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Laboratory Ship **400 ton** **15mm scale**



L-4721121-000000-00000-0 MCr158.9841 400 tons.

Crew=5. TL=9. Passengers=15. Cargo=23. Fuel=90. EP=12. Agility=1. Hardpoints=2. Air/Raft=2.

Credits for the Laboratory Ship

Cover art by William H. Keith, Jr.

Deck plans drawn in scale by S.R. Greene

Original Deck Plan by Marc W. Miller

Information on the Laboratory Ship is taken from Traveller Death Station.

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Laboratory Ship and Research Pinnacle

L- 4721121-000000-00000-0 MCr158.9841 400 tons.

Crew=5. TL=9. Passengers=15. Cargo=223. Fuel=90. EP=12. Agility=1 Hardpoints=2. Air/Raft=2.

Research Pinnacle KK-0205501-000000-00000-0 MCr20 40-tons

The following data should be considered to be available in any library program within the imperium and available under the keywords- Laboratory Ship-Lab Ship-Reaserch Ship.

History of the Laboratory Ship

In their pursuit of greater knowledge of the universe; private, corporate and governmental concerns conduct their research throughout the galaxy. While the findings of their research may be beneficial, the results may be of much greater consequence through the creation of products, jobs, markets and profits. Therefore, large investments are made to finance the requirements of research projects. The nature of many of the projects created the need for mobile research platforms. The 400-ton laboratory ship is one of the vessels designed to meet such requirements.

Laboratory Ship (Type L): Using a 400-ton hull, the laboratory ship is a mobile research and development station used for commercial experimentation. The ship has jump drive-D, maneuver drive-C and power plant-F, giving it a performance of jump-2 and 1-G acceleration. The fuel capacity of ninety tons is sufficient to support the power plant for twelve months and allows one jump-2. A computer Model/2 with software package is installed adjacent to the bridge. No turrets or weaponry are normally fitted, but two tons of space have been reserved for later installation of fire control equipment for the ship's two hardpoints. The ship has twenty staterooms and no low berths. Cargo capacity totals 23 tons; 85 tons are available within the

ship for use as lab space. The lab ship carries one 40-ton pinnacle and two air/rafts. The ship itself is not streamlined.

The laboratory ship requires a crew of five: a pilot, a navigator, a medic and two engineers. Gunners may be added to the crew if the ship is armed; additional crew are carried to accomplish the ship's research functions. The laboratory ship costs MCr158.9841, and takes sixteen months to build.

The lab ship is built as a ring structure, which is rotated to provide centrifugal gravity simulation. While approaching the ship, the most striking feature observed is the rotation of the ring. The play of light and shadow constantly reveals new facets of the exterior hull. The ship has minor thrusters positioned along the ring allowing the ship to institute spin or stop it as desired. Standard grav plates and inertial compensators are installed; they may be switched off and centrifugal force used instead to remove grav forces as a variable in experiments. A part of the ship which does not rotate is the small craft docking ring. Located at the end of the central spoke, the docking ring is specifically mounted to counteract the rotation of the ship, thereby making docking easier for lesser-skilled pilots. Locking bolts hold the craft in position as the lab ship moves. The docking ring can be entered by any six-meter diameter vehicle.

The lab ship's drives and the power plant are contained in two drive pods mounted on the hull. The forward face of each drive pod is equipped with a hardpoint for turret weaponry.

Ship's Vehicles

To allow for the installation of research equipment, the main lab is fitted with a cargo access plate. This heavy, fully secured sliding panel is not normally opened; doing so requires the depressurization of the entire main lab. Unbolting the access plate requires at least two persons and several hours of labor.

The 40-ton research pinnacle is a small craft capable of scavenging for fuel, acquiring specimens and running errands to other parts of the system or to world surfaces. The pinnacle is capable of 5-G acceleration and normally carries a crew of one. The bridge is equipped with two control couches, the first for the pilot and the second for the gunner if the craft is armed. The cargo area can carry up to nine tons of cargo; six passengers may also be carried. A fuel capacity of twelve tons enables the pinnacle to undertake long range ventures within the system, in addition to ferrying fuel to the lab ship. The pinnacle is streamlined and has integral fuel scoops.

The lab ship's two air/rafts are carried in separate compartments on the ring hull. They provide access to world surfaces, both for specimen gathering and for routine errands. Each air/raft bay is a large air lock which can be accessed using the remote triggers each air/raft is equipped with.

Operations: Typically, a lab ship will be purchased (or chartered) and assigned to a specific system or world for a series of research projects. After jumping to a system, the ship takes up orbit and begins its regimen of experiments. Lab ships are capable of moving great distances, but they generally remain on station for long periods of time. The air/rafts are used for routine transport while the pinnacle is used for heavier work or missions requiring greater speed.

Refueling: Because the lab ship is unstreamlined and therefore cannot skim fuel for itself, the refueling task falls to the pinnacle. The small craft is assigned the routine of

skimming a gas giant and ferrying the fuel to the lab ship. In systems where refined fuel is available, the pinnacle will be called upon to transport fuel from the fueling point to the ship.

Approaching the Ship

When the lab ship is approached, the most striking features observed is the rotation of the ring. The play of light and shadow constantly reveals new facets of the exterior hull. Not rotating, however, is the pinnacle and its docking ring. The structure at the end of single spoke is specifically mounted to counteract the rotation of the ship, making docking easier for lesser skilled pilots.

Four entry points to the ring are immediately obvious to observers. They are the two air/raft bays, the cargo access plate under the main lab, and the docking ring for the research pinnacle.

The air/raft bays each normally contain an air/raft. They are air locks, and can be opened and entered using one of the ship's vehicles; the ship's air/rafts have remote triggers which will open the bay door. Individuals with electronic-2 or better skill can rig a makeshift trigger on 9+ per hour.

The cargo access plate to the main lab is a heavy, fully secured sliding panel normally used to allow installation of research equipment. It is not normally opened, and requires the depressurization of the entire main lab. Unbolting the access plate requires at least two persons and several hours.

The docking ring can be entered by any six-meter diameter vessel; entry to the spoke is then quite easy. If no six-meter diameter vessel is available, then the manual hatch on the spoke can be opened and ship entered.

Simplistic solutions to the entry problem (such as cutting through the hull or blasting the ship with laser fire) should be discouraged as detrimental to the ship's interior.

Interior Walls: Interior walls are non-load bearing panels firmly fixed in place as partitions.

Sliding Doors: Set in interior walls, sliding doors save space over conventional swinging doors and are standard on most starships. Sliding doors usually aren't airtight, serving merely as privacy screens.

Bulkheads: The major structural component of a ship, bulkheads represent the compartmentalization of the ship for damage control and environmental maintenance. Bulkheads also form the outer hull of the ship and they are very difficult to destroy. All deck floors are assumed to be bulkheads.

Maintenance Hatches: Maintenance hatches are placed in bulkheads to allow repair or service personnel access to machinery or equipment. Small and unobtrusive, these hatches are rarely used and generally remain closed. They are unpowered and lock with a common service key.

Lift Shaft: Elevators lifting personnel or goods between decks are called lift shafts. In the lab ship, this consists of a pressure-tight lift car and shaft extending along the spoke leading to the docking ring. Ordinary sliding doors close the shaft when a lift car is not present. the lift car is sealed with a sliding door which is pressure-tight. between decks, the lift shaft is sealed by pressure doors, maintaining integrity between the decks.

Iris Valves: Iris valves are pressure-tight automatic portals set in bulkheads. The valve functions much like the iris of a camera; many panels retract into the frame to leave an open passage or extended to block the portals with metal. Iris valves may be horizontal or vertical. Iris valves are operated by pressing a stud on the wall next to the valve. A valve may be locked from either side or by computer. A red light glows on the indicator panel to reflect this condition. The iris valve will close automatically when a pressure difference is sensed between the two sides of the bulkhead. They will not close fully until the valve is clear of any objects.

Manual hatches: A less costly substitute for iris valves, manual hatches are hinged pressure doors secured by a handwheel and extending bars. They are not automatic and have no interaction with the ship's computer. There may however, be a sensor which tells the computer if the hatch is opened or closed.

Quadrant One

1. Main laboratory.

Quadrant Two

2. Cargo bay.
3. Air/raft number one.
4. Drive pod number one lower level.
5. Drive pod number one upper level.
6. Hardpoint number one.
7. Corridor.
8. Bridge.
9. Pilot's stateroom.
10. Navigator's stateroom.
11. Medic's stateroom.
12. Engineer's stateroom.

Quadrant Three

13. Kitchen and storage.
14. Galley and mess area.
15. Private dining room.
16. Private lounge.
17. Staff stateroom.
18. Reception area.
- 19 -24. Staff stateroom.

Quadrant Four

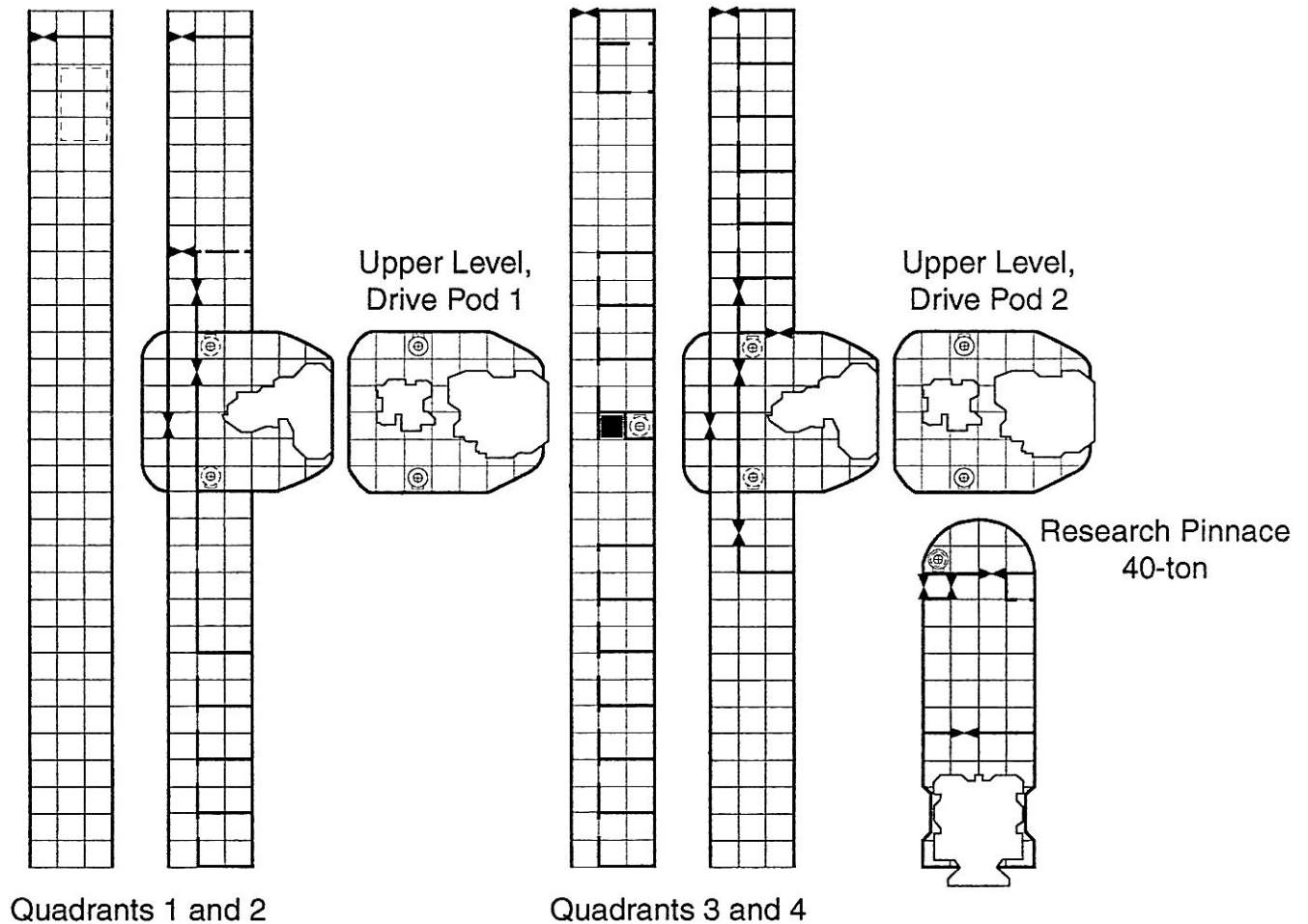
- 25 -29. Staff stateroom.
30. Auxiliary bridge.
31. Drive pod number two lower level.
32. Drive pod number two upper level.
33. Hardpoint number two.
34. Corridor.
35. Air/raft number two.
36. Auxiliary laboratory.

Research Pinnacle

1. Bridge.
2. Airlock.
3. Fresher.
4. Passenger/Cargo area.
5. Drive room.

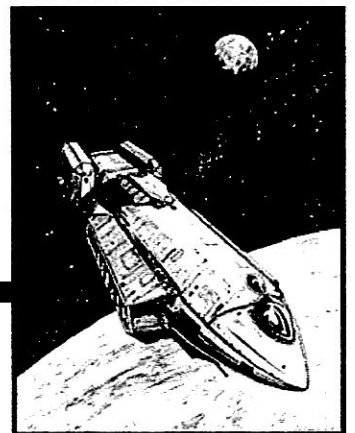
Complete Deck Plans of the Laboratory Ship

Master Deck Plan Referee



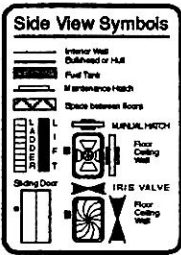
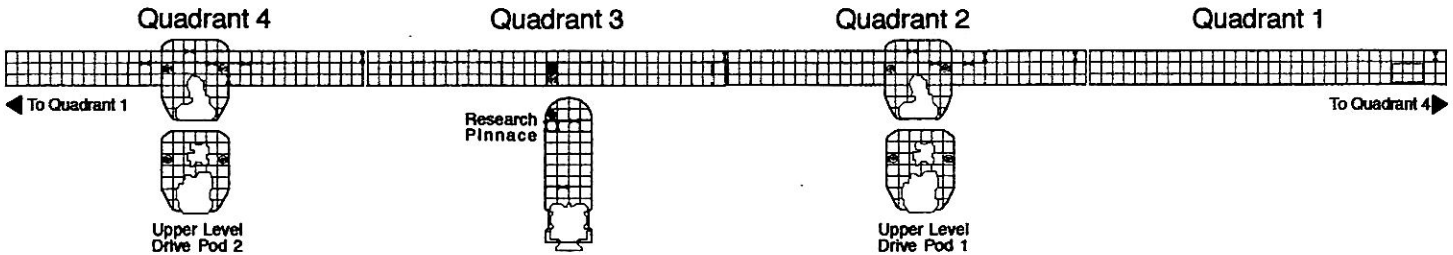
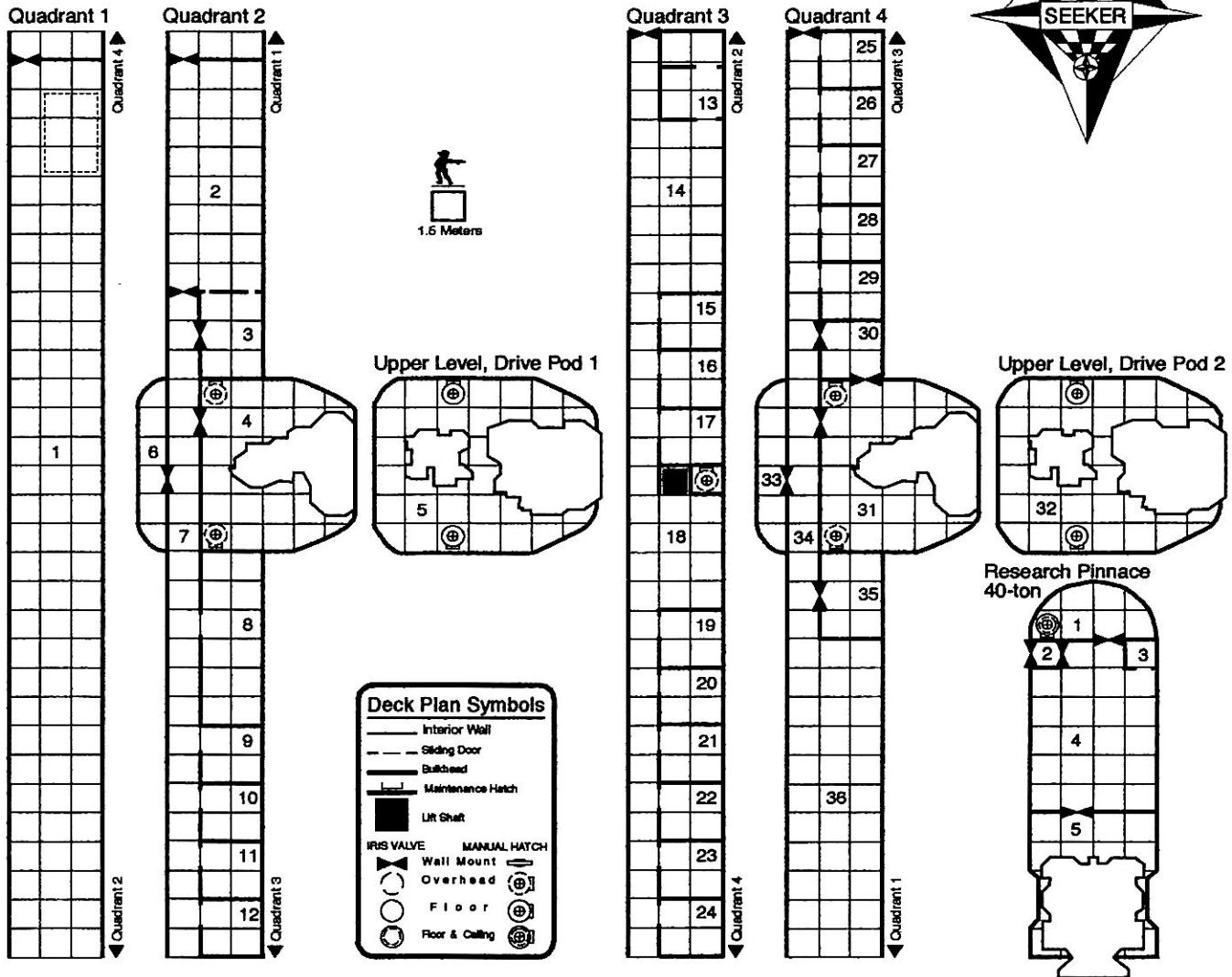
Gazelle Class CLOSE ESCORT

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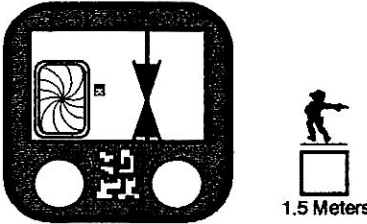


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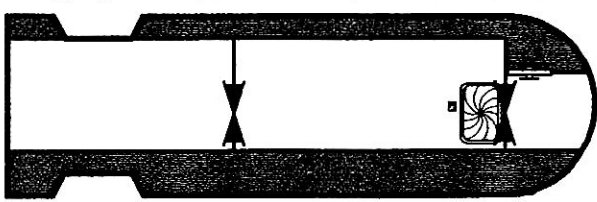
Laboratory Ship Master Deck Plan



Cross Section



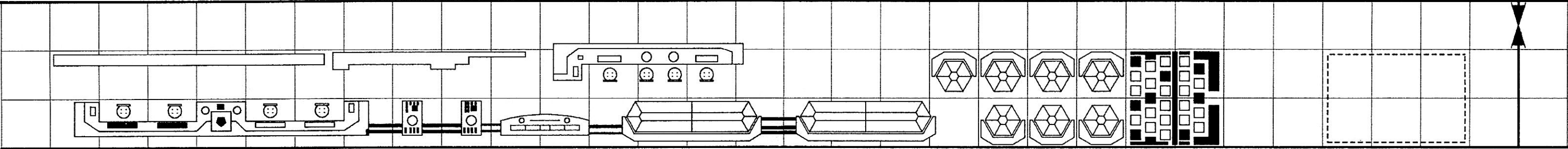
40-ton Research Pinnacle Side View



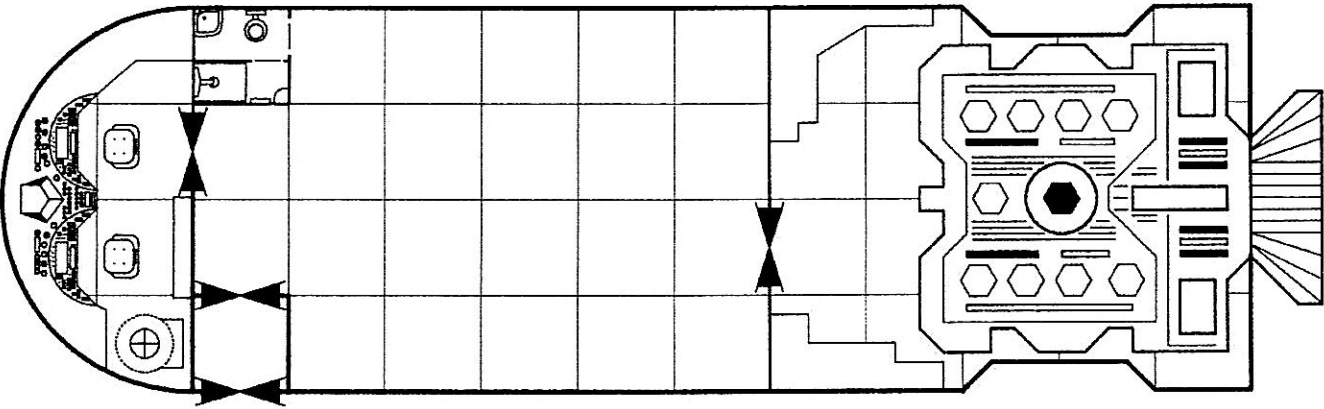
◀ To Quadrant 2

Quadrant 1

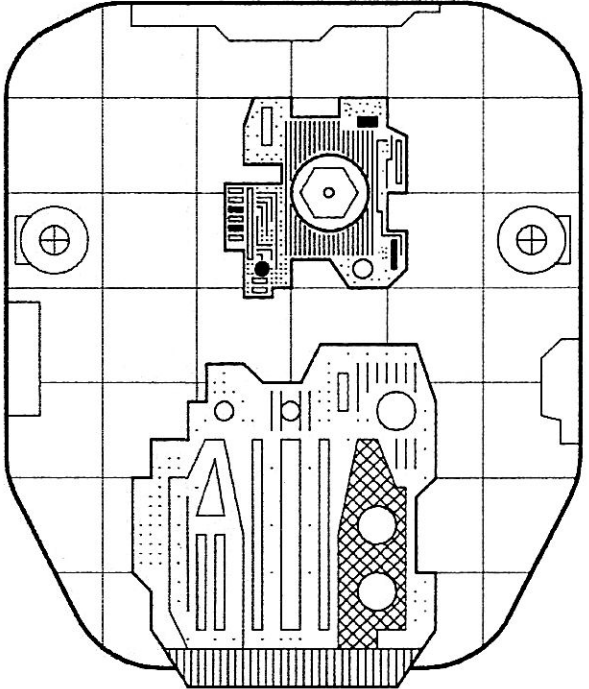
To Quadrant 4 ▶



Research Pinnacle 40-ton



Drive Pod 1, Upper



Laboratory Ship

400-ton

Drawn by S.R. Greene



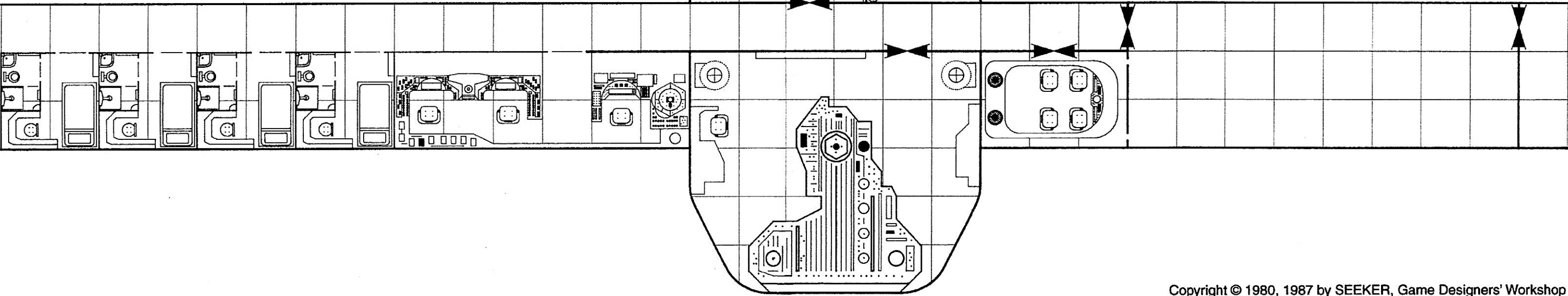
DECK PLAN SYMBOLS			
—	INTERIOR WALL AND BULKHEAD		
- - -	SLIDING DOOR		
⌈	MAINTENANCE HATCH		
◀	IRIS VALVE	MANUAL HATCH	
○	OVERHEAD	HATCH	
○	FLOOR	OVERHEAD	
○	BOTH FLOOR AND OVERHEAD	FLOOR	



◀ To Quadrant 3

Quadrant 2

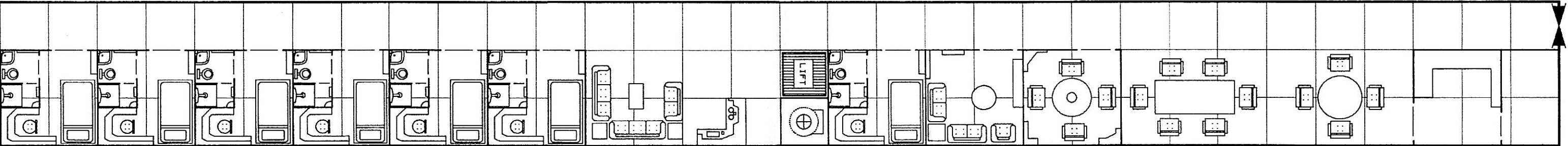
To Quadrant 1 ▶



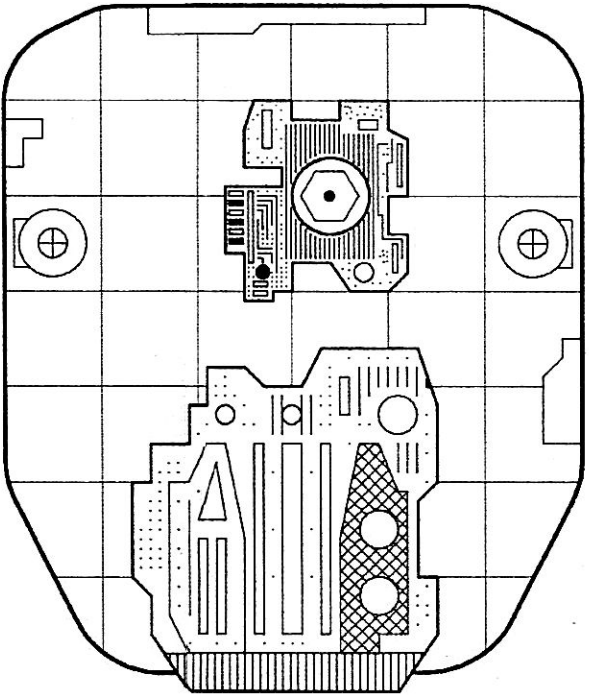
◀ To Quadrant 4

Quadrant 3

To Quadrant 2 ▶



Drive Pod 2, Upper



Laboratory Ship
400-ton
Drawn by S.R. Greene



DECK PLAN SYMBOLS			
—	INTERIOR WALL AND BULKHEAD		
- - -	SLIDING DOOR		
⌈	MAINTENANCE HATCH		
IRIS VALVE		MANUAL HATCH	
◀	IRIS VALVE	HATCH	
○	OVERHEAD	OVERHEAD	
○	FLOOR	FLOOR	
○	BOTH FLOOR AND OVERHEAD		



Quadrant 4

◀ To Quadrant 1

TO Quadrant 3 ▶

