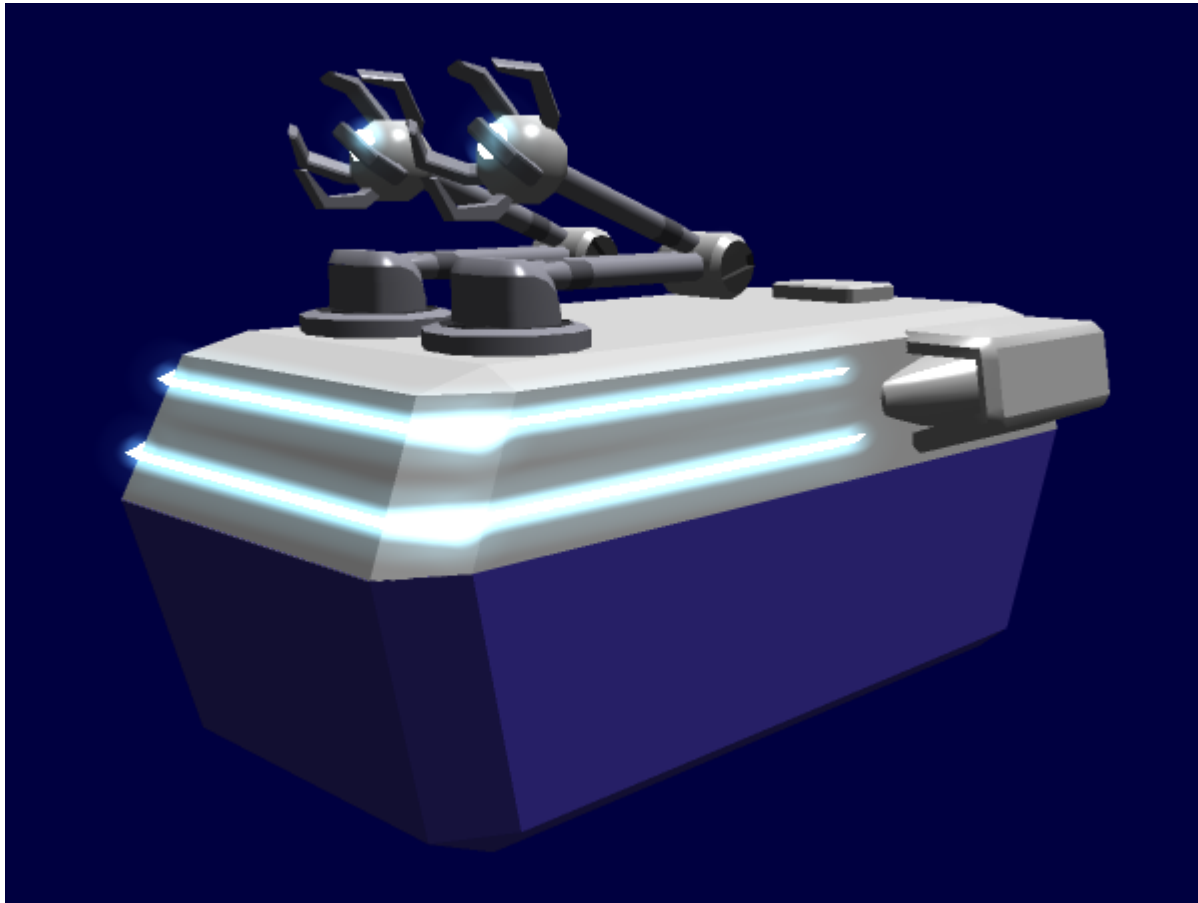


# Packrat-class Light Cargo Ship

The Packrat-class Light Cargo Ship is a craft designed by [Yuki Toshiro](#) in [YE 32](#) to act as a light salvage and cargo vessel for the layman. It is a simple ship that uses its Cargo Bays and its grapplers to get the job done. If needed, its Cargo Bays can be repurposed for other things.



## About the Packrat

The Packrat was developed as a Light Cargo Ship, and retains that name, though grapplers have been added to the craft to permit salvage and self-loading. It is fitted with systems and rooms for living as well, to allow extended amounts of time to be spent in space.

## Key Features

The Packrat has the ability to not only store a significant amount of material for its size in an ejectable cargo bay; but it can also use its external grapplers to grab items. This can be used for salvage, or for loading Cargo onto the ship. The craft also has 2 internal grapplers of smaller size, for arranging internal cargo.

## Price

15,000 KS

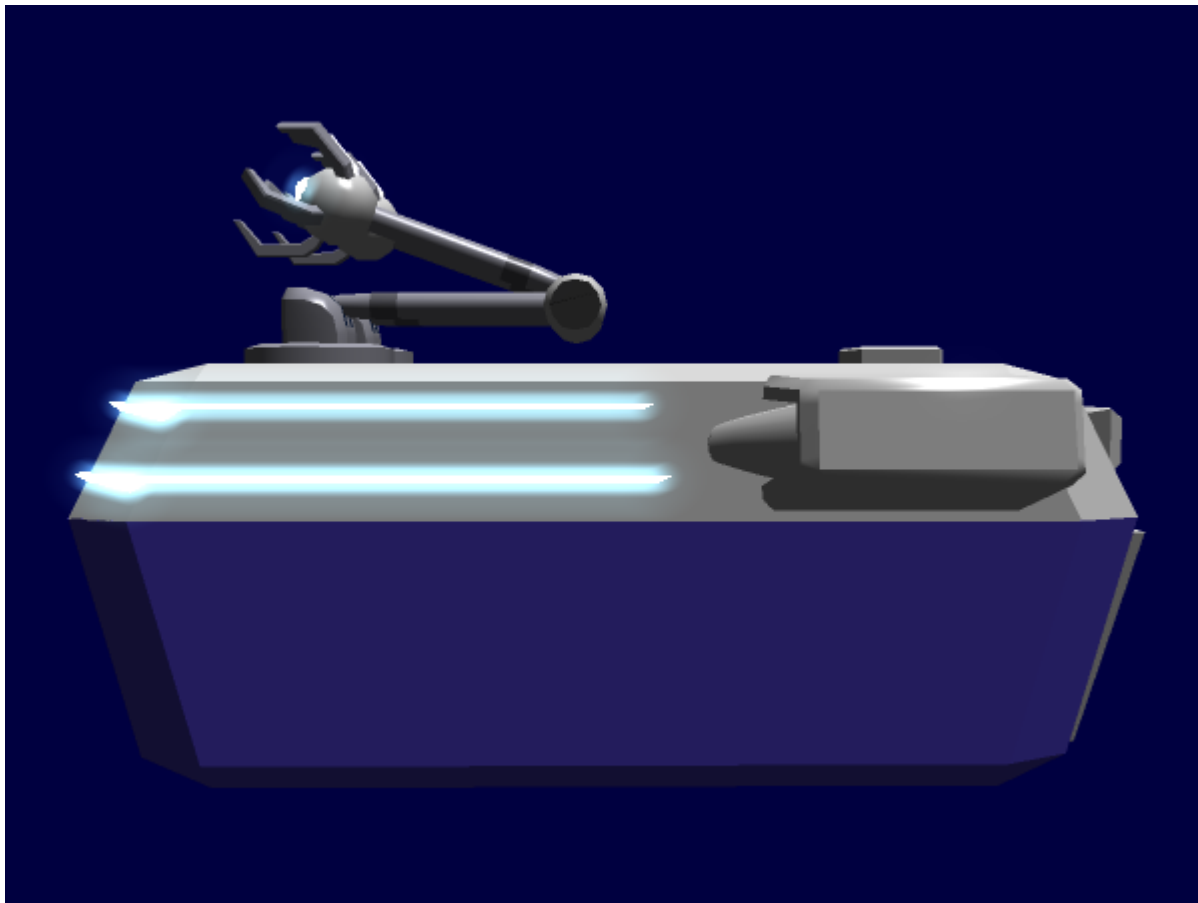
## Mission Specialization

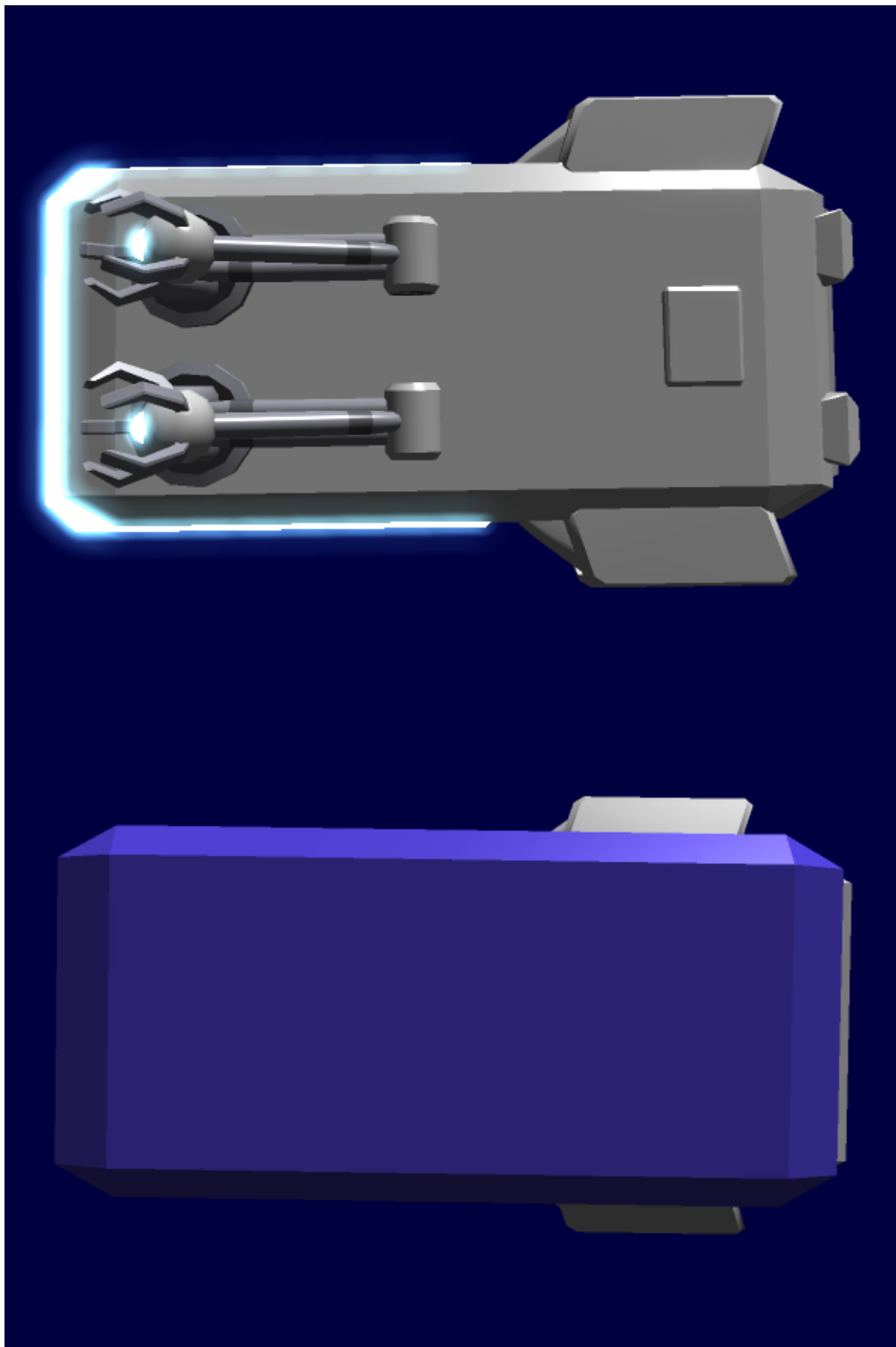
This craft is small, but is good for a great many purposes. Typically, it's good for personal transportation for people who need slightly more fold capacity or living space than a shuttle, it can be used as a salvage craft, or as a cargo vessel for small businesses.

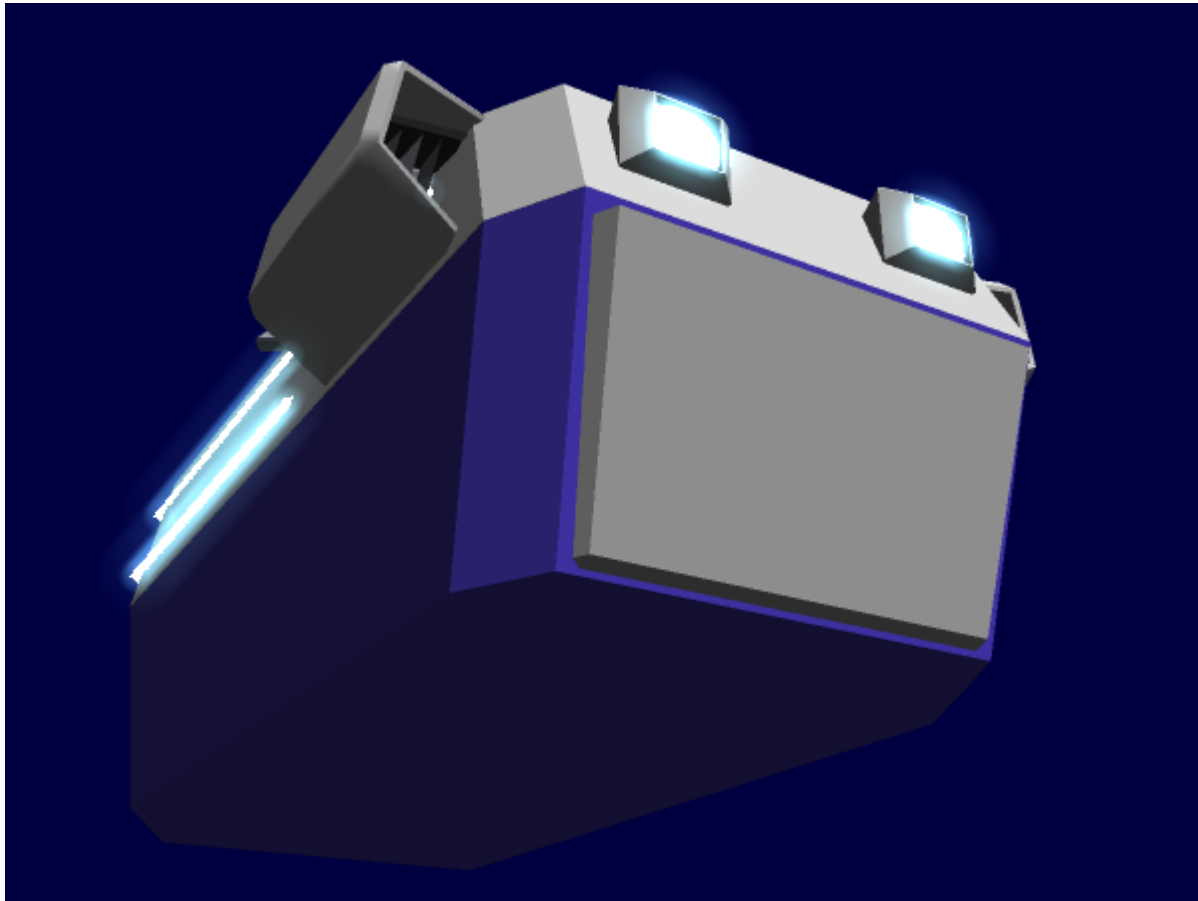
- Personal Transport
- Cargo (Vehicle and Furniture-scale Transport)
- Salvage

## Appearance

The craft is boxy, with a top white-grey half and a colored cargo bay. Three grapplers are installed on top of the craft and two engines extend out the sides.







## History and Background

Originally, the Packrat started life on paper as the Packer. The Packer was designed by [Yuki Toshiro](#) to be a light cargo craft for small businesses and individual ownership that could transport items such as furniture and vehicles. However, long realizing the importance of a cheap cargo craft which could also be used for salvage or have the ability to load itself, he added grapples to the top and installed systems to support them. After some time and testing, the craft was ready for deployment and sale, manufactured at Toshiro's shipyard.

## Statistics and Performance

### General

Class: YS-Y1-1A Type: Light Cargo Ship Designers: [Yuki Toshiro](#) Manufacturer: [Yuki Toshiro](#), at his Shipyard Production: Made by request Fielded by: Civilians

## Passengers

Crew: 3 operators are recommended, 1 is required. Maximum Capacity: There are accommodations for 6 people. About 18 people can fit aboard in an emergency, but the ship would be extremely cramped.

## Dimensions

Length: 40 meters (131.2 feet) Width: 25 meters (82 feet) Height: 15 meters (49.2 feet) without grapplers, 25 meters (82 feet) with grapplers in storage mode Decks: 5 (2 x 4.5 meter high cargo decks, 2 x 3 meter standard decks) **Cargo Bay Capacities:** 40 meters (131.2 feet) long, 18 meters (59 feet) wide, 4.5 meters (14.8 feet) tall.

## Propulsion and Range

**Continuum Distortion Drive:** 0 - 18,750c (25,125c in Escape Mode) **Hyperspace Fold Drive:** 0.4 ly/m (0.75 ly/m in Escape Mode) **Sublight Engines:** 0.15c (0.3c in Escape Mode) **Speed (Aerial):** 300 km/h (186.4 mph) **Speed (Water):** Untested Range: Carries Supplies for 6 months for 6 people (3 years for 1 person) Lifespan: Estimated 30 Years **Refit Cycle:** Once every 3-5 Years

## Stat Table

[starship\\_stats\\_tables](#) and [using\\_the\\_starship\\_stats\\_tables](#) for an explanation on the stat tables. This craft is very simple technology, and thus gets 8 Stat points (10 \* 0.8). Its Durandium hull has 6 SP (10 \* 0.6).

The Cargo bay, which takes up half the Packrat's mass or more, can be ejected in an emergency to allow the top half of the ship to escape while the cargo bay container is focused on by any raiders. The loss in mass is reflected by an overall increase in top speed.

To reflect this in the stats, the three Utility Points are removed when the Cargo Bay is ejected, and split evenly between the three types of propulsion in Escape Mode.

Ship Class	Structure Points	STL Engines	CDD (FTL)	ptp FTL	Weapons	Shields	Utility
Packrat	6	1	1	1	1	1	3
Escape Mode	6	2	2	2	1	1	0

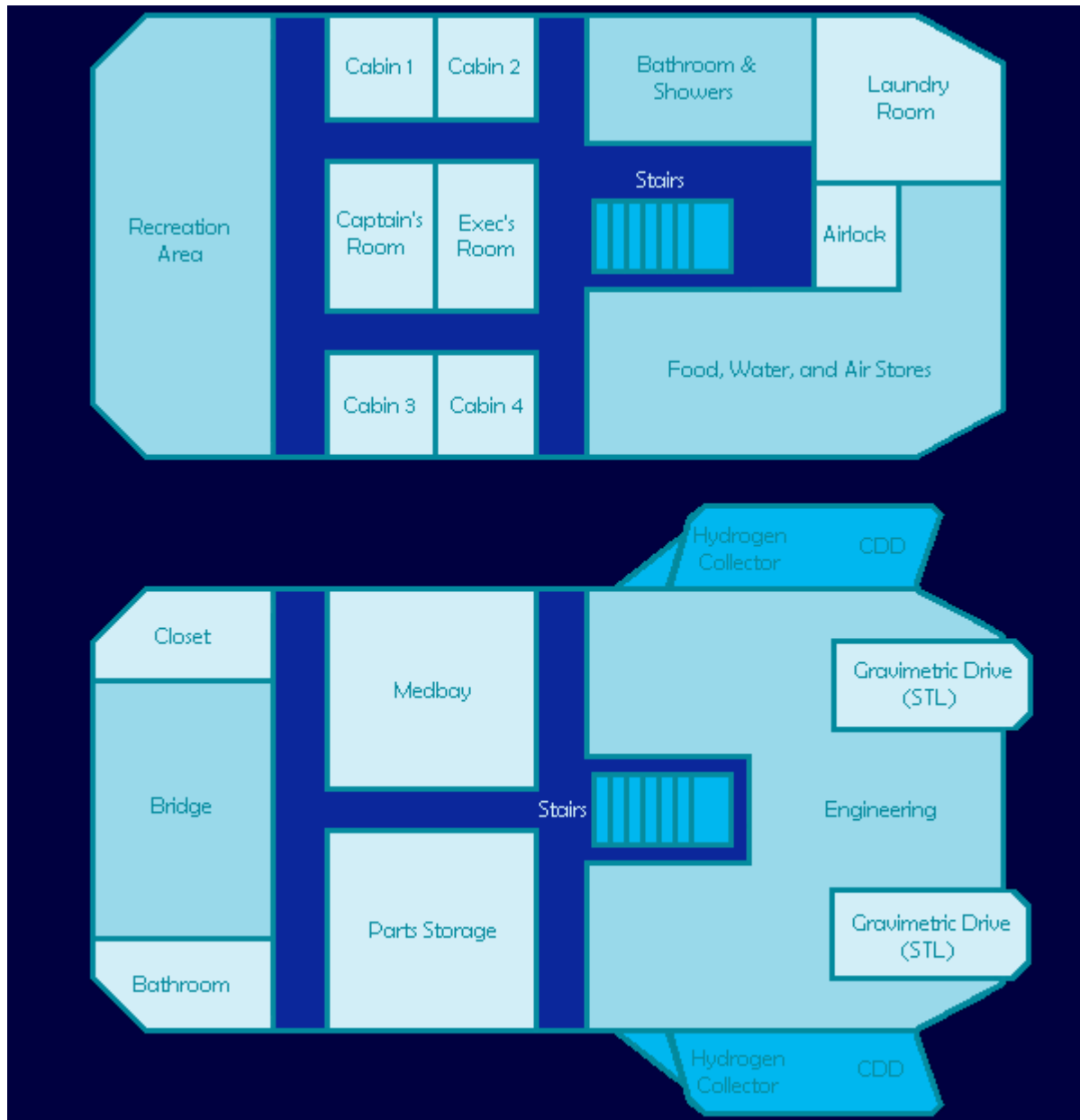
## Damage Capacity

See [Damage Rating \(Version 3\)](#) for an explanation of the damage system.

- Hull: 6
- Shields: 5 (Threshold 1)

# Inside the Ship

## Deck Layout



## Compartment Layouts

### Bridge

The Bridge is a large structure in the front of the Lower Deck, from which the Captain controls the craft. It is a large bridge for such a small ship, to help combat the sense of the ship's small size as well as to store the computer systems. Two chairs with consoles are at the front, by the diamond composite

window panels, while the Captain sits at the center of the room. Two doors are located behind the bridge, opposite the previously mentioned consoles.

It also has easy access to the lower deck's Bathroom and the Closet.

## Cargo Bays

The Cargo Bays make up the bottom 60% of the craft's interior, not counting the grapplers. At 4.5 meters tall per deck, they can store small shuttles, furniture, vehicles, ship parts, and many other types of moderately sized cargo. Each Cargo Bay is identical with two small cargo grapplers to arrange cargo (moved by a grid of tracks in the ceiling), gravity control systems, tiedowns on the floor and walls, padding on the walls, and air containment forcefields.

These Cargo Bays are also designed with power plugs, to use the [Stick-A-Wall](#) compartment system. These allow easy-to-erect and disassemble walls to be put up to compartmentalize the Cargo Bays. The computer detects this configuration, and can even allow the grapplers to navigate around the walls reliably.

The Cargo Bay has access to a cargo bay door with an air containment forcefield, and the whole part of the ship containing the Cargo Bays can be ejected for Escape Mode.

***This ship is able to hold up to 75 items of salvage.***

## Closet

The Closet is a small, shelved, storage room off the bridge for whatever the crew may need it for. Often it is used as an Armory, but it can also be used to store firefighting equipment, [spacesuits](#), emergency food and water, etc.

## Crew Cabins and Utilities

### Captain's and Exec's Rooms

These rooms are larger than the Crew Cabins and have a queen-sized bed, a desk with a computer and a comfortable chair, a storage closet, and multiple shelves on the wall. They can be decorated in any way desired. In exchange for their increased size, they have to do without windows.

### Crew Cabins

Crew cabins have windows along the side of the room made of diamond composite, a twin-sized bed, a closet, and a desk with a computer and a standard chair. Customization depends on the captain's wishes.

### **Bathroom (Lower Deck)**

This small bathroom has a single toilet, a single sink, and a long shower stall. It has room for a few changes of clothes as well. This is for the Captain or crew who can't afford to be very far from the bridge for extended periods.

### **Bathroom & Showers (Upper Deck)**

This bathroom has two toilets and two shower stalls, but also has something many ships lack - a fairly large hot tub. This was added to help with recreation, as well as to make the craft more appealing for long duration travel. It has its own water supply which is cleaned and recycled, so it doesn't drain the main water supply.

### **Laundry Room**

The Laundry Room contains an industrial strength washer, a dryer, an automatic ironing press, and shelving for extra clothing. It also has a large cabinet for assorted bleaches, detergents, and soaps; as well as a sink. There is a space here for a litter box for any small pets on the ship.

### **Engineering**

Engineering takes up a very large section of the lower deck, as it contains the Fusion Reactor Array, the ship's Hydrogen stores, the fold system, life support, the engines, and every other major system aside from the computer. Air and Water are pumped through from the room above through the ship's environmental system. Gravity is controlled directly from here. It is an essential part of the ship from which all bridge functions can be conducted, assuming the main computer on the bridge is intact and not locked out.

### **Food, Water, and Air Stores**

In a room above Engineering; food, water, and air are stored. While the food is stored in refrigerated containers and in cabinets, air and water are stored in large tanks throughout the room on racks. These racks connect to piping which goes down to Engineering. The room also has a microwave for heating up snacks.

### **Medbay**

The Medbay is a very simple one, lacking the technology of a military craft. It has two beds with built in scanners for diagnosis and the monitoring of the patients' conditions. It is possible to use forcefields built into the beds to keep the occupants from getting up, in the cases of seizures or other possibilities where



the person may injure themselves.

A desk, a computer, shelving, a biohazard container, drawers with various tools and bandages, a refrigerator for medicines, diagnostic screens, and alarms are also present to allow medical personnel to do their jobs.

## **Passageways**

Passageways are spartan and simplistic, but are subtly lit and are wide enough for people to walk past each other easily while carrying supplies.

## **Parts Storage**

This is a storage room near Engineering which stores spare parts for the ship. Generally these are easy-to-swap parts which are purchased for the craft, to minimize the need for actual engineering work. Each has a green, yellow, and red light to indicate its status, which can be kept track of by the computer system.

These rooms also hold any unused [Stick-A-Wall](#) panels for the cargo bay. Typically, 100 meters of the walls (all three sizes), 6 doors (one and two meters), and 10 corners come with the craft. It can fit many more.

## **Recreation Area**

The Recreation Area is a large multipurpose room that has a long table with 6 chairs in the center, diamond composite windows along all but one side, a kitchen and dishwasher on one side, and a couch with a coffee table and television on the other. Along the inside wall, there are bookshelves with books, magazines, and movie disks, as well as a desk with 2 computers.

## **Stairs**

The stairs go all the way from the top of the ship by the airlock to the bottom cargo bay. Each section, however, can be sealed off by a 20 cm thick Durandium shutter. These shutters are airtight, and the one separating the interior of the craft from the cargo bay automatically activates when Escape Mode is enabled.

# **Ship Systems**

## **Armored Hull and Hull Integrated Systems**

The hull is [Durandium Alloy](#) with diamond composite windows, and its hull is very simple. It costs little to produce for a starship, and is rather simplistic. Its colors are usually a whitish grey on top and a custom color on the bottom that is provided by the customer. The default color is Blue.

## Grapplers

See [Basic Grapplers](#). This craft is equipped with one pair.

## Airlock

The ship has a lone dorsal standard airlock, to which the craft can dock with many other kinds of craft. A 20cm thick Durandium panel, as well as an air containment forcefield, provides protection should intruders try to board, or if the airlock is for some reason blown off.

## Computers and Electronics

The Packrat has two simple Quantum computers which operate in parallel to control the various systems of the ship. If one should fail, however, the workload is small enough for the remaining one to handle the entire workload. This is for the sake of redundancy and reliability. Most other computers and electronics are standard fare – cheap and reliable.

## Emergency Systems

Each floor can be individually sealed from each other by 20cm Durandium panels, which are air and watertight.

## Escape Mode

In the world of Cargo Vessels, pirates are a constant menace. A small and cheap ship like the Packrat wouldn't stand much chance against a well armed pirate ship, so another solution had to be found.

To protect the lives of the crew of the ship, the Packrat can fully detach from its Cargo Bays and operate independently of them. In this way the ship can escape while the pirates focus on the cargo. It should also be noted that the loss of the Cargo Bays' mass translates to a notable increase in speed, with which the ship can better escape the threat.

It is recommended, if possible, to always ensure the contents of these vessels because the contents can be sacrificed to keep the crew alive.

## Fusion Reactor Array

The Fusion Reactor Array is a group of eight nuclear fusion reactors that power the ship, and are located in Engineering. They have enough fuel stores for roughly a year and a half at a time, but the Hydrogen Collectors can extend this time.

## Hydrogen Collectors

Inspired by the Hydrogen Collectors on the old [Yui-class Scout](#), these hydrogen collectors siphon stray hydrogen from space as the ship travels. These extend the life of the ship's fusion reactors, cutting down on fuel costs.

## Life Support Systems

This ship has standard food, water, air stores in a dedicated room. It also has standard environmental and gravity control, even in the cargo bays, controlled by the Bridge or Engineering.

## Propulsion

This craft has three types of propulsion, though they are limited in speed due to their power source and their load. The systems are very basic and easy to repair.

## STL

The craft uses a pair of very simple Nuclear Fusion Thrusters, capable of propelling the ship at 0.15c with the Cargo Bay attached, or 0.3c in Escape Mode. This engine was selected due to power considerations, ease of repair, durability, and to use the same fuel stores as the ship's own generators. The ability to pull Hydrogen from space also extends the range of the engines.

The variable mass of the cargo bay presented a problem with the ship, especially due to the location of the engines on the craft. The solution was to automatically adjust the grapple on the top of the ship - extending and moving them to provide force to counteract the mass below. It should be noted that since the loading of the ship can be automatically handled by the grapple with just one person observing, the cargo bay is usually very well balanced so as not to impact STL travel adversely or require excessive limb movement.

## FTL

This craft has a simplified CDD, designed to be energy efficient and reliable. The CDD is attached to the sides in standard nacelles. It can manage 0 to 18,750c, though it can go up to 25,125c in Escape Mode.

## Fold

The most compact fold system possible has been installed, allowing just 0.4 ly/m, but as much as 0.75 ly/m in Escape Mode. Most craft this size lack a Fold system, but a Cargo Craft must be able to make deliveries on time in lots of star systems.

## Shield Systems

The ship's defensive shield systems are minimal, designed to protect against debris. They can typically protect against just one hit from a DR 5 weapon. After that, it's best to flee with the Escape Mode.

## Weapons Systems

- [Basic Grapplers](#): (Specifically the Laser Blaster) Tier 10, Light Anti-Starship each

From:

<https://wiki.stararmy.com/> - **STAR ARMY**

Permanent link:

<https://wiki.stararmy.com/doku.php?id=corp:yggdrasill:packrat>

Last update: **2023/12/21 00:58**

