

Zahl-class Cruiser Type 02

The Zahl is intended to be used as the backbone of the new LSDF. The Zahl-class Cruiser is intended to serve as a warship and patrol vessel which would also serve as a proving ground for new Lorath ship building technology and engineering.

Due to the Zahl being the first dedicated space warship that the [Lorath Matriarchy](#) have produced, the mission profile of the Zahl is currently quite vague, thus, the Zahl's assignments range from delivery of precious cargo, to waging full scale assaults at a moment's notice.

Refit Notes

The refitted Zahl has been redesigned to serve as the spearhead of Lorath innovations and as a tribute to the foresight of the original Zahl engineers which ensured that the class would be able to accommodate the newest innovations in Lorath technology.

History and Background

Through the use of cutting edge Lorath designs, and the leap in engineering methods which have been introduced through contact with the YSE, the Lorath have managed to bring their Zahl Cruiser into existence. Prior to the [YSE's](#) influence, the Zahl Cruiser was just in its early planning stages, a mere dream made from ink and paper.

After the [Mishhu](#) assault on [Lor](#), and to uphold the Lorath's agreement that they would defend themselves, the Lorath Self Defense Force has developed the Zahl from the planning stages, to production. This has mainly been accomplished through the use of QnS ship building facilities. Additionally, the QnS documentation that came with these facilities allowed the Lorath to incorporate a number of QnS technological innovations in their cruiser, which range from basic component design, to some entire systems.

Since the destruction of the [Taiie](#) system, and the increased Mishhu activity surrounding the [Southern Nebula](#), and [Lor](#), the Lorath have decided to focus more of their resources to the restoration of the QnS equipment to construct their cruisers, and allocating more personnel to oversee the construction of these vessels.

YE 30 - Refit

The withdraw of the SMX from the war, and the migration of the Lorath from Lor to Nyli has resulted in a massive shift of politics and industry in the Lorath civilization. With a newfound time to regroup, the Lorath have devoted a portion of their new industrial might to bring the Zahl-Class up to the new standards of Lorath technology, and produce new Zahl which will serve as the backbone of the LSDF

fleet, as originally intended.

Dimensions and Crew Compliment

Organizations Using This Vessel: Lorath Self Defense Force Type: Cruiser Class: Zahl Class Cruiser Type 02. Designer: Velor Tomoe Tur'Lista, LSDF Manufacturer: Lorath Matriarchy Production: Mass production as needed

Crew: 4 - 12. (6 Would be standard complement, 4 would be the minimum requirement without computer automation.) Maximum Capacity: 30 (Not counting crew in stasis). Appearance: The appearance of the vessel as seen from above is of a crescent like shape with an extension that is like that of a neck, that leads to a some what triangular shaped section that houses the bridge of the vessel.

Length: 185 Meters. Width: 125 Meters. (Without wingtip extensions) Height: 52 Meters. Decks: 4.5 Mass: 2,750,600 ~ 2,890,000 kg

Performance Statistics

Speed (STL): .400 C Speed (Subspace Wave Drive): 10,000 C using only antimatter systems Speed (Hyperspace Fold Drive) .75 ly/m Speed (Aerial): Mach 5.

Range (Distance): Range is limited by the lifetime of the vessel. Range (Support): The vessel can travel for a period of eight months without resupply. Lifespan: Estimated at 25 years without refits. Refit Cycle: Refits are carried out at the earliest convenience; mandatory refits are carried out every two years.

Inside the Zahl

Bridge

The Bridge of the Zahl is located in the forward section of the vessel on the second deck. The bridge is shaped in a trapezoid like shape. Two "pits" house the command and control stations of the bridge. The sensor, weapons, and navigation stations are located on the left side of the bridge. The engineering, communications, and general computer access stations are located on the right side of the bridge. A large view screen is located in the front section of the bridge to allow for all stations on the bridge to have a clear view of what is being observed. The captain's chair is located in the middle of the bridge to allow the captain to easily shift his attention from one bridge station to another. Five doorways are at the rear section of the bridge, the doorway on the far left side leads to the bridge's head. The door in the middle left leads to the bridge's aid station. The door in the middle leads to the corridor that leads to the rest of the ship. The door to the middle right leads to the captain's office. The door to the far right leads to the ladder access to above and below decks.

Main Crew Quarters

There are two main crew quarters; these quarters are located on the far right side of the vessel on deck two. These quarters are built in a typical bunk room style and house four individuals per room. In these bunk rooms there are limited computer access terminals and communication terminals placed inside of the bulkhead for crew usage. Additionally there are sliding panels that hold retractable tables and shelves. Behind what seems to be the bulkhead in the middle of the room there is a closet behind the sliding wall, inside of this closet there are two sets of cabinets, meant to be shared between the occupants of the bunk room.

Captain's Quarters

The captain's quarters are located on the right aft side of the vessel on deck two. The captain's quarters are far more luxurious in comparison to the bunk rooms that other crew members have at their disposal. The standard amenities these quarters are equipped with include and are not limited to; a bath, a private bathroom, a dresser desk combination, and a pit style bed. Captain's quarters often are customized for each vessel for each captain.

(Note: A "Pit Bed" is a bed which is built into a recess in the flooring or has a frame built around the intended sleep area. In the case of the "Pit Bed" used on the Zahl, it is built into the flooring. If there are any more questions, please direct them to my PM box, where I can then elaborate more so about the dynamics of bedding and sleep related furniture.)

Emergency Medical and Break Rooms

On each deck of the vessel, there are "Break Rooms". These rooms are used as a first aid station, and as a place for crew members to seclude themselves if they require rest, or a moment of solitude.

Typical break rooms incorporate a single adjustable bed, able to be configured into a sitting, laying, and inclined position, a metal chair, a small desk, and a wall mounted [first aid cabinet](#).

Small Arms Storage

There are several small arms storage rooms aboard the vessel. Pistols, rifles, and smaller crew served weapons are stored in these rooms. The weapons themselves are located inside of lockers that are sealed with a nerve impulse recognition lock. These locks operate on the principle of each individual's brain wave pattern being different than any other individual's; the mechanism is used by placing the user's palm against a panel that reads nerve impulse patterns through the skin. These palm scan panels also perform a scan of the user's palm print, pulse, blood pressure, and DNA.

If a high blood pressure is detected in a non-combat status situation, the lock mechanism will trigger a computer prompt for a PIN which can be input through a number pad located next to the lock.

Per Small Arms Storage

- 10: "Hand Cannon" .50 Cal Revolvers.
- 10: FMS-1 Quad-barrel Linear Shot AKA ' [Stalwart Special](#)'
- 400: Rounds of FMJ .50 Cal Ammunition.
- 50: Rounds of explosive .50 Cal Ammunition.
- 100: Rounds of fragmentation .50 Cal Ammunition.
- 50 Rounds of high velocity .50 Cal Ammunition.
- 40: Quick loaders for revolver ammunition.
- 1500: "Needles" for "Stalwart Special"

Post Refit

- 10 [LSDF "Ek'yra" Railgun Service Rifle](#)
- 10 [LSDF "My'hyz" Service Rifle](#)
- 10 [LSDF "Hik'id" Plasma Assault Rifle](#)
- 15 ["M'Cel" 40/30mm Grenade Launcher](#)
- 30 [FMR-1 Stalwart Enforcer](#)
- 12 [Magnetically Contained Charged Plasma Saber](#)
- 12 ["Wind" Armor Series](#)
- 20 Plasma and Energy packs for the Hik'id
- 20 Battery packs for the Ek'yra
- 500 Rounds of 7.62mm My'hyz ammunition
- 500 Rounds of 7.62mm Ek'yra ammunition
- 60 Rounds of 40mm grenade launcher ammunition, various compliments
- 60 Blocks of Stalwart Enforcer ammunition
- 12 Plasma saber power packs

Heavy Armory

As the name implies, the Heavy Armory is where the stronger ordinance carried by the vessel are located, this armory is located on deck two. Lockers in this armory operate just the same as the small arms storage locks, but these lockers are also equipped with a simple lock mechanism that can be unlocked with the use of a key with simultaneous use of the scanner lock. The keys are carried by the first in command, second in command, and ship's quartermaster. The armory's entrance is protected by a heavy durandium hatch equipped with a hydraulic assist device that allows the hatch to be opened with greater ease. A ladder and lift is also placed inside of the heavy armory to allow for heavy ordinance to be moved between decks.

New Locking System

With the refit of the Zahl, the old lockers for heavy weapons and the vault door itself have been upgraded to include a new key mechanism. New keys have been distributed which incorporate hollow recesses, curves, and complex internal shaping to make keys far more difficult to duplicate. These keys

are to be utilized by inserting the key into a special port in the locker or vault locking mechanism which contains a portion of [Pico-Jelly](#). The pico-jelly in the locking mechanism fills in the recesses of the key and sends data into the locking mechanism to confirm if the key is a match to the proper key configured to the lock.

Weapon Compliment

Contained inside of the heavy armory are the following:

- 20: RPAMS – Rocket Propelled Antimatter Missile System.
- 50: Low yield antimatter Missiles. (Equivalent to a typical rocket launcher or bazooka charge)
- 50: Fragmentation Explosive Rockets.
- 50: Fragmentation Grenades (5 second fuse).
- 200: Unfilled Antimatter Containment Missiles
- 2: Neural lock secured antimatter taps designed to securely interlock with antimatter missiles.

Post Refit

- 1: Nanite constructor chamber. (Five meter by three meter)
- 20: [Magnetically Contained Charged Plasma Saber](#)
- 40: Plasma saber power packs
- 10: [Combined Particle Cannon Technology](#), Powerarmor Configuration
- 10: [Combined Particle Cannon Technology](#), Fighter/Shuttle Configuration
- 10: [Lorath Plasma Arc Disruptor](#), three foot strips
- 10: [Lorath Plasma Arc Disruptor](#), Powerarmor/Shuttle/Fighter Configuration
- 20: [Devil's Fountain Gatling Weapon](#), 7.65mm configuration
- 20 [LSDF "Ek'ya" Railgun Service Rifle](#), including vehicle mounts
- 20 [LSDF "My'hyz" Service Rifle](#), including vehicle mounts
- 20 [LSDF "Hik'id" Plasma Assault Rifle](#), including vehicle mounts
- 20 ["M'Cel" 40/30mm Grenade Launcher](#), including vehicle mounts
- 40 ["Wind" Armor Series](#), unmodified
- 20 ["Wind" Armor Series](#). with [Gust Armor Kit](#)
- 30 Gallons of metallic [Pico-Jelly](#)
- 50 Plasma Power Cells
- 50 Energy Cells
- 5,000 7.62mm Chemically Propelled Ammunition
- 10,000 7.62mm Tungsten Slugs
- 500 40mm Grenade Launcher Rounds.
- 100 Unfilled 40mm Antimatter Containment Rounds

Note: In the refitted variant of the Zahl, the Heavy Armory includes a nanite constructor system which grants the new armory the flexibility of being able to create ammunition and equipment on demand.

Inter-Deck Ladders

Several ladders are placed throughout the vessel; these ladders are used to move between the three crew habitable decks of the vessel. At each deck there is blast shutters placed at the opening to the deck. These blast shutters can be manually activated at the opening, or can be activated from the bridge's security station. The blast shutters are also set to automatically seal off the deck when decompressions or explosions are detected. When sealed, these blast shutters can only be opened after entering an access code, and pumping a handle on the blast shutter three times to ensure that the blast shutter is not accidentally opened. Each blast shutter has a monitor device embedded in it that displays the temperature and air pressure on the other side of the shutter. To ease the movement of materials from one deck to another, a small motorized platform can be attached to the shaft's ladder, allowing the shaft to be converted to a lift.

Mess hall/Wardroom

The mess hall and wardroom is used as the primary meeting location for the crew of the vessel when it is time for meals, and for situations where the crew should be gathered together for a briefing or formal function.

The wardroom is equipped with several tables and chairs. These furniture pieces are equipped with magnets upon the legs of the chairs and tables in case of gravity failure.

Food is served upon either ceramic or plastic dishes depending upon the occasion and meal. Often dinners are served upon ceramic square shaped plates and large and typical soup bowls. Additional dish wear may be acquired by the captain of the vessel.

Galley/Kitchen

The kitchen of the vessel is located across the corridor from the mess hall. The kitchen primarily relies on a **Emfratec "Galley Master"**. The kitchen also includes a stainless steel cooking surface/counter (Think sushi bar.), and an all-in-one blender, food processor, and rapid food dehydration unit.

New Galley Technology

Energy to Matter Device - Galley Edition

The galley includes an energy to matter converter designed to create organic compounds to be utilized in the organic tissue culture chamber. The energy to matter device also produces water for crew consumption.

Organic Tissue Culture Chamber

The “Organic Tissue Culture Chamber” is a climate controlled containment unit which also includes cloning and culture growth technology, allowing for one organic tissue sample to serve as a catalyst to produce a nearly never ending supply of organic material intended for consumption.

- Meat: Through the use of a tissue sample from healthy genetic stock gathered from cattle, the meat culture chamber produces a two meter by two meter lump of meat every day.
- Fruit: By utilizing multiple culture systems and feeding the product into a blending chamber, the fruit culture chamber produces a multi-fruit paste by the bucket full. Excess fluids from the process are drained to a containment unit which contains the fruit juices for later consumption.
- Vegetable: Much like the fruit culture method, the vegetable system produces a green sludge-like paste which incorporates various vegetables into one combined product. Much like the fruit variant, excess juices are stored in a container for crew consumption.
- Dairy: By utilizing the culture system, a steady production of dairy product can be produced and fed into a double-chambered culture unit. In one chamber, the dairy product goes through a treatment and catalyst induction process which produces a blended cheese product. The other chamber yields a sweetened yet creamy milk product.
- Grain: The grain production culture chamber also includes a milling system which produces a fine powder-like grain product which can be utilized to produce [Bread](#), cereals, imitation rice, pasta, and flour.

Small Organic Tissue Culture Unit

The smaller organic tissue culture unit is utilized for producing various organic compounds in small quantities, such as spices, sugars, and other such materials.

Emfratec Stove

The galley includes a 'Galley Master' variant of the [Emfratec Stove](#).

Refrigeration Unit

The galley includes a walk-in refrigeration and freezing unit where food can be stored for later usage. The walk-in unit also includes an emergency door-release on the inside.

Often a pair of pre-trained [Helashio](#) handle the serving and preparation of meals, these Helashio are trained in preparing traditional Lorath cuisine, and are often provided with comfortable quarters in the cargo section of the Zahl. (Additional note, workers aboard LSDF vessels are paid for their employment. So they are not slaves ^^;).

In some cases, the galley is manned by Lorath crew. The galley requires at minimum one person to operate it for a standard size crew. Additional crew members can work the galley if food demands become critical.

Food Storage

The fresh food supplies of the vessel are stored in the bottom uninhabited deck of the vessel, a walk in freezer and refrigerator, and several large kegs used for storage of alcoholic beverages and other fluids intended for crew ingestion.

Main Science and Stellar Cartography

The science and stellar cartography section of the vessel shares the same space as the engineering section of the vessel. There are several computer and sensor access terminals placed against the bulkheads of this area. A “volumetric” projection apparatus is located in the middle of the science area, this device is used to project an image of the surrounding space around the vessel, and is used to aid in navigation and mapping.

A sealed lab is located adjacent to the open lab area. The sealed lab is atmosphere controlled and is kept isolated from the rest of the ship to prevent contamination of the experiment, or the rest of the ship. The sealed lab contains various equipment required for experimentation, additional equipment can be brought aboard dependent upon the Zahl’s mission profile.

Engineering and Engine Cores

The main engineering area of the vessel is where most functions concerning the mechanical workings and computer workings of the vessel are maintained from. These functions are monitored and regulated from several access terminals. On the starboard and port sides of the engineering section are the main drive cores of the vessel, these drive cores allow the vessel to move at hyper luminal velocities, directly beneath the engineering section is the fusion core used for sub-luminal velocity propulsion. Also housed in the engineering section is a large durandium and titanium-carbide “box” used to house the ship’s computer system.

Refit Addition

The refitted Zahl also includes a durandium enclosure which houses a combination [antimatter reactor and energy/matter converter system](#). Along with the added enclosure, a plasma generator system is also interfaced with the enclosure and operates in tandem with a [Plasma gathering and containment system](#).

Along with the added power systems, the 'Box' which housed the computer of the Zahl has been modified to also have compatibility with ARIA computing systems. The modification essentially involves the installation of an interface chamber which has been attached to the 'Box'.

Sickbay

The sickbay of the vessel is the main medical aid and treatment center of the vessel. Inside of the sickbay is a wide range of scanning and treatment equipment designed to be mounted upon any one of the four medical tables in the main area of the sickbay. There are also several cabinets that hold the hand held instruments that would be needed by the doctor, these tools are placed on a magnetic sheet with a weak pull that is intended to keep the tools in place in the event of a gravity failure. All drugs and medicines intended for medical treatment are stored inside of a cabinet that uses a neural scan lock mechanism and palm print scanner.

The sickbay's atmosphere is regulated by its own life support system that is isolated from the rest of the vessel's air supply. The sickbay itself is kept at a low pressure/negative atmosphere level in comparison to the rest of the ship, to prevent contaminants from escaping into the rest of the vessel upon the time of the doorway to the sickbay being opened.

Refit Addition

A three meter by two meter 'box like' unit has been added to the refitted Zahl's sickbay. This unit is a combination of a nanite constructor and organic pico-jelly dispenser. This unit is intended to be used to create synthetic organs, tissues, blood, and even limbs. Each new dispenser and constructor unit can also be fitted to dispense other forms of pico-jelly depending on the doctor's needs. This unit is also meant to supply to the demands of the operating room and interrogation chamber.

Operating Room/Interrogation Chamber

Adjacent to the sickbay is a sealed chamber that is used to treat highly contagious patients, conduct surgery, and interrogate prisoners. Inside of this room is a single bed equipped with restraints. A cabinet stocked with medical tools, a cabinet filled with medicines and other chemical substances, and a cabinet stocked with torture devices, including several slave collars.

Gym and Training Area

Due to physical fitness being an important part of the Lorath culture, a gym and training area has been added to the vessel, the gym is equipped with magnetic resistance weights, treadmills, and plenty of space for sparing, and aerobic exercise.

Baths and Showers

The vessel is equipped with both baths and showers, the three baths are intended to be shared while in use, the shower area is an open space, with shower fixtures placed in the ceiling and bulkheads. Often crews are allowed to customize this area as seen fit for comfort. The standard configuration is often

undivided, thus allowing for social interaction.

Refit Note

In the refitted configuration of the Zahl, vacuum systems have been added to the drainage systems of the baths and showers, and additional gravity generation units have been put into place to prevent gravity failure induced flooding and general water induced chaos.

Attachment Points and Airlocks

Located on the upper hull, lower hull, port and starboard wingtips, and belly are airlocks which include attachment points that would allow for the attachment of additional features to the vessel, or for the docking of vessels. These airlocks are rather plain, but each one also includes a small control room (The size of a rather small closet).

These attachment points operate through the use of a magnetic interlock and locking bolt system. Thus allowing for a solid hard point connection, or an easy to remove magnetic connection.

Refit Note

Airlocks now include a standardized nanomachine sprayer system which is designed to decontaminate atmosphere, objects, and individuals which pass through the airlock. Applied nanomachines are also designed to cooperate with the immune systems of those the machines interact with who are not marked as hostiles, through this interaction the immune systems of those who receive a dose of these nanomachines is actually augmented against disease or infection.

Along with the added nanomachine sprayer system, an automated turret has been added inside of the airlock. This turret is essentially a modified [LSDF "Hik'id" Plasma Assault Rifle](#) and [FMS-2 Plasma Thrower 'Stalwart Suppressor'](#) installed in tandem, which are designed to feed off of the ship's power supply. This turret is protected by a gravity regulator unit which prevents scalar damage.

Along with the defensive measures which have been added, the airlocks have also been brought to regulation in regard to compatibility with other common-place spacecraft.

Quartermaster Office

The ship's quartermaster's office is adjacent to the small arms storage room and small craft repair and maintenance area, the quartermaster's office can be isolated from the surrounding areas by the use of it's own environmental system along with a set of bridge and quartermaster controlled blast shutters, this is to allow for the isolation of the ship's armory from intruders in case of boarding. Usually, the blast shutters are kept open, allowing for work crews to pass through the office with ordinance from the arms

storage rooms which are placed adjacent to the office, and below the office's deck. The office is located on the second deck of the vessel.

Toilets (4 per deck)

Toilets are located near the galley, crew quarters, adjacent to the bridge, and adjacent to the pilot and warrior bunks. These toilets also include an optional "Tube" function which would be used in the situation of zero gravity. The "Tube" function involves a tube which has a rubber seal upon the end of it which conforms to the shape of the user's waste orifice, thus allowing for a leak proof release of waste. These tubes are self cleaning upon retraction into a panel located on the side of each toilet, self cleaning is accomplished through the use of high pressure steam jets, and a cleansing solution submersion inside of the tube panel. When cleaning is complete, the tube remains submerged in liquid which remains at a constant 100 C, thus removing any remaining bacteria, prior to use, a quick burst of cooling liquid is passed through the sealed panel, which cools the tube to a warm temperature near Lorath body temperature. The tubes operate through the use of low pressure vacuum which sucks the waste down the tube to be disposed of.

Computer Access Terminal Rooms

On the second deck of the vessel, there are two computer access rooms intended for use by individuals whom require the capability to rapidly access and send data. Also these thermals can be used to program computer functions. These terminal rooms are sealed and require a crew member's access code to enter. The terminals functions are limited depending on who is accessing the terminal. Only the ship's commander can make any alterations to the computer's normal operations.

Captain's Office

The ship captain's office is located adjacent to the bridge, each office is different, they are decorated and outfitted as the ship captain desires.

(QnS Document Assisted) Panic Room

The panic room is a small room which can be accessed by the use of the corridor which leads to the bridge. The hatch for this room is hidden behind a sliding bulkhead which appears as if a door were not present. The room is protected by several layers of heavy durandium armor plate, its own QnS/NDI made Z shield generator rated at roughly 50 teratons per square centimeter , and several sensor jamming devices which operate similarly to those used aboard the Harvester salvage vessel. This room is intended to be used by VIPs while the ship is in a dangerous situation. Much of the protocol for the usage of this room is left to the captain of the vessel, standing orders remain that only VIPs have permission to use the room, and this includes the captain.

Laundry

The ship's laundry room is located on the second deck, near the engineering area and down the corridor from the bridge. The laundry room is equipped with basic washers and dryers, but also includes a clothing decontamination machine, intended to remove harmful materials from contaminated clothing. Due to this function, the laundry room has gained its location near the engineering area.

The decontamination machine operates through the use of non-lethal radiation, high pressure steam, various cleaning solutions, and a soak in a NBC (Nuclear, Biological, and Chemical) neutralizing agent.

Refit

Along with the old methods utilized in the original Zahl's decontamination process, an additional process of bathing the laundry in a cleansing nanomachine solution has been adopted.

Soldier's Bunks

The soldier bunks are located separately from the crew bunks, these bunks are located on the 1st deck of the vessel. The bunk areas dominate the top deck, often serving as more of a barracks than a bunk area due to most of the upper deck being dominated by the two large rooms which are located on the starboard and port sides.

The soldier's bunk rooms consist of several dozen alcoves which are recessed into each bulkhead. In these alcoves are two metal "shelves" with thin cotton stuffed mattresses. Furniture is sparse and is often limited to only a handful of chairs, and a pair of desks. Located on the floor in front of each alcove is a pair of footlockers used to store personal belongings. Additional decoration is often dependent upon the company or squad of Lorath warriors assigned to the vessel, and how many are awake at a given time.

Launch Bay

The launch bay is located on the 1st deck, above the maintenance and re-supply bay. The launch bay is designed to be able to launch two fighters or four power armors at one time. The launch bay is separated from vacuum by a durandium clad structol blast shutter which is moved in and out of place by the use of a magnetic system which can rapidly slide open the door or shut it within a quarter of a second through the action of attracting or repulsing a series of electromagnets fixed to the durandium layer of the door. The launch bay can be accessed either by the lift system from the maintenance bay, or the decontamination and locker room which is located behind the bay. Small craft are stored below the launch bay deck, and are moved adjacent to the maintenance bay area.

Refit Note

Launch bays are now equipped with gravitational field regulators which prevent scalar damage from being inflicted in the launch bay area. These units also include a projected graviton generator which can be utilized to 'bring in' small craft which are unable to land on their own, or to slow craft which are coming in too fast.

Along with the graviton generator system, four turrets have been added to the interior of the launch bay. These turrets consist of two turrets with quad-mounted modified [LSDF "Ek'yra" Railgun Service Rifle](#) with 40mm grenade launcher systems, and two Power Armor grade [Combined particle cannon](#).

Small Craft Repair and Maintenance

On the middle deck of the vessel is the small craft repair bay. This large area of the vessel is used to repair and re-supply small craft launched from and retrieved by the vessel. The small craft repair bay is equipped with a lift system used to move small vessels to the deck above and below, along with crew and equipment.

Repair and maintenance is carried out by a crew of mechanical engineers, computer operated robotic arms, or a combination of both. Storage is dependent upon the small craft in use, but they are often moved onto "racks" which are fixed upon the walls and ceilings of the maintenance and launch bays, which allow for small craft to be stored as if they were being placed upon shelves.

Refit Note

In the refitted variant of the Zahl, the repair and maintenance process has been improved by including a nanomachine constructor system which can repair and mend hull breaches, replenish ammunition supplies, and even clean off dirt and contaminants. Along with the nanomachine system, a pico-jelly dispenser system has been added to allow for the rapid sealing of breaches and the temporary repair of components until a maintenance crew can give the damaged unit proper attention.

Decontamination and Locker Room

The decontamination and locker rooms are a pair of rooms which are separated by a stone thread mesh laminated high strength plastic wall. The decontamination room consists of a shower system which uses basic water, combined with a mixture of nanomachines designed to neutralize nuclear, biological, and chemical threats. The airlock which separates the two rooms also includes a sensor system that detects microbial threats, radiation, and harmful chemical compounds. Contaminated uniforms are placed into a sealed canister which can be taken to the decontamination machine in the laundry room. This canister can be placed into the machine and opened and processed inside of its durandium and lead airtight confines.

The locker room consists of a dozen two meter by one half meter lockers which have a depth from

opening to rear of one half meter. The locker room has a pair of benches used for comfort while removing or putting on clothes. Often the locker room is decorated by the pilots or soldiers who use the room often.

Primary Missile and Torpedo Storage

The primary missile and torpedo storage is located on the 3rd deck, the storage room provides access to the ship's main launch tube. The storage room is complemented with smaller torpedoes meant for anti-ship operations, and large missiles, intended for planetary bombardment. This area is equipped with blast shutters and a security access requirement. Often missile and torpedo loading is handled automatically by the use of a robotic lift system, but the missile and torpedo tube can be accessed from this room and loaded manually. The ship's sensor probes are also stored here, to allow for probes to be launched from the main tube.

Refit Note

This area now also houses a [Repeating Launcher System](#) and the proper equipment to feed and maintain the system.

Cargo Holds

The ship's cargo holds are located on the 4th deck, they can be accessed by the use of the maintenance shafts, launch bay lift system, and the belly airlock. The cargo hold is meant to hold cargo ranging from mission related supplies, to passengers.

Refit Note

Standard on newly refitted Zahl-Class ships are three 50 gallon [Pico-Jelly](#) containment vats which are connected to a distribution network which allows for the jelly to be distributed within the hull layers, and to locations within the ship with outlets for the jelly. These vats also include specialized constructor mechanisms which gradually replenish the jelly supply available.

Maintenance Shafts

Between the four decks of the vessel are shafts which run between the deck plates, these shafts are half a meter in height, and half a meter in width. Within the walls of these shafts are the power grids, water supplies, and other major components which keep the ship going. Access to these shafts is strictly regulated, only command staff and engineers may access these shafts. When the shafts are empty, they are kept evacuated of air, and isolated by blast shutters.

Refit Note

Maintenance shafts now house distribution pipes intended for the routing of pico-jelly throughout the ship. Along with the new distribution network, maintenance shafts also include plasma-release valves at regular intervals within the shaft to allow for the interior of the shaft to receive a wash of super-heated plasma in the event of contamination or intrusion. The temperature of the plasma is regulated to prevent damage to the systems in the area of the discharge and is confined by a gravitational field system which prevents heat and matter bleed off and splash.

Ship Systems

Hull

Refit Note: Due to the advancement of Lorath metallurgical technology and production technology, the former hull has been nearly entirely refitted to accommodate the newest of building materials. The outer two layers have been stripped away to make way for new material. Formerly, the hull of the Zahl was composed of titanium carbide, durandium, and high density carbon. With the refit of the Zahl, the hull materials have been overhauled and replaced in majority.

Exterior Hull Layer

The exterior hull of the refitted Zahl is composed of [structural mesh](#). Structural Mesh is a product of the structural layering system, and has been utilized to produce an exterior hull which is capable of sustaining much more damage than the titanium carbide predecessor which came before it. Along with the structural mesh's durability, it also provides heat dissipation and the capability to diffuse gravitic and scalar effects.

Secondary Hull Layer

The secondary hull of the Zahl has been designed to utilize a product of Sourcian technology, replacing the old Durandium ¹⁾, with [Class A Structol](#). Due to the nature of Class A Structol, this layer of hull is capable of distributing impact damages, enduring intense energy reactions, and protecting the interior of the Zahl from electromagnetic interference and chemical attack. Unfortunately, due to the need to establish feeding channels, airways, and light sources; the structural integrity of the Structol layer has suffered slightly, but for the sake of long term survivability.

Inner Hull Layer

This layer of hull material in the Zahl is intended to be utilized as an insulation layer and atmosphere sealing layer. This layer of hull is composed of a combination of stonethread fiber weave, and a

compressed filler and coating of boron carbide material. The combination of [Stone Thread](#) with boron carbide material provides an excellent means of sound insulation, temperature insulation, radiation shielding, internal damage induced breach prevention, and is capable of being easily replaced with an application of a carbon fiber boron carbide sealing foam.

Structural Points: 20

Bulkheads

Serving as the internal walls of the Zahl, bulkheads are required to be constructed of sturdy material and able to endure extensive damage.. However, the interior of the internal walls of the Zahl are hollowed out to allow for utility conduits and tubing to be put through the interior of the bulkheads. Access panels are built into the bulkhead to allow access to the conduits.

Components

External Structural Material

The bulkheads of the Zahl are composed of carbon-ring material with an overlay of titanium carbide, along with the actual structural layer, support beams and other portions of the bulkheads are composed of titanium carbide and carbon-ring components.

Insulation

Much like the exterior hull, the interior of the Zahl is insulated through the use of carbon fiber material and boron carbide material. The application of this material as insulation provides radiation protection, sound blocking, heat protection, and damage prevention.

Operational Components

Within the bulkheads of the Zahl are a series of tubes and conduits which provide the vital utilities needed for the operation of the Zahl. Utilities such as plasma, heated water for heating and crew use, electrical power, breach sealing [Pico-Jelly](#), waste management pipes, life support systems, communication lines, and other vital utilities. Along with the obvious utilities, series of lines of [Structol Class B](#) have been applied to be utilized as additional computational support and as a means of modifying or repairing internal components.

Pico-Jelly Storage and Supply

A new addition in the refit of the Zahl, the [Pico-Jelly](#) storage and supply system has been added for multiple reasons.

- **Crew Comfort:** Due to the wide variety of applications of pico-jelly for entertainment or utility, a supply of the material provides greater comfort for the crew of the ship.
- **Tool Use:** Thanks to the wide range of shapes and which pico-jelly can assume, the material can be utilized as a means of producing functional tools such as wrenches, hammers, and basic non-powered mechanical devices.
- **Medical Usage:** Due to the widely configurable nature of organic pico-jelly, the material serves as an excellent means of providing rapid aid in the event of massive wounds, broken bones, and other such physical damages.
- **Hull Breach Sealant:** Pico-jelly can be utilized to rapidly and effectively seal breaches in the hull of the ship, preventing the full decompression of compartments and providing a greater survivability to the ship.

Dispensers

Dispenser systems for pico-jelly have been incorporated into every room of the Zahl. These dispensers are attached to the bulkhead of the room and are essentially one foot by one foot boxes with a depth of four inches. Each box has three dispenser nozzles with thirty feet of hose length included. Each nozzle provides a different form of pico-jelly. Plastic, organic, and metallic.

Storage

Pico-jelly supplies for the Zahl are stored in the cargo hold in three forty gallon vats. Each vat is capable of producing additional pico-jelly through a specialized production process.

Airlock System

The Zahl connects to other vessels through the use of airlock systems placed at the belly of the vessel, the topside of the vessel, and at the two “wingtips” of the vessel (Slightly behind the mounting positions on the wing-tips). The Airlock systems include an extendable docking tube which uses vacuum suction devices to attach to smooth hulls of other vessels. If the other vessel’s hull is unable to be attached to by such means, the tube also includes magnetic attachment devices, and a temporary adhesive. Other than this feature, the airlock system relies upon the basic usage of two doors which enclose a small room which can be pressurized or decompressed.

Refit Alteration

The size and shape of the airlock connection has been retooled to fit to the standardized airlocks utilized by other common-place spacecraft. Along with the size and shape, the physical docking mechanisms have been retooled for maximum compatibility.

Airlocks also now include a standardized nanomachine sprayer system which is designed to decontaminate atmosphere, objects, and individuals which pass through the airlock. Applied nanomachines are also designed to cooperate with the immune systems of those the machines interact with who are not marked as hostiles, through this interaction the immune systems of those who receive a dose of these nanomachines is actually augmented against disease or infection.

Along with the added nanomachine sprayer system, an automated turret has been added inside of the airlock. This turret is essentially a modified [LSDF "Hik'id" Plasma Assault Rifle](#) and [FMS-2 Plasma Thrower 'Stalwart Suppressor'](#) installed in tandem, which are designed to feed off of the ship's power supply. This turret is protected by a gravity regulator unit which prevents scalar damage.

Front Hatches

Two hatches are placed on the front of the vessel, these hatches include ramps. The hatches are located on the 1st and 4th decks. These hatches are often used for rapid deployment of Lorath warriors in the event of a ship-to-ship raid. These hatches also include a retractable arm which would be placed against a hatch or hull breach, allowing for a seal to be formed and bridging the two ships.

Refit Alteration

The retractable assault docking arm has been altered to include a pico-jelly spray system which can be used to form a layer of material which aids in forming an atmospheric seal between two ships.

Along with the alteration to the docking procedure, a series of internal defense turrets have been added within the assault tube and to the hatchway opening itself. These turrets consist of turrets with quad-mounted modified [LSDF "Ek'ya" Railgun Service Rifle](#) with 40mm grenade launcher systems, and Power Armor grade [Combined particle cannon](#). Most Zahl hatchways are equipped with no less than six turrets.

Escape Pods

Escape pods are located on the underside of the vessel; these pods are designed to carry four conscious individuals for seven days. If the individuals are placed into stasis, the pods can sustain a group of ten for an indefinite time. The pods are also equipped with a low yield fusion drive system to allow for short range travel, and a pair of retractable solar sails.

Refit Additions

Refitted Zahl now include escape pods which are equipped with subspace transmitter systems, subspace laser transmission systems, water recyclers, and [first aid cabinets](#).

An 'Officer' escape pod has also been included, this escape pod includes a capacitor system which powers a wormhole generator. This wormhole generator is capable of moving the escape pod up to five light-years in distance. However, due to the power demand of the generator, the capacitor is only able to provide one jump per three days.

Razor's Edge

The forward "head" of the vessel has been designed around the Lorath warrior's love for melee combat, which has been symbolized by the design of the hull to bring the edges of the hull of the head of the vessel to a sharp monomolecular edge. This design feature has also been made functional by re-enforcing the hull plates in this area with several structol braces, allowing for direct hull-to-hull impacts. Usage of this design feature is frowned upon by most ship commanders, due to the sheer pig-headed nature that it would require to risk such a tactic.

Refit Addition

On refitted Zahl units, [Lorath Plasma Arc Disruptor](#) strips have been added adjacent to the edge of the 'Razor', these strips are designed for short-range engagement and utilize a projection feature much like the [Magnetically Contained Charged Plasma Saber](#). The new 'Razor's Edge' with plasma projector augmentation is theoretically capable of being able to break through Zesuaium.

Troop Storage

Two hundred cryonic pods are located on the 1st deck of the vessel adjacent to the soldier bunk areas. The cryonic pods are stacked one on top of the other, allowing for a large number of storage pods to be placed into a small area. In the event of a ship boarding or other situation requiring the support of Lorath soldiers, these pods are removed from storage by the use of automated robotic arms. The stored Lorath soldier is then quickly thawed.

Refit Alteration

With the new innovations in Lorath biotechnology and medicine, thaw times have been cut down to 1.5 minutes.

Sales Alteration

In the refitted Zahl, a new sales incentive has been added. Cloned Helashio are offered instead of Lorath soldiers. These Helashio have received the proper programming to be obedient soldiers and quite functional.

Attachment Points

The Zahl is equipped with several points where additional hardware, or even other starships can attach to the vessel. These attachment points are located on the lower hull, upper hull, and wingtips of the vessel.

These attachment points operate through the use of a magnetic interlock and locking bolt system, thus allowing for a solid hard point connection, or an easy to remove magnetic connection.

Shield System

The refitted Zahl is now equipped with [Lorath Shield System Technology](#). Systems included are EM shielding, plasma shielding, and gravitational shielding. Also included is the combined shield system function.

Shield Points: 20

Environmental Systems

The Zahl is equipped with temperature control, air pressure regulator, air recycling, water recycling, organic matter recomposition and recovery, and stasis condition activation device (Ship wide freezer). Each deck has their own environmental systems package, allowing for each deck to remain isolated from the other decks of the vessel.

An additional feature of the environmental system is a system which allows the introduction of chemical compounds, medicines, and micro/nano machines into the air supply of the vessel, allowing for rapid response to the spread of disease through the ship, or other situations where an airborne solution would serve best.

Refit Addition

Now included in the Zahl is a system which treats recycled atmosphere with a plasma-wash which removes contaminants such as biological agents, chemical contaminants, and nanomachines.

Drive Systems

The Zahl utilizes [Common Lorath Propulsion Systems](#). These systems include; Plasma fusion engines, subspace drive systems, maneuvering thrusters, magnetic drive systems, gravitic systems, and the [Space Distortion Drive System](#) with [Enhanced Subspace Wave Drive](#).

Along with the Lorath designed systems, a hyperfold system now comes standard on all refitted Zahl.

Emergency Threat Containment Feature

Each section of the Zahl is able to be isolated from the rest of the vessel when proper authorization is given. This feature is intended to allow crew members to isolate themselves from potential threats which may come aboard during combat. The isolation feature utilizes internal forcefields, boron carbide blast shutters, and isolated environmental systems.

Additional Feature

The obvious eluded the original Zahl designers when they were in the process of developing the internal defenses of the Zahl, however, the obvious has made itself apparent and now the Zahl includes internal turrets in corridors and vital control areas. Turrets are to be controlled from the bridge by command staff, or from engineering by individuals of sufficient rank. Turret controls require neural-scan, retinal scan, and fingerprint confirmation.

Internal turrets which are deployed vary between Power Armor Grade [Combined Particle Cannon Technology](#), Quad mounted [LSDF "Ek'yra" Railgun Service Rifle](#) with 40mm grenade launcher, or duo-mounted [LSDF "Hik'id" Plasma Assault Rifle](#) and [FMS-2 Plasma Thrower 'Stalwart Suppressor'](#).

Computer Systems

The refitted Zahl now utilizes [Common Lorath Computing Systems](#). These systems include the [Neural Processor Pack](#), [Neural Interface System](#), and [SI ARIA Ship Control System](#). The computer system of the Zahl is designed to be compatible with KFY, MFY, and other Yamatai affiliated computer systems.

Sensor Systems

The refitted Zahl includes all [Lorath Sensor Packages](#) available.

Communications Systems

The refitted Zahl includes all forms of [Lorath Communications Systems](#). These systems have been

designed to be compatible with KFY, MFY, and other Yamatai affiliated computer systems. Compatibility has also been ensured for other common spacecraft.

Neural Data Saving Link

A specialized subspace-laser transmitter has been included in the refitted Zahl which is dedicated to transmitting encrypted neural-data to Lorath neural data saving banks. Due to the laser-like nature of this communication method, intercepting ships would have to move directly between the transmission point and the receiver point. To prevent interception, a confirmation signal must be relayed back to the transmitter at a .005 second interval, and in each confirmation signal a specialized code is included which is changed every transmission and is cross-checked with a pre-assigned series of codes specific to each transmission origin.

Gravity System

Gravity is maintained on the Zahl through the use of a network of low power graviton emitters placed throughout the deck plates of the ship. With the refit of the Zahl, the old gravity system has been replaced with a proper system which reproduces standard Lor-like gravity.

Power Systems

The refitted Zahl includes [Lorath Power Systems](#) consisting of energy/matter conversion systems, antimatter systems, fusion systems, magnetic cycle motors, plasma reactors, and a bio-reactor.

Along with the power production systems which have been updated in the Zahl, a capacitor system has also been installed to store produced power, and provide it when needed. The new capacitors are capable of storing enough power to operate the Zahl in non-combat situations for up to three days, and for one hour at combat readiness.

New Addition

When possible, Zahl-Class Type 02 units are upgraded with the installation of a [QNC](#) power cell which effectively doubles the power available to the ship's systems.

External Systems

The upgraded Zahl also includes wide-field support systems, umbilical systems, and microwave projection systems.

Plasma Systems

The refitted Zahl now includes [Lorath Plasma Gathering and Containment Systems](#). These systems centralize around a primary plasma reactor which is housed in the engineering section of the Zahl. These systems are intended to feed the plasma reliant systems of the Zahl, and provide power if needed.

Graviton Beam Projector (4)

This device creates a stream of gravitons which can be used to tow other spacecraft or shuttles. The projector is ineffective against ships using gravitic shielding. There are two projectors located on the top side of the vessel, and two located on the bottom. This device can also be used to guide small craft into the Zahl's landing bay.

Lorath Made Psionics Scrambler

[Psionics Scrambler Device](#)

Belly Hangars

Located on the exterior of refitted Zahl units, a pair of 'dome-like' enclosures have been included. These enclosures have been designed to accommodate two [Whirlwind](#) with legs in a folded position. Whirlwind units can be attached to the belly of the Zahl, where they can then be concealed behind the belly hangar shutters, or exposed for launch.

Centerline System

The refitted Zahl has been granted a new innovation in missile loading and launching technology in the form of the [Repeating Launcher System](#). This launcher has been installed on the center-line of the Zahl and permits rapid reloading of the Zahl's primary torpedo tube.

Alternate Configuration

An alternate configuration of the refitted Zahl can include a centerline mounted [Combined Particle Cannon](#).

Weapons



A Note On Long-Range Weapon Safety: Safeguards have been installed in the refitted Zahl to include a regulator system which prevents super-long-range weapons from firing in the direction of friendly stationary targets such as planetary holdings. This safeguard is equipped on the Fixed White Beam Emitters due to their .005 LY range. This safeguard is automatically overridden if an enemy target is locked and is being fired on by the weapon at that time.



A Note On Long-Range Energy Projection Weapons: Applicable systems have been augmented with [Compressed Packet Weapon System](#) technology.

Fixed White Beam Emitters

Spatial distortion is used to release condensed 5-D potentials. The result is a fantastic flow of tremendous energy. The fixed white beam can be aimed up to 45 degrees off-center.

Due to the new placement of the white beam emitters, they are now able to be rapidly disengaged from the Zahl and ejected in the event of damage or to replace faulty units.

[QnS Shipyards Aether Plasma Cannon](#)

Alternate Configuration

An option is available to replace the Fixed White Beam Emitters with [Combined Particle Cannon Technology](#). These cannons would have a comparable firing arc to the White Beams which they would replace.

Front End 'Head' Retractable Weapons

Located at the front of the Zahl are four shutters which cover four mounting points for retractable weapons. Weapons which are compatible with the system include: [Combined Particle Cannon Technology](#), [L-Mark-Two](#), and the cannon configuration of the [Lorath Plasma Arc Disruptor](#).

L-Mark-Two Units

The Zahl is now equipped with a pair of [L-Mark-Two](#) where the old Fixed White Beam emitters were located. These L-Mark-Two units have 10,000 rounds of ammunition available, and can be supplied with additional ammunition through the use of an internally accessible reloading port.

Combined Weapon Turrets

The eight turrets which were originally 'White Beam' turrets on the original Zahl have been replaced with

'Combined Weapon' turrets which are combination turrets consisting of twin mounted [Compressed Packet Rifle](#) and a [L-Mark-Two](#) with decreased barrel length and wormhole projector.

Plasma Arc Strips

The refitted Zahl now has [Plasma Arc Disruptor Strips](#) placed on it's exterior. These strips are located near airlocks, hatches, launch bays, and weapon emplacements.

Forward Missile Pods

Located in forward area beneath the wings of the Zahl are two large missile pods, each one of these pods is capable of holding thirty missiles.

These missile pods are capable of being loaded with [M sized missile ordinance](#).

Rear Missile Pods

Located in the rear area beneath the wings of the Zahl are six large missile pods, each one of these pods is capable of holding thirty missiles.

These missile pods are capable of being loaded with [M sized missile ordinance](#).

Main Missile Tube

The main missile tube of the Zahl runs through the middle of the vessel, and opens in the forward section of the ship. This missile tube is capable of firing a wide variety of missiles and torpedoes. This missile tube is now served by the [Repeating Launcher System](#)

The main missile tube is capable of firing [M, L, and XL missiles](#)

Safety First: Lorath antimatter munitions which contain yields greater than 100 MT are kept unfilled with antimatter until orders are given to arm the warheads for deployment.

Optional Equipment

Star fall - High Yield Positron Delivery System

An optional pair of positron cannons can be attached to the topside of the Zahl, these cannons operate in much the same manner as Mishhu and Star Army positron based weapons, taking the best features from both and putting them into one YSE equipment made package.

Positron confinement and delivery is accomplished through two methods. In packet mode, the positrons are encased inside of an EM field and accelerated by electromagnetic rails built into the weapon. In beam mode, the positrons are focused by a subspace and EM field, and used to boar through the target.

- Location: On the topside of the Zahl's hull.
- Primary Purpose: Anti-starship
- Secondary Purpose: planetary bombardment.
- Damage in Packet Mode: extremely heavy damage against any starship. Smaller starships or starships without high-end armor will likely be completely obliterated.
- Area of Effect in Packet Mode: Point of Impact.
- Range in Packet Mode: 500,000 Miles
- Rate of Fire in Packet Mode: 1.5 Minutes.
- Damage in Beam Mode: Total Destruction in a 5 Meter wide circle.
- Area of Effect in Beam Mode: Point of Impact.
- Range in Beam Mode: .90 AU.
- Rate of Fire in Beam mode: One shot every 10 Seconds.
- Payload Regenerated by capacitors.
- Damage Rating: Tier 12, Heavy Anti-Starship

Combined Particle Cannon

An optional pair of [Combined Particle Cannons](#) can be attached to the topside of the Zahl.

Plasma Arc Disruptor Cannons

An optional pair of [Plasma Arc Disruptor Cannons](#) can be attached to the topside of the Zahl.

Repeating Launchers

An optional pair of [Repeating Launcher System](#) units can be attached to the topside of the Zahl, and have a magazine capacity of 9 rounds of 200mm railgun ammunition, or L-Sized Lorath missiles.

Vehicle Complement

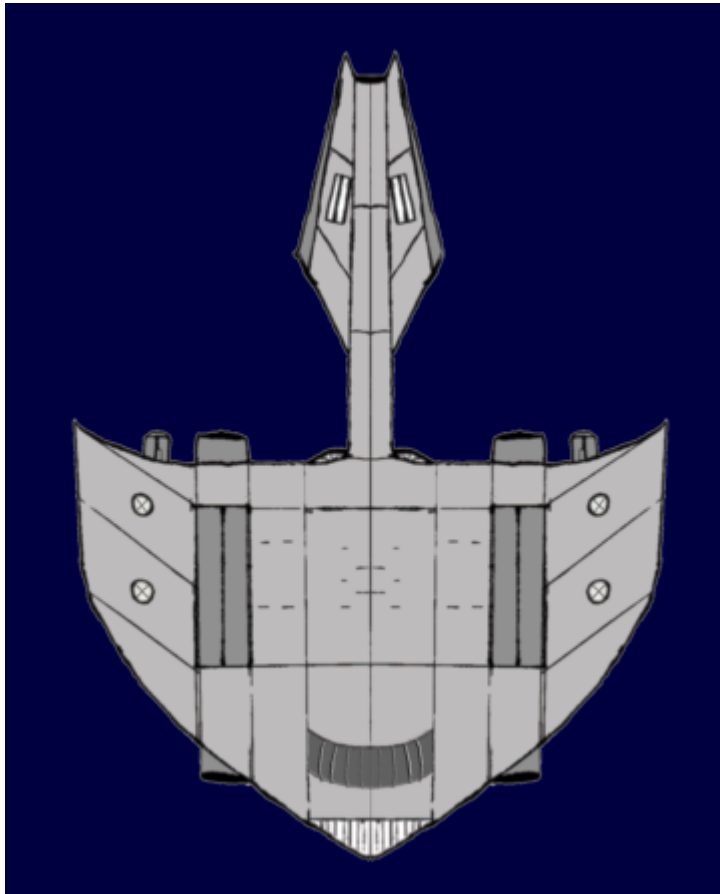
2 [Paa-Zem Advanced Construction Pod](#).

2 [Hawk Fighter Bomber](#)

20 [AMX-101 WINTER](#)

2 [Whirlwind](#)

Illustrations



Internal Floor Plan:



Looking For Skilled Artist To Redraw Interior and Exterior



1)

OOC: Neutronium originally

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