

'Cardinal' High Mobility Fighter

The 'Cardinal' High Mobility Fighter is a new fighter design developed by the [Lorath Self Defense Force](#) in cooperation with the [United Manufacturing Cooperative](#) in YE 31. The Cardinal is designed to function as an interceptor and superiority fighter.



About the Ship

The 'Cardinal' was designed to fill the role of a superiority fighter when ships, stations, and planetary installations are confronted by small-scale starships, attack shuttles, and power armor.

Key Features

When the Cardinal was designed, it was designed to offer high mobility through the use of its large engines, along with superior forward facing firepower to provide the capability to suppress or destroy target enemies by sheer volume of fire.

Mission Specialization

- Anti-shuttle
- Interceptor

Appearance

The Cardinal has two wings, two tail fins, two large rear facing engines, four forward facing side-mounted cannons, and one centerline cannon. The general shape is that of a conventional fighter.

History and Background

During the encounter between the LSDF Trishka and opposing Occhestian forces at one of their outlying research complexes in the year YE 30, the Trishka encountered sizable opposition from small-scale craft such as attack shuttles. The opposition presented by these shuttles posed no significant threat to the Trishka, however, these opponents posed a significant threat against deployed armor units. The Cardinal was designed to effectively eliminate the threat posed by such combatants which are just out of the mission profile of armor units.

Statistics and Performance

General

Class: LSDF/UMC-F-HM-01 ¹⁾ Type: Fighter Designers: Lorath Self Defense Force, United Manufacturing Cooperative Manufacturer: Lorath Self Defense Force, United Manufacturing Cooperative Production: Mass Production Fielded by: Lorath Self Defense Force & Affiliates

Passengers

Crew: 1 Maximum Capacity: 2, second individual can be seated in a rear seat reserved for a co-pilot.

Dimensions

Length: 14 meters Width: 9 meters Height: 4 meters Decks: 1

Propulsion and Range

Enhanced Subspace Wave Drive: 10,000c Cruise Speed, 20LY. 14,000c Overdrive, Five Minute Run Time, Thirty Minute Recharge Continuum Distortion Drive: 2500c, 20LY Optional Hyperfold Drive: .70 LY/M Sublight Engines: Lorath [Plasma Drive Systems](#) .400c, .88c with Subspace Wave Drive Assisted Boost, Ten Second Boost, One Minute Between Usages Due To Structural Constraints. Sublight Engines, Atmospheric, Sustained Flight: Mach 25 With Hull Energized, Mach 8 Without Hull Energized Range: 20LY

Lifespan: 10 Years Refit Cycle: Whenever upgrades are available.

Damage Capacity

- Hull: 16 SP ²⁾
- Shields: 20 (Threshold 1)

Inside the Ship

Cockpit

The cockpit of the Cardinal houses the pilot and controls for the Cardinal. The cockpit has two seating areas, one facing forward, one facing rear (Sharing the same seat backing). Placed directly in front of the pilot is a single control stick which allows for the pilot to assume manual control of the Cardinal, along with the stick, are a pair of pedals which handle other fine course adjustments. Also attached to the control stick, are the manual firing controls for the Cardinal's weapons systems.

The manual controls of the Cardinal also include throttle, targeting control, electronic system overrides, sensors, communications, course input, and environmental control. Placed at several locations on the pilot and rear co-pilot seats are neural interfaces which allow for the Cardinal to actively interface with the pilot's nervous system through use of the conventional Lorath Neural OS.

Utilizing a cockpit feature originally found in the Winter Power Armor, the Cardinal's cockpit utilizes a gel system to encase the pilot in an impact absorbing layer of gel, and to provide oxygen. Displays for the pilot are provided through an OLED coated panel placed in front of the pilot, and a volumetric projection system which provides a full 360 degree field of view, without obstructions.

Payload Bay

The payload bay of the Cardinal is an interior bay which is two and a half meters wide, four meters long, and one meter wide. This payload bay is designed to open to the topside of the Cardinal, and provides a storage bay for missiles, launcher devices, or gun mounts.

Ship Systems

Armored Hull and Hull Integrated Systems

Hull Composition

The Cardinal uses [Duremium Alloy](#) armor with a layer of [sitarium](#) stealth material. To provide increased

security for armor components, the Cardinal also utilizes explosive [Reactive Armor](#) which not only is used to defeat breaching attacks, but to also destroy sensitive armor materials when tampered with or dislodged.

Energized Hull

Precision forcefields are projected upon the hull of the Cardinal to provide additional structural support. Along with providing support, these forcefields allow the Cardinal to alter its aerodynamics when in use within an atmosphere, thus allowing for improved maneuverability and lift.

Variable Wings

The wings of the Cardinal have been designed to retract or extend from the fuselage, and reposition themselves to optimize drag reduction and in-atmosphere aerodynamics. A [Pico-Jelly](#) ejector system has also been incorporated in the wings to allow for altering of the wing shape while in-flight.

Computers and Electronics

The Cardinal utilizes [Lorath vehicle and starship grade computing technology](#) including the [ARIA ship control system](#) and [Neural Interface System](#).

System Interface

Neural Interface

A [Neural Interface System](#) is utilized to conduct high-speed commands and data access with the Cardinal's systems. The system aboard the Cardinal has been designed to be compatible with Jiyuuan, Lorath, and ARIA bodies.

Volumetric Virtual Display

Through the use of precision holographic imaging and projected forcefields, a floating display like those found aboard typical starships can be produced. This display is capable of being interfaced with like a typical physically solid panel. With the Cardinal, this system is capable of also producing a simulated control interface which can be used to produce a number of various control surfaces as needed by the pilot.

Standard Interface Panels

The cockpit of the Cardinal includes standard flat panel interfaces which serve as displays and control access. These panels utilize high resolution displays, and an easily reconfigurable interface.

Emergency Interface System

The Cardinal includes a manual set of controls to allow for directly connected fly-by-wire to be utilized by the pilot in the event of computer system failure. These controls are fully capable of operating all Cardinal functions through manual inputs.

Sensors

The Cardinal includes [Common and Uncommon Lorath Sensor Packages](#).

Communications

The Cardinal's communications package includes the full range of [Lorath Communications Systems](#) technology.

Integrated Cockpit Systems

Placed in front of the seat of the cockpit is the manual control interface, and OLED display. The manual control interface includes a single control stick which allows for the pilot to assume manual control of the Cardinal, along with the stick, are a pair of pedals which handle other fine course adjustments. Also attached to the control stick, are the manual firing controls for the Cardinal's weapons systems. The manual controls of the Cardinal also include throttle, targeting control, electronic system overrides, sensors, communications, course input, bay door opening and closing, fuel tank ejection, wing configuration, ejection, and environmental control. A second option for manual control includes a "two stick" configuration, which allows for the pilot to control yaw and pitch separately. The manual controls of the Cardinal can also be reconfigured to a pilot's personal preferences.

The cockpit system also includes a pilot monitoring sensor package, and automated first aid system. This system is designed to monitor the pilot's physical state, and deliver chemical medical aid as needed through the use of a self administering IV system.

The cockpit can be accessed through a double-locked hatch which requires both a neural verification, and access code input before access is granted and the magnetic and mechanical locks are disengaged, allowing for the hatch to be opened.

Cockpit Environmental System

Also included in the cockpit are various systems designed for pilot comfort, first and foremost being the environmental system. Atmosphere in the Cardinal's cockpit is maintained through the use of oxygen and nitrogen emitting bacteria which are housed inside of a canister attached to the pilot's seat. The oxygen and nitrogen provided by the environmental system is infused into a gel substance which provides the pilot with oxygen, padding, and greater atmospheric pressure control.

Housed in the seat of the cockpit is a waste extraction system, this system obviously must be configured depending on the pilot's gender, the default configuration is for a female pilot, but can easily be changed to suit a male pilot. The waste extraction system can also be attached to the pilot's flight suit, if they prefer to wear an atmospheric suit, which would include a waste management system. The waste extraction system does not simply waste the organic matter, the organic matter is instead fed to the oxygen producing bacteria canister, and the electricity producing bacteria canisters of the vessel.

A system is also included in the cockpit to provide nutritional supplements to the pilot, the nutritional supplement solution is delivered to the pilot either through the use of an intervenes tube. The IV solution also includes an [appetite suppressing drug](#) which causes the pilot to have the illusion of being full.

Additional emergency systems include an organic [Pico-Jelly](#) material cannister, an automated pico-jelly material infusion device which adds pico-jelly material to the atmospheric gel which is used to automatically patch wounds, and as a Lorath standard, the cockpit pod also includes a cryogenic freeze system, in case of emergency which requires the pilot to enter stasis.

Combat Neural Interface System

The primary method for control of the Cardinal in combat situations and situations involving rapid responses and maneuvers is the neural interface system which has been put into use on modern day Lorath space vessels. The Cardinal's neural interface system has been modified to include additional features.

One of the new features of the Cardinal's neural interface system includes a "psychosomatic sympathetic response system" (PSRS), the PSRS system allows for a pilot to "feel" the condition of their vessel. Some examples of what this system allows is for a pilot to have a simulated physical response when struck in combat, or to have the pilot feel when the vehicle is being pushed to it's limits by feeling an artificial sensation of muscle strain.

Another innovation to the neural interface in the Cardinal includes an "Emotional Feedback System" the EFS system allows for the vessel to warn the pilot of changes in flight conditions through a simulated emotional response and a simulated HUD projection in the user's "mind's eye" which would indicate what the emotional response is in reference to. An example of feedback would be if the pilot is suffering from "Target Fixation" during a strafing run and is risking collision with the target, the system will induce a feeling of controlled fear, and bring up a HUD indicating the distance from target. Prior to the use of the Cardinal's EFS system, a pilot must configure the EFS' warning boundaries. (In other words, how long until the EFS starts nagging the pilot to notice something.)

G-Force Control System

The G-Force Control System is a series of gravity control devices which creates a stable gravitational field around the pilot of the Cardinal. This field is kept at 1G at all times, and prevents excessive G-forces from forcing a pilot to black out. Unfortunately, due to the small size of these units, their maximum compensation is limited to 15G, beyond this, G-Forces will be experienced by the pilot.

The G-Force Control System also serves as a scalar protection device for the pilot, additional G-Force Control System pods have been placed throughout the Cardinal to protect vital systems from stress damage, and Scalar attacks.

Ejection System

The entire cockpit of the Cardinal is designed to be ejected from the vessel; the cockpit module includes a small gravity manipulation device which would allow for the pod to be directed towards safety, but would not deliver enough thrust to get the pilot from one planet to another. The pilot pod is also able to endure atmospheric re-entry to allow for a safe planetary landing. Use of the pod for landing is handled through an automated system included inside of the pod and is independent of the Cardinal's main computer. The gravity manipulation device also doubles as a scalar damage prevention measure.

Emergency Supplies

Located beneath the seat of the Cardinal is a supply kit container which includes;

- 1 [One Lorath Portable First Aid Kit](#).
- 1 [arbitrator_pistol](#) with 36 Rounds Conventional Ammunition, 18 rounds signaling ammunition.
- 2 ['Wind' Armor Series](#).
- 2 [Lorath Standard Issue Canteen Kit](#).
- 2 [Nutritional Supply Pack](#) with two weeks nutritional supply.
- 2 Survival Knives, stamped metal construction, hollow handle, contains interactive volumetric star-chart projector.

Due to be upgraded to a dedicated kit at a later point.

Propulsion

Enhanced Subspace Wave Drive

A [Enhanced Subspace Wave Drive](#) system has been installed upon the Cardinal as a primary means of "Point A to Point B" propulsion.

Continuum Distortion Drive

Drawing from the United Manufacturing Cooperative's resources, the Cardinal has been designed to incorporate a [Continuum Distortion Drive](#) based drive system, the CDD has been installed as a secondary drive system to be utilized primarily as a maneuvering aid, however, it also serves as a redundant FTL system.

Lorath Fusion Plasma Based Drive

The Cardinal utilizes [Lorath Plasma Gathering and Containment Systems](#) along with [Lorath plasma and fusion](#) systems. This combination allows for a high performance plasma reaction to be sustained by the Cardinal when in sub-light operations.

Limited Gravitic Drive

To aid in maneuvering, the Cardinal has been fitted with a gravitic drive which allows for improved maneuverability and control for the fighter by allowing for tighter turns with greatly reduced gravitational stress upon the frame of the ship.

Optional Hyperfold Drive

An optional attachment can be added to the Cardinal to greater facilitate the Cardinal's interceptor role. A hyperfold drive can be attached to the Cardinal's fuselage on the topside of the vessel. Unfortunately, this attachment requires use of the Cardinal's topside weapon hold, thus preventing the carrying of missiles or optional weapons.

Power Supply

Plasma Systems

The Cardinal utilizes [Lorath Plasma Gathering and Containment Systems](#) systems to facilitate its plasma based functions.

QNC

A [QNC](#) has been installed on the Cardinal, the QNC provides power for ship systems such as cockpit functions, computer functions, gravitic maneuvering, and other less demanding systems.

Antimatter Reactor System

The Cardinal has been fitted with a [Antimatter Power Core with matter/energy converter](#). This system provides primary power for weapons, shields, and additional plasma for the Cardinal's drive systems.

Shield Systems


[Lorath Shield System Technology](#) is used aboard the Cardinal, with EM, Gravitic, and Plasma shield functions.

Psionic Scrambler


A [Psionics Scrambler Device](#) has been included on the Cardinal to protect it from psionic based attacks.

Weapons Systems

Offensive

- Center-line [UMC-GRA-E-S001 'Gammatron'](#): 1, Tier 9, Heavy Anti-Mecha
- PA Grade [Combined Particle Cannon](#): 4, Plasma Tier 7 or Tier 8, Light Anti-Mecha or Medium Anti-Mecha (: Staff needs to determine which) / Antimatter Tier 9, Heavy Anti-Mecha

Defensive

- Rear Fuselage Mounted '[Deviance](#)' [Shotgun Gatling](#) Top and Bottom: 2, Tier 1, Light Anti-Personnel, Standard payload listing, using 'CRI' flare ammunition.
- Wingtip and Fuselage [Plasma Arc Disruptors](#): 4, Tier 7 or Tier 8, Light Anti-Mecha or Medium Anti-Mecha (: Staff needs to determine which)

Misc

- Optional Weapon Bay Payload; Two L-Size [Lorath Missiles and Torpedoes](#) or a fixed or turreted gun system.

Drone Complement

- 10 Large [Directional Explosive Sentry Unit](#) with micro-gravitic drives.
- 4 Mi-Size [Lorath Missiles and Torpedoes](#), Warhead Removed, Sensor Package Installed.

¹⁾
Lorath Self Defense Force / United Manufacturing Cooperative - Fighter - High Mobility - Model 01

²⁾
0.8 x 20

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Last update: **2023/12/21 01:44**

