"Great Owl" Interstellar Shuttle

Great Owl series 500 One of the most common types of personal transport available to civilians on Khorsovarolor, this shuttle is often used (for those who can afford one) for jaunts out into other solar systems; more often it is used to ferry people between cities and work sites in the nearby asteroid belt.

Even so it is capable of traveling quite far under its own power, and is a favorite among business executives looking for a cheap but classy way to arrive to conferences and summit meetings.

Development of the Owl

Although the series 100 was designed as an exoatmospheric shuttle to deliver small payloads to space stations in low orbit, when the series 200 was introduced it brought with it a new way to be used. It was frequently taken to mines in the asteroid field for inspection tours, and as more and more people came to be able to afford to purchase or at least rent one, further series added greater passenger capacity and more ability to take those who wished to use them farther and farther.

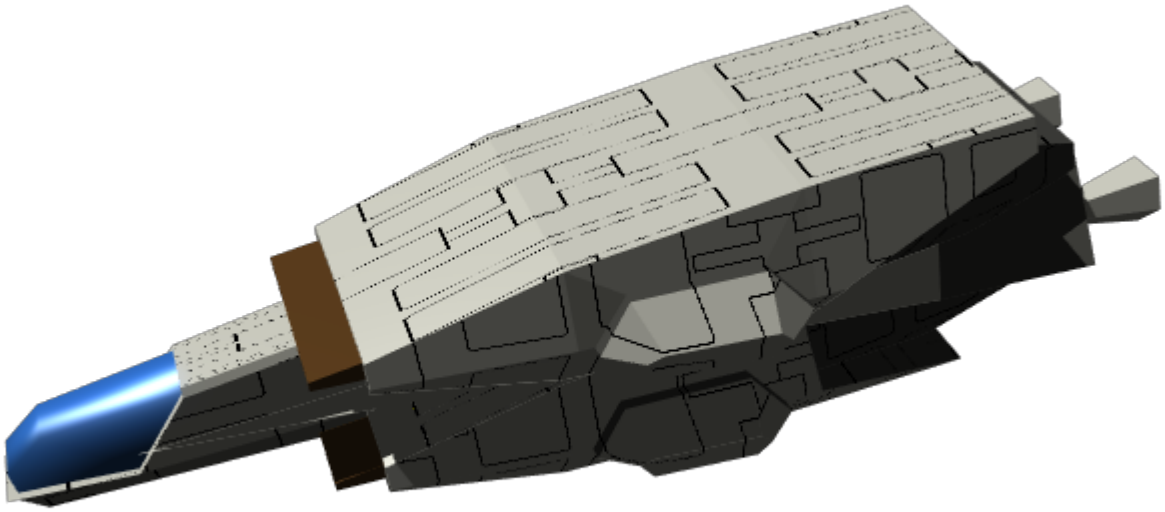
With the series 500 on showroom floors and with an ever-growing fleet of private shuttles parked in starports around the planet, it became necessary for the Transit Authority to establish its presence offworld, effectively opening the door for a round of trade negotiations and treaty possibilities that may forever change the face of Khorsoi politics.

Dimensions and Crew Complement

Planet(s) using this vessel: Khorsovarolor Type: Shuttle Class: TS-500 Great Owl Designer: civilian vehicle Manufacturer: Starliner (civilian) Production: several thousand

Crew: minimum 1 pilot; 3 recommended (1 pilot, 1 copilot, 1 navigator) Passenger Capacity: 20

Appearance



Length: 35 meters Width: 15 meters Height: 5.24 meters Decks: 1 and a half (see below) Mass: 1,862 tons Cargo Capacity: 300 kg

Performance Statistics

Speed (Sublight): .09c Speed (FTL): 4,000c Speed (Aerial): 700 kph Speed (Water): 6 knots Speed (Submerged): none Range (Distance): 580 lightyears Range (Support): 6 weeks Lifespan: 20 years Refit Cycle: every 3,000 lightyears.

Inside the Owl

Cockpit

Standard side by side arrangement, with the pilot sitting on the right side of the cockpit, with the controls set up to allow ambidextrous operation. The pilot is afforded a heads-up display that is borrowed from classic fighter craft; it shows all other vehicles within sensor range ahead of the shuttle to a distance of 12,000 kilometers (while there is a radar system on board the shuttle it is used more for proximity alerts than actual navigation); as well as that, the HUD shows things such as elevation, speed and heading

(which can be programmed to preference depending on point of departure and destination) along with power distribution settings. The copilot has a similar layout, with the added exception that he or she also has a comms board.

The navigator's station is inset against the port bulkhead in the cockpit, and has a large console dedicated to allowing he or she to input calculations and variables; while the database provides a great deal of assistance to the navigator, it is ultimately up to her to plot the intended route, manage the FTL generator characteristics, and monitor for variances in the FTL field. The navigator also has a broader display of the ship's surroundings, requiring a specialized set of skills for prolonged operation.

Crew and Passenger Areas

The shuttle is comparatively small, and as such only carries 23 passengers. The forward area of the ship contains the lounge and a small kitchen; since there is only pilot, copilot and navigator they are expected to treat themselves but also behave responsibly when it comes to food, and as such the food stores can only be accessed three times per day by each person registered for the flight.

Beyond the lounge is a sleeping area with twenty bunks arranged in four stacks of five; this is set opposite to the crew cabin which is somewhat more spacious but only somewhat.

Cargo storage is aft of the sleeping areas and to the port, with the lavatory facilities occupying a small space near the very rear of the ship; the engines are set in an alcove on the starboard side.

The half-deck comes into play as an intermediate equipment area, where such things as the navigational computer, extra stores, and fuel cells are kept. Since the Great Owl is low on available space and passengers are in such proximity to each other for extended periods the half-deck also contains isolation chairs which allow them to immerse themselves in a virtual setting away from others even though they're sitting close by.

Ship Systems

Hyperdrive

Although they've had FTL technology for many centuries only recently have the engineers made a breakthrough in shrinking the machinery necessary to generate a hyperspace window and thus allowing an increase in the FTL speeds of small ships such as the Owl. Short of establishing warp gates in orbit around every possible destination hyperdrive has for the Khorsoi proven to be the most reliable method of transit at FTL velocities.

A Great Owl's hyperdrive is tied directly into the sublight engines and shield system, using the energies to instigate a quantum reaction that opens the hyperspace window and provides enough streamlining to prevent accidents from happening; without such a safeguard irregularities in the thrust field would result in a premature and violent exit.

Generating a hyperspace window is accomplished by using the shields to discharge a phased pulse in the

direction of travel; this pulse disturbs local space-time enough that the forward momentum of the ship combined with the pulse pushes the ship into the hyperspace window. Once inside the sublight engines shut down and the energies of the primary drive system are diverted into generating a field which acts pretty much like a surfboard for starships; as the window tends to snap shut as space-time normalizes itself, it generates a wake that can push a vessel along through the altered dimension.

Once the ship has started moving through hyperspace it must maintain the wake effect on its own; the engines and the shields which keep the thrust field active along with the hyperdrive itself send ripples down the field from stem to stern, much like a frog moving through the water but frequently enough to keep constant motion rather than alternating high and low speeds.

Hull

Great Owls have minimal armor, just enough to shrug off micrometeoroid impacts and stellar debris. Additional protection is available at cost to the owner and is an after-market modification not supported by StarLiner or its affiliates. The 500 series does come equipped with a responsive gel layer that will expand to fill any gaps in the hull; however this is not a permanent solution and if the gel does activate it is recommended that the shuttle is taken in for repairs immediately.

Shielding

Navigational deflectors only, although for a price a Great Owl's shields can be upgraded to allow defense against laser fire and small bombs.

Airlock System

500 series, like older models, do not possess true airlocks, instead having a security bulkhead that maintains cabin pressure when the ship is in vacuum, preventing a catastrophic blowout in the event of a hull breach.

Escape Pods

None

Additional Equipment

- Magnetic docking clamps (rarely used)
- Emergency survival suits
- Life rafts (in case of water landing)
- First aid and fire response kit
- Travel charm (optional)

- Translation module
- Flight data recorder

Sensor and Computer Systems

Class One AI

The main computer is robust enough to support a low level artificial intelligence whose primary purpose is to double-check the FTL calculations and suggest a safe, efficient route towards the intended destination.

Civilian Array

Although it is not very specialized in terms of what it can detect, a civilian array possesses the equipment required to operate a starship traveling between solar systems. For close-in navigation of 1000 kilometers or less it uses a passive radar system. Admittedly this does light the Owl up like a christmas tree, but the intention is for the ship to be visible to other vessels in the vicinity so that they navigate around it.

For the more complex effort of traveling from one planet to another within the same solar system it has a simple but effective computer brain which has been likened by one engineer to a telescope that has all its parts shoved into a box about the size of your typical internal combustion engine. The system is complex enough to read the changes in space-time that occur when a vessel enters faster-than-light travel speeds, enabling navigation through the hyperspace field.

To accomplish this, parts of the hull are fitted with particle detectors, reacting to changes in field strengths and energy states, transmitting this data to the computer brain where it is converted into information the pilot and navigator can use. The nose of the ship holds the highest concentration of these mirrors, and therefore collects the highest variety of data.

The array is sensitive enough to detect another ship entering or exiting an FTL mode from a distance of 50,000 kilometers and detecting weapons fire to a maximum distance of 14,000 kilometers.

Navigational Database

Effectively a list of all possible destinations within the galaxy, it facilitates route planning and execution, cutting down on the amount of travel preparation necessary. As such it also contains a list of preset calculations for FTL travel, making jump calculations easier. Of course, any system which is not in the database can still be visited but it requires manual calculations and the results cannot be guaranteed.