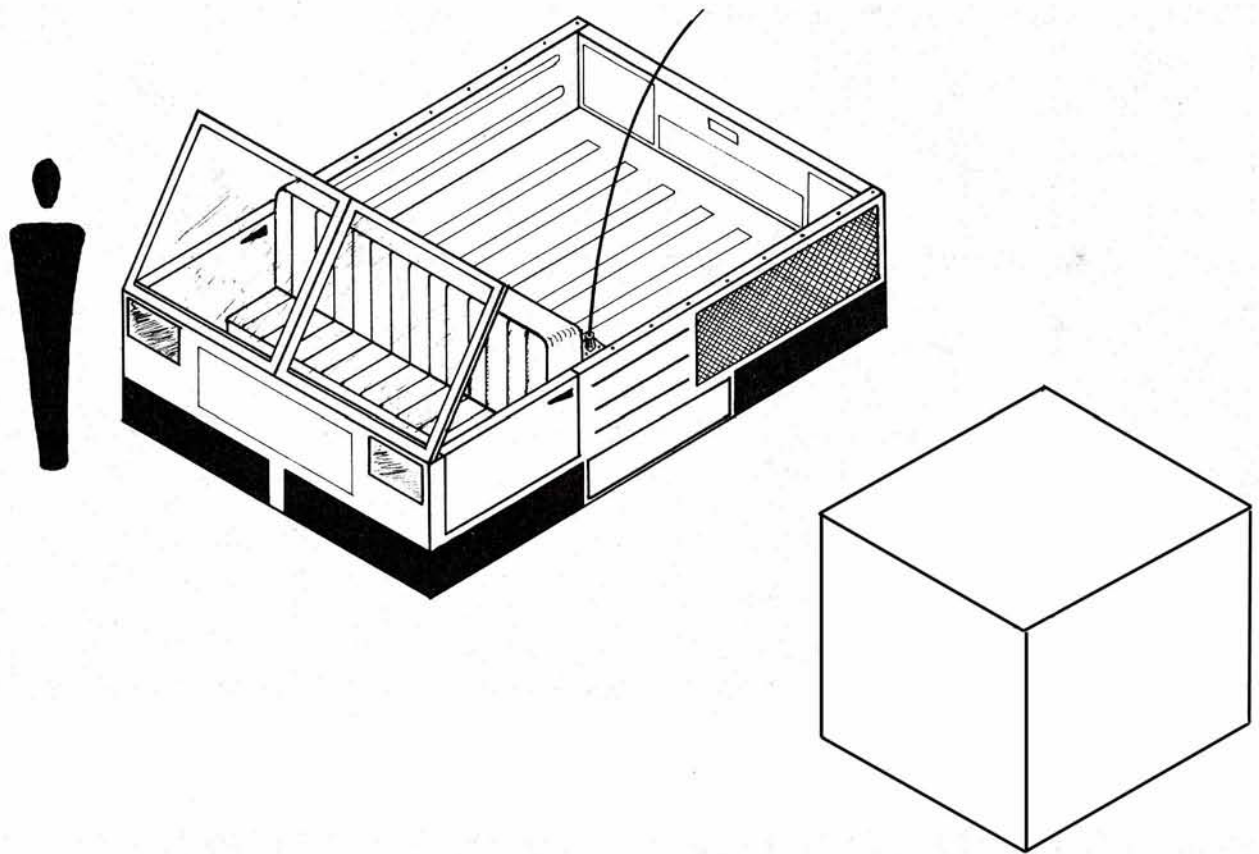
Modular Refueling Package



**Refueling Package Installed
on Pinnacle**



10 meters



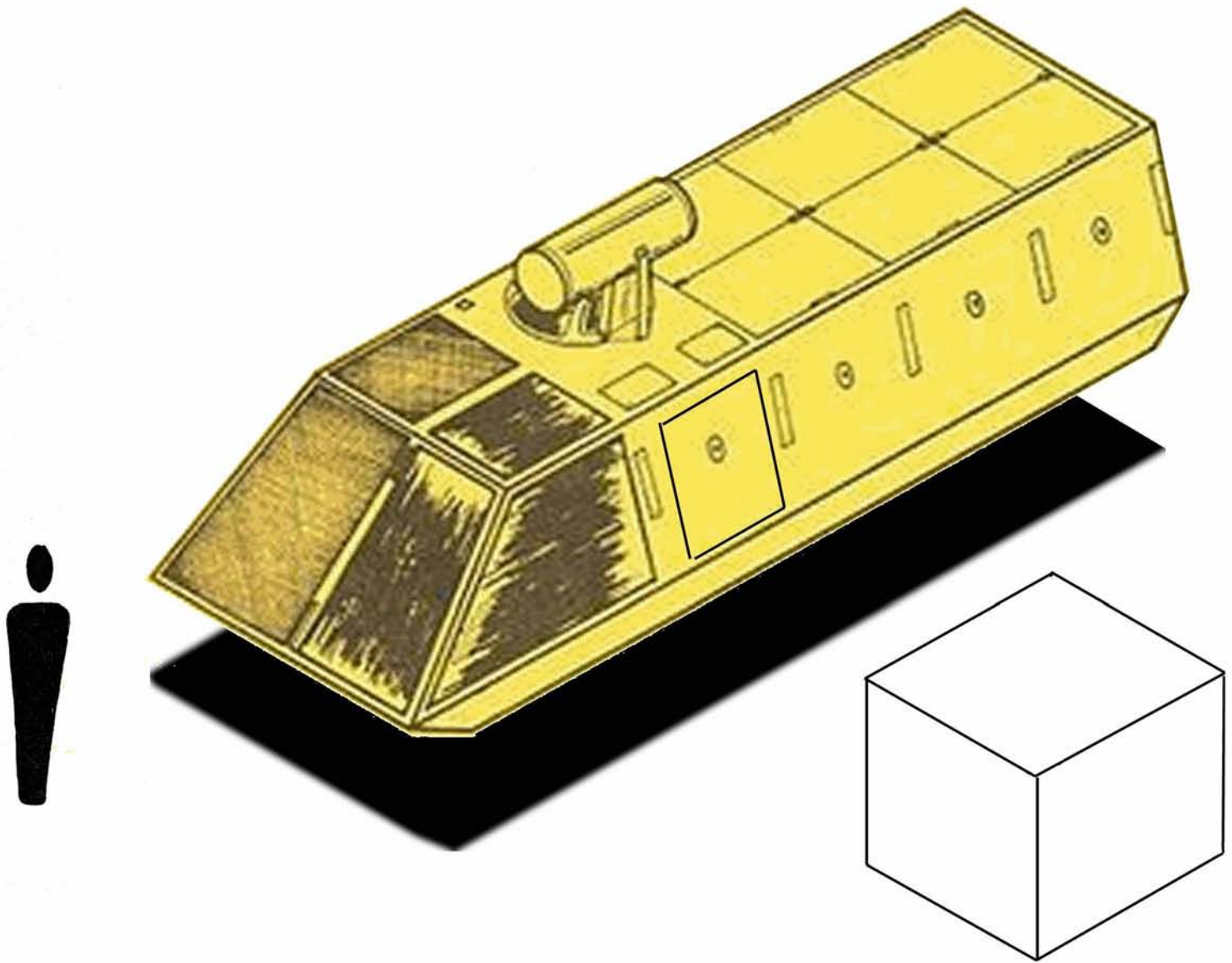
Air Raft

Also known as a flier, the air/raft relies on solid state null gravity modules for lift and propulsion. Four independent, individually replaceable modules (CR 100,000 each) insure a maximum of safety. Loss of one module reduces lift by one-quarter. The standard air/raft weighs 4 tons and can carry a payload of up to 4 tons including pilot and passengers. Cruise speed is 100 km per hour with unlimited range and endurance. Normally air/rafts are open topped; options such as pressurized cabins, gun mounts, searchlights, crash cushions or larger capacities are available at higher than the standard price of CR 600,000.

Length: 3 meters (10 feet)

Width: 2 meters (6.5 feet)

Height: 2 meters (6.5 feet)



GCarrier

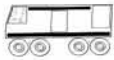
The GCarrier is an enclosed military or quasi-military grav vehicle: armored and originally intended for duty as a troop carrier. Performance is similar to that of the air/raft, but the vehicle typically has a gun mount and an armored rear hatch door. It requires a crew of one (plus a gunner). It can carry 12 additional passengers (troops); alternatively, it can carry 0.5 tons of cargo.

Length: 6 meters (20 feet)

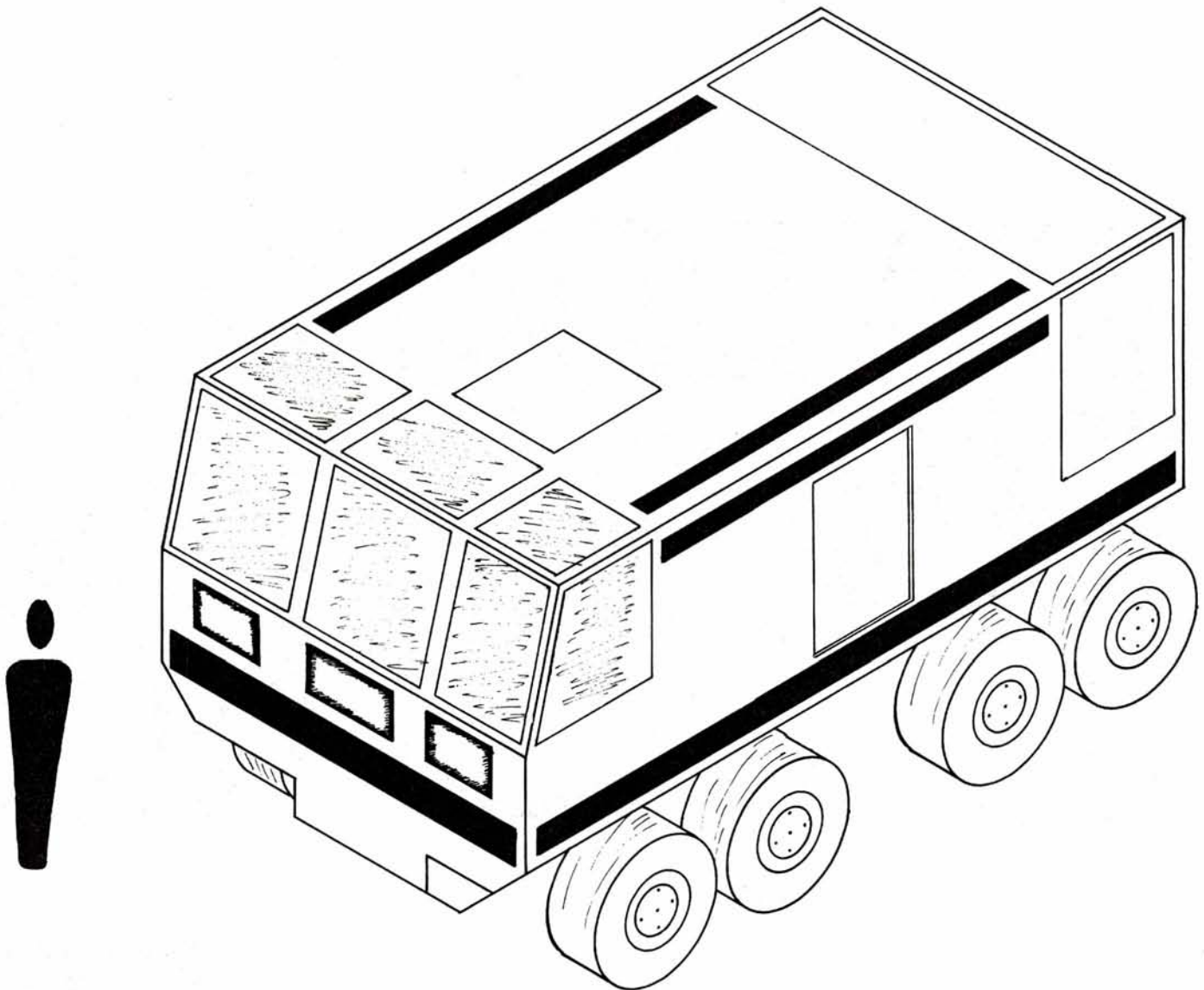
Width: 3 meters (10 feet)

Height: 2 meters (6 feet)

The craft is fully pressurized and can carry facilities for eating and sleeping. The GCarrier is an 8 ton vehicle and costs Cr1,000,000. The vehicle is often available as military surplus for less than a tenth of that amount.



10 meters



All Terrain Vehicle

Considerably more expensive than the ground car, the All Terrain Vehicle (abbreviated ATV) is designed to serve admirably on many different worlds under widely varying conditions, including vacuum and insidious atmospheres, and high or low gravity. With a range between refuellings of 5000 km (refuelling is performed from a ship's power plant), ATVs are capable of speeds up to 100 km per hour on roads, and about half that cross-country. The vehicle is fully pressurized and contains complete (though cramped) eating, sleeping, and travel facilities for eight persons. The ATV weighs 10 tons and costs CR 300,000.

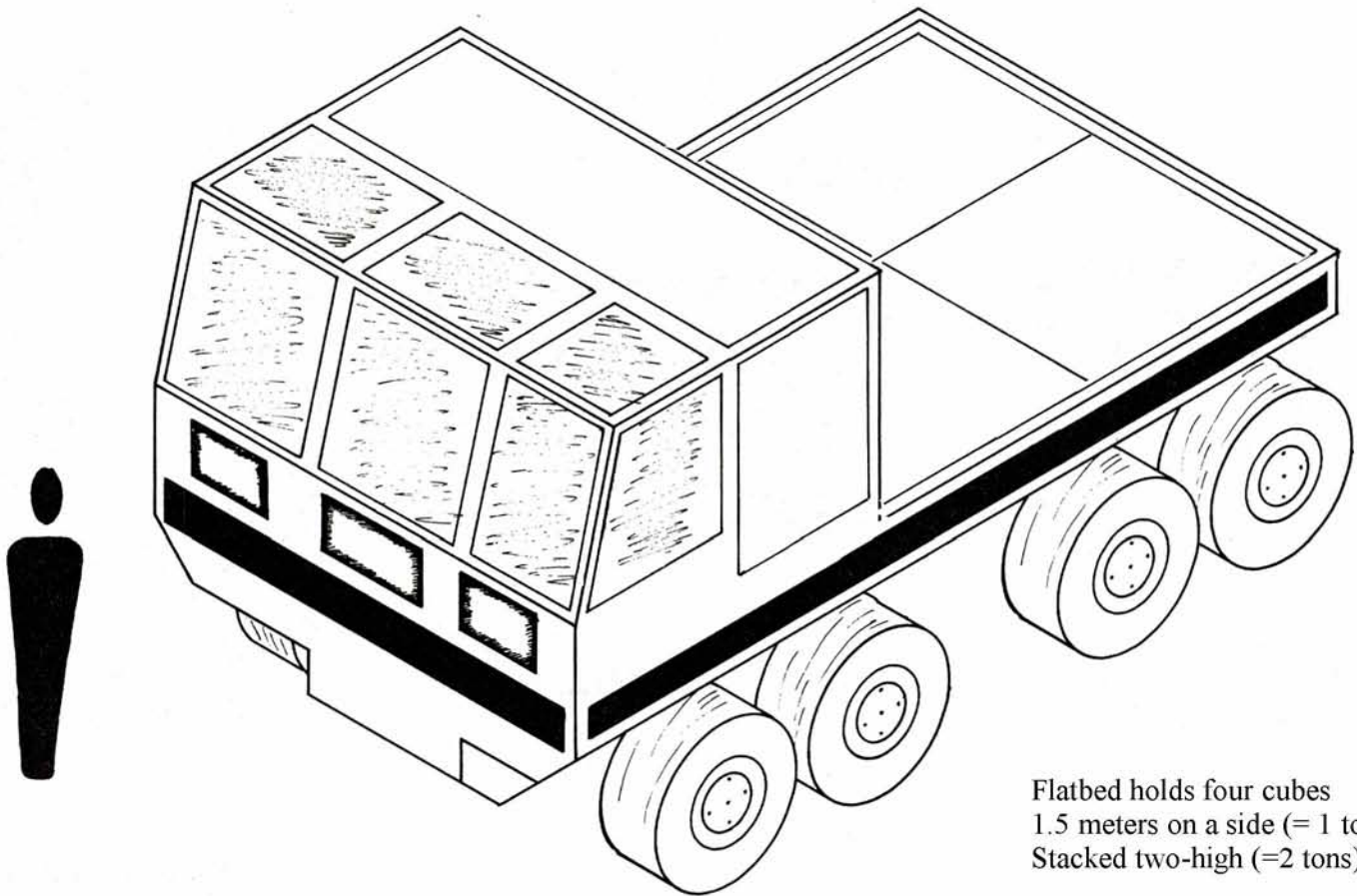
Length: 5 meters (16.5 feet)

Width: 3 meters (10 feet)

Height: 3 meters (10 feet)



10 meters



Flatbed holds four cubes
1.5 meters on a side (= 1 ton).
Stacked two-high (=2 tons).

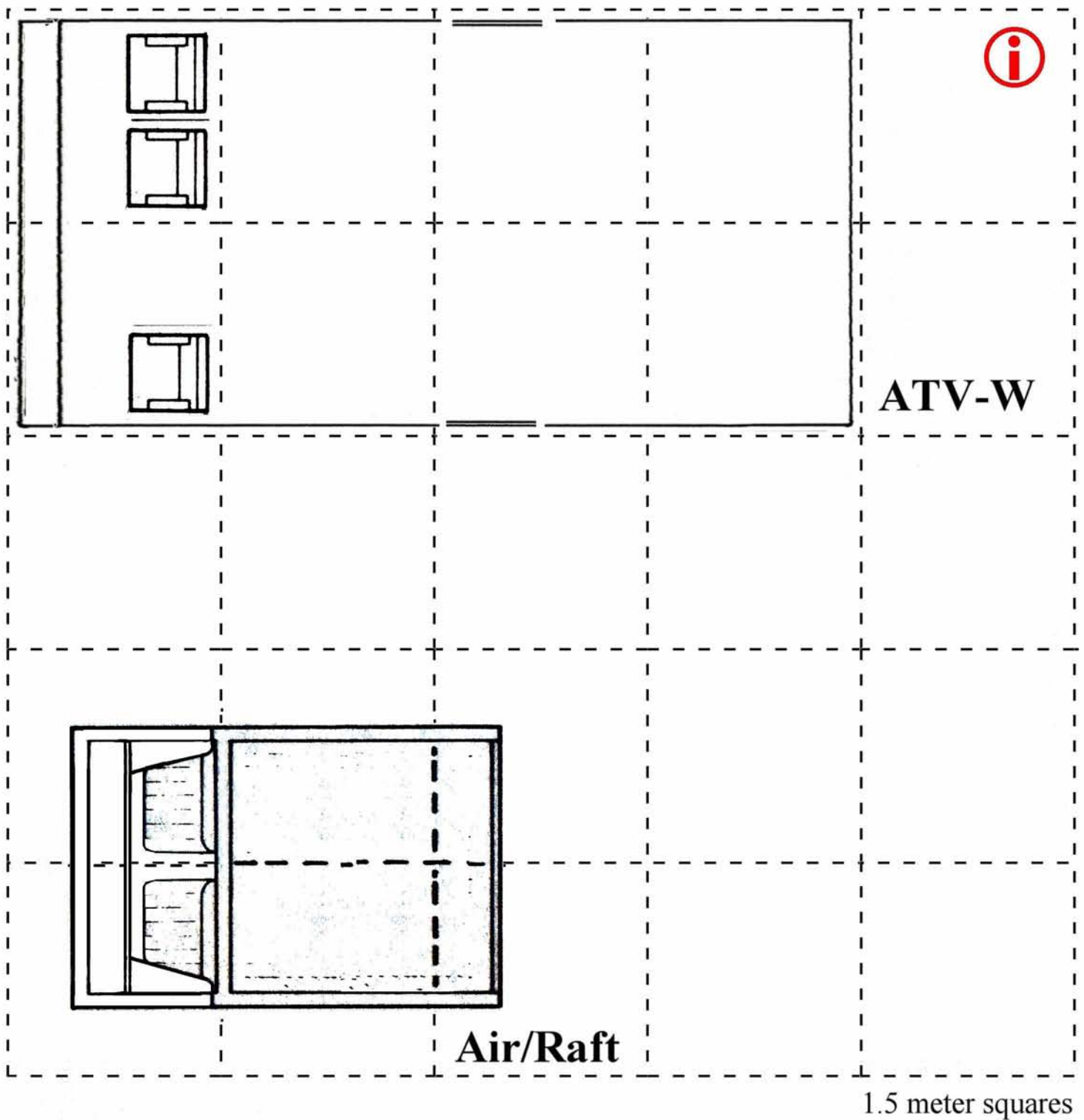
Flatbed All Terrain Vehicle

Considerably more expensive than the ground car, the All Terrain Vehicle (abbreviated ATV) is designed to serve admirably on many different worlds under widely varying conditions, including vacuum and insidious atmospheres, and high or low gravity. With a range between refuellings of 5000 km (refuelling is performed from a ship's power plant), ATVs are capable of speeds up to 100 km per hour on roads, and about half that cross-country. The vehicle is fully pressurized and contains complete (though cramped) eating, sleeping, and travel facilities for four persons. The ATV weighs 10 tons and costs CR 300,000.

Length: 5 meters (16.5 feet)

Width: 3 meters (10 feet)

Height: 3 meters (10 feet)

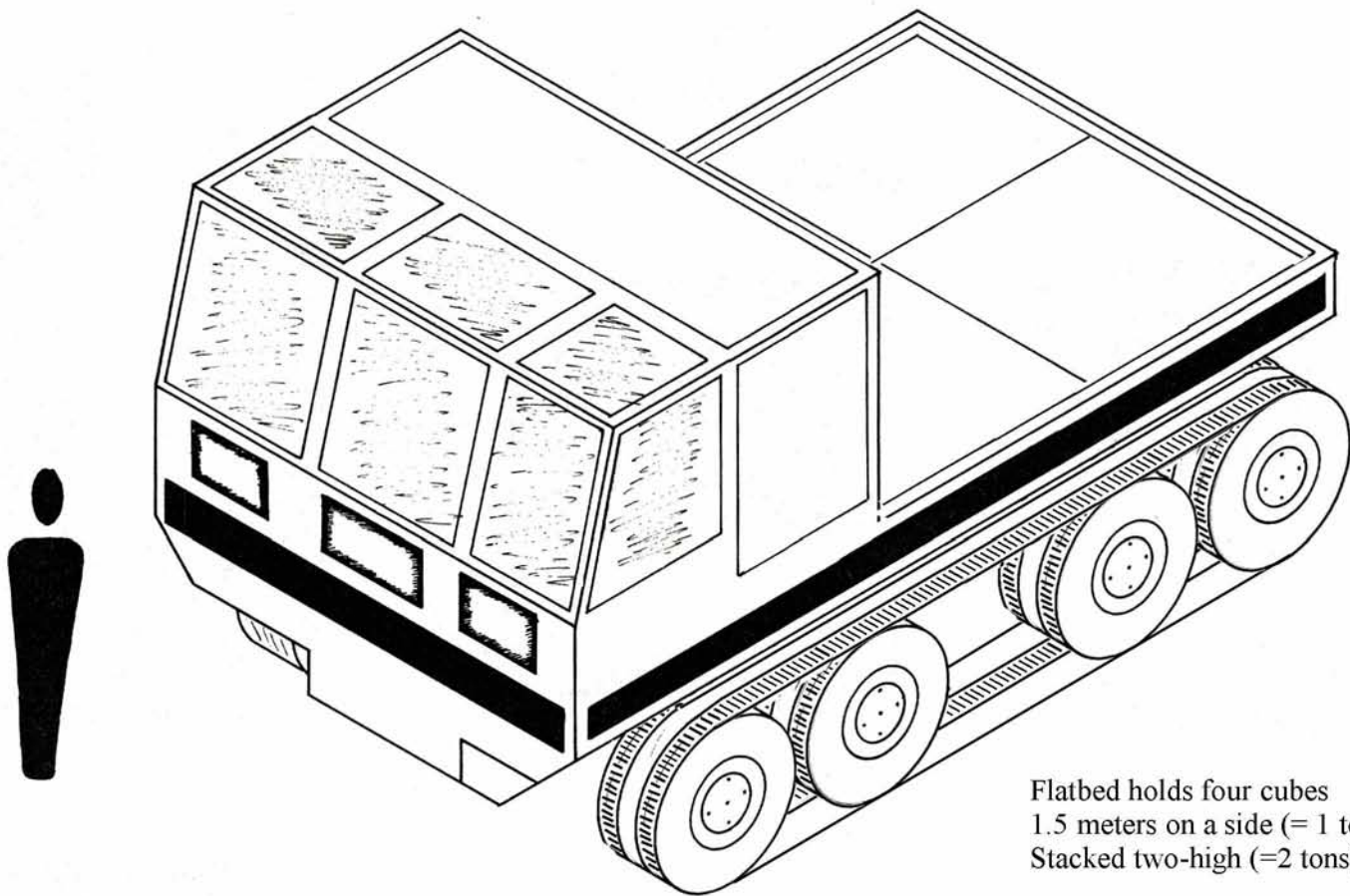


Air Raft All Terrain Vehicle

Comparative deck plan views of ATV and Air/Raft.



10 meters



Flatbed holds four cubes
1.5 meters on a side (= 1 ton).
Stacked two-high (=2 tons).

Flatbed All Terrain Vehicle Tracked

Considerably more expensive than the ground car, the All Terrain Vehicle (abbreviated ATV) is designed to serve admirably on many different worlds under widely varying conditions, including vacuum and insidious atmospheres, and high or low gravity. With a range between refuellings of 5000 km (refuelling is performed from a ship's power plant), ATVs are capable of speeds up to 50 km per hour on roads, and about half that cross-country. The vehicle is fully pressurized and contains complete (though cramped) eating, sleeping, and travel facilities for four persons. The ATV weighs 10 tons and costs CR 300,000.

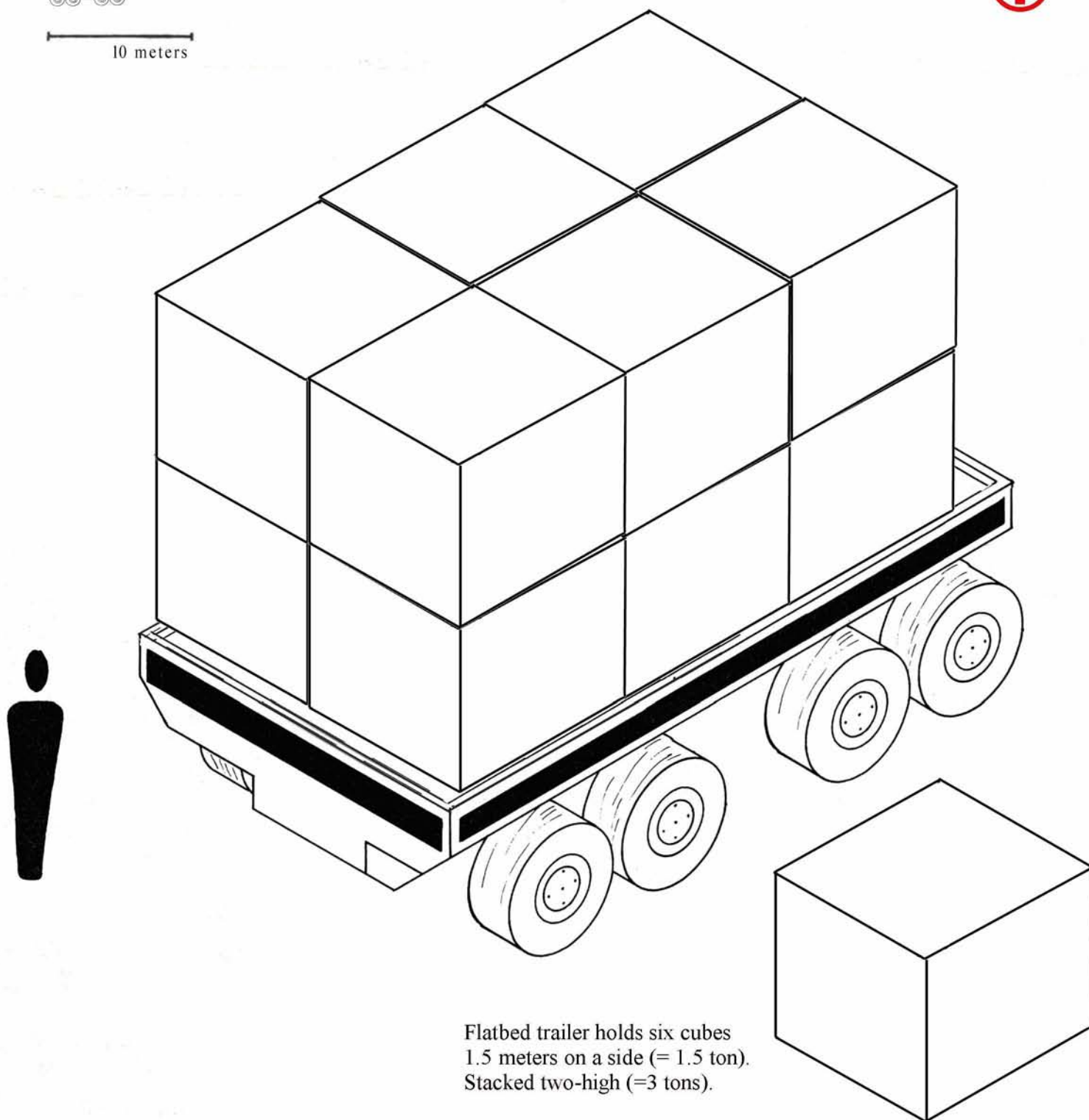
Length: 5 meters (16.5 feet)

Width: 3 meters (10 feet)

Height: 3 meters (10 feet)



10 meters



Flatbed trailer holds six cubes
1.5 meters on a side (= 1.5 ton).
Stacked two-high (=3 tons).

Flatbed ATV Trailer

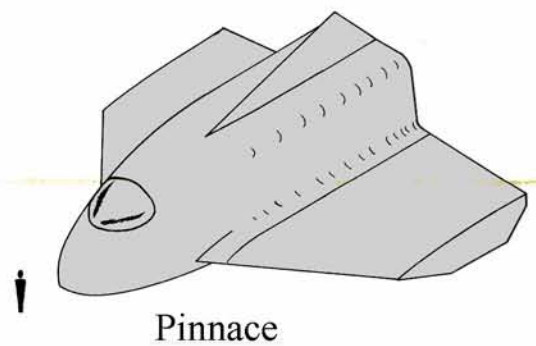
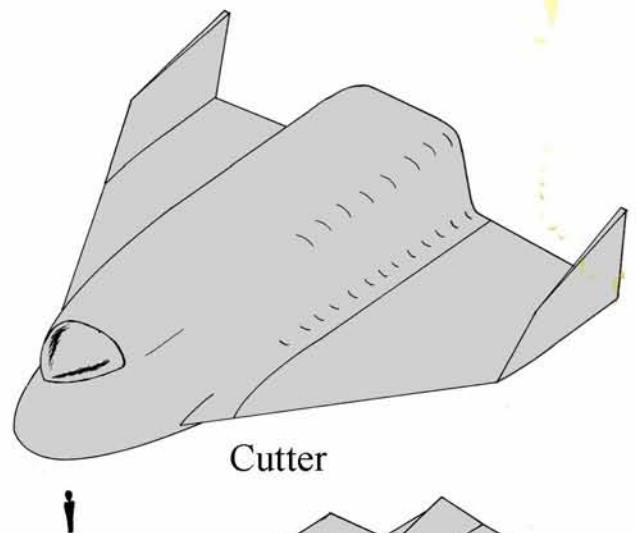
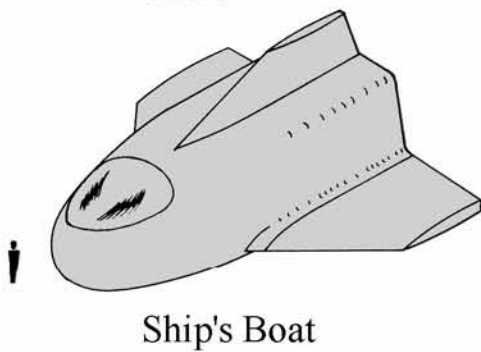
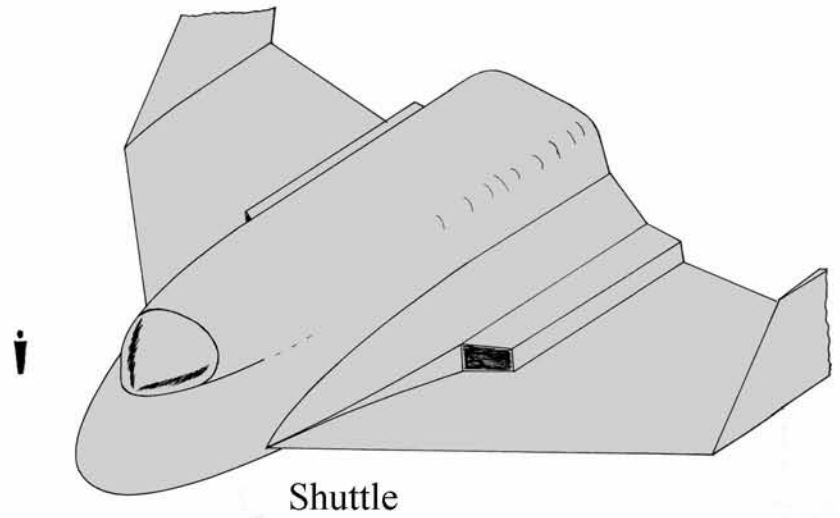
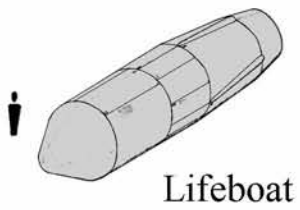
The unpowered flatbed trailer can be coupled to an ATV to carry additional cargo, or a modular shelter.

The powered flatbed trailer can be programmed to follow an ATV at a predetermined distance (from 1 to 100 meters). The ATV Trailer weighs 5 tons and costs Cr150,000.

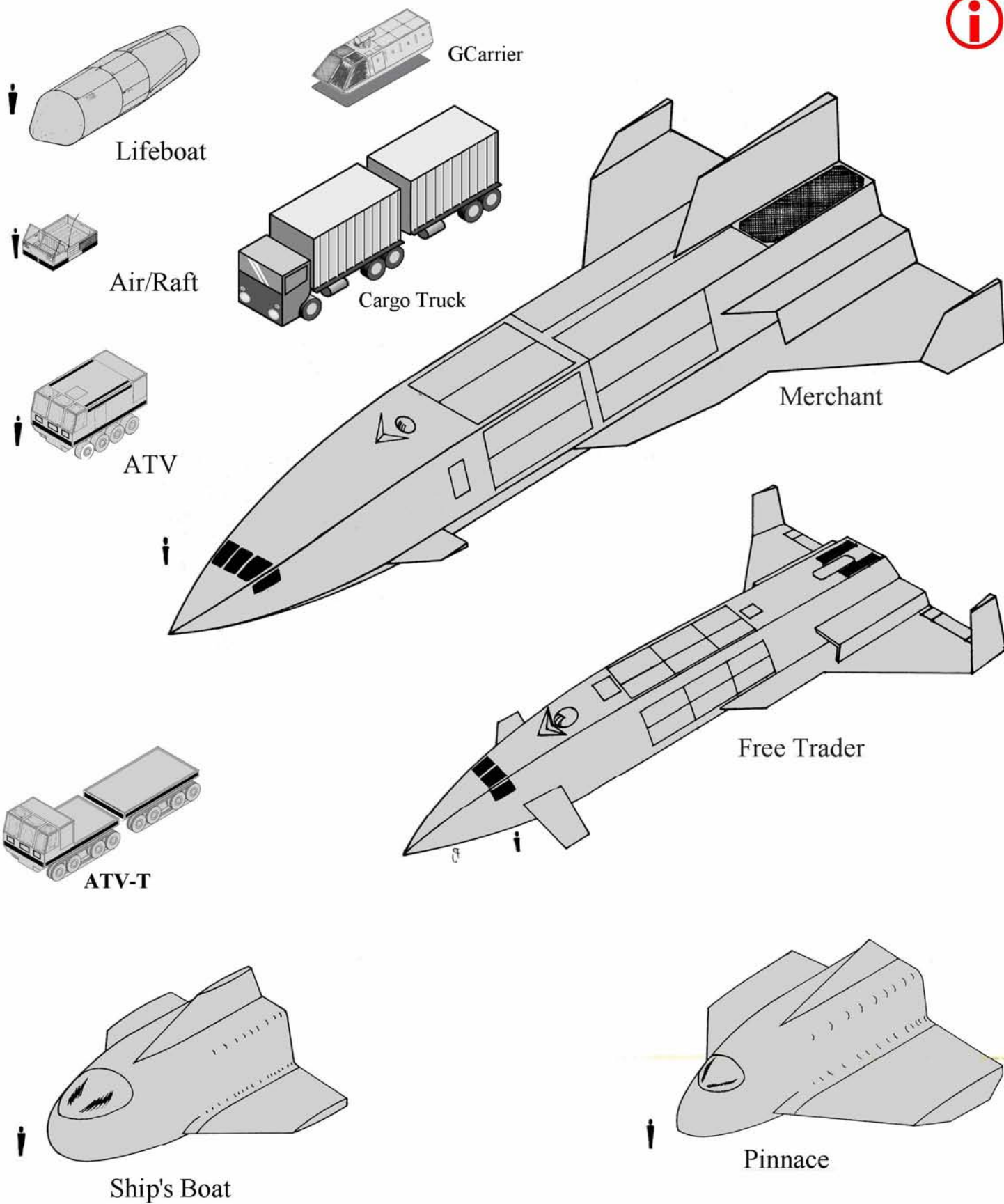
Length: 5 meters (16.5 feet)

Width: 3 meters (10 feet)

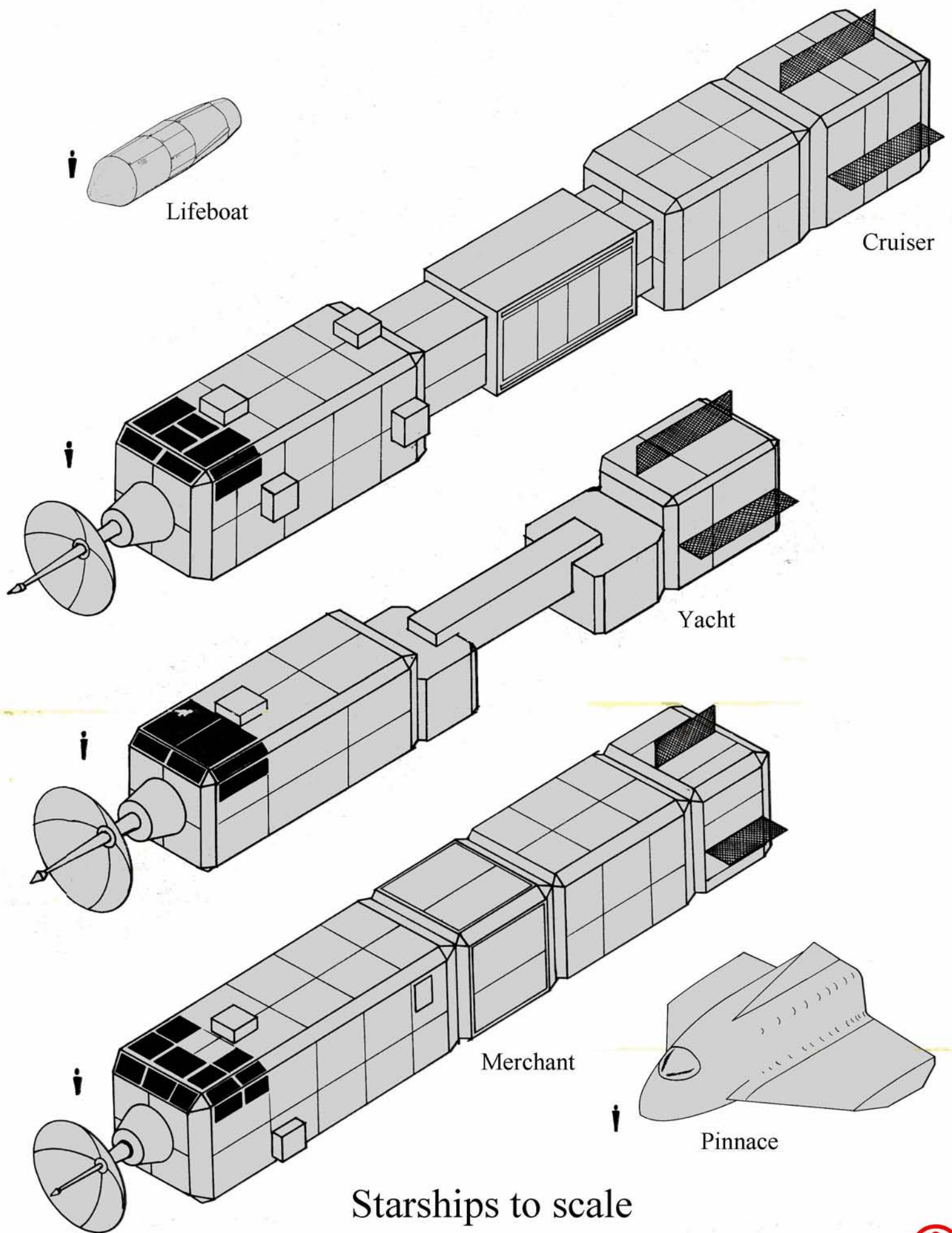
Height: 1 meter (3 feet)



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Starships to scale



Starships to scale



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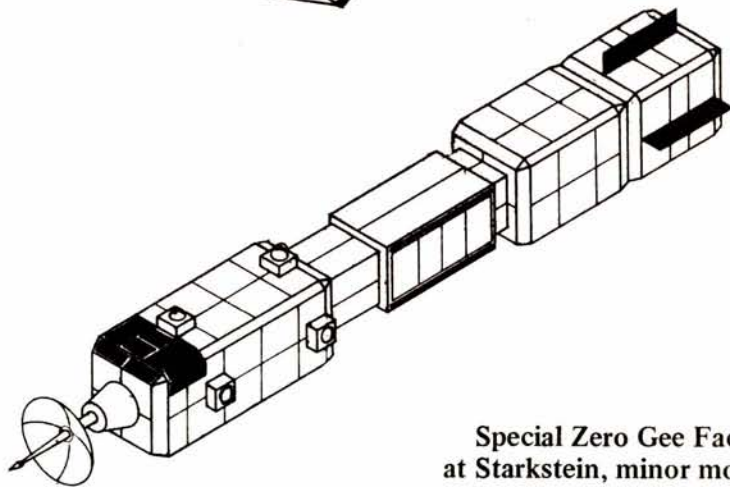
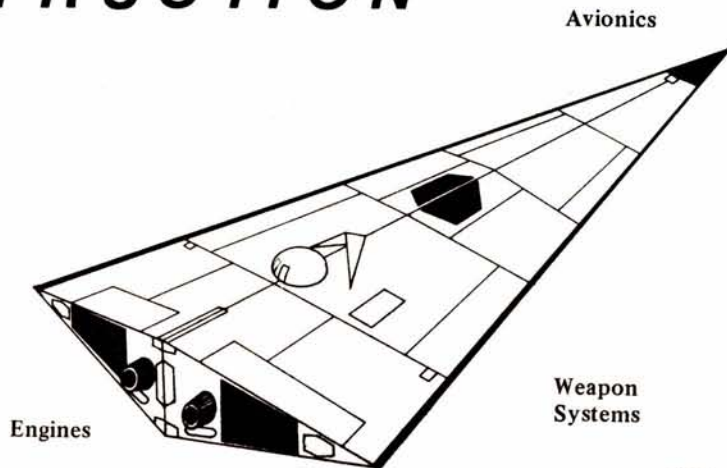
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