

PANTHEON's Eye Covert Sensor Probe

The PANTHEON's Eye Covert Sensor Probe is a common stealthy sensor array found throughout the [Yamatai Star Empire](#) and the borders of the [United Outer Colonies](#).



Origins and Background

Star Army Officer [Kage Yaichiro](#) was once summoned into NECTAR, the heart of [Hotaru Star Fortress'](#) security system. During this visit, he was informed, in an off-hand way, of the need for a better method of infiltrating Mishhu space for transmissions.

He conceived the concept of PANTHEON's Eye before leaving NECTAR that day.

Specifications

Organizations Using This Probe: [Motoyoshi Fleet Yards Star Army of Yamatai](#) Type: Long Life Covert Sensor Drone Class: Ke-O7, MY-O1 (same design used for both) Designer: SIP Director [Kage Yaichiro](#) Manufacturer: [Hotaru Star Fortress](#), [Himitsu Star Fortress](#), Motoyoshi Fleet Yards, [First Expeditionary Fleet](#) Production: Mass Production

Crew: Unmanned Maximum Capacity: Unmanned

Appearance: The device is either a gray or black sphere with vents 1.5 meters in diameter, or it is disguised as a standard asteroid less than 2m in any dimension.

- Length: 1.5 m
- Width: 1.5 m
- Height: 1.5 m
- Speed (STL): 0.10c using thruster systems.
- Speed (Micro CDD): .01 to 370c using Micro Combined Distortion Drive. Stops to recharge every 3 days, rounding out to a max of 1 LY/Day

Design

Hull

PANTHEON's Eye is a very simple construct, compared to most other YSE systems. It is camouflaged not by advanced light refraction technology, but by being encased in actual space rock, to look like an asteroid. The unit isn't designed to fool detailed scans, but to appear so common place, odds of a detailed scan being done in the first place are minimized.

When not sealed inside a fake Asteroid, the unit is a 1.5 meter radius sphere, generally painted Star Army Grey. The ones made for the Black Coats of Tange Misato-Shosho's command are often painted jet black instead. The hull is Durandium rather than Yamataium, so as to not have more mass than the rock it is disguised as should allow. (DR 6)

Power Generation

This system uses systems quite similar to the [Star Army Escape Pod, Type 30](#) to gain continuous power without being suspiciously brilliant on sensor systems.

Matter Collection

Using the vents across the hull of the sphere, often hidden below the craters of the fake asteroid exterior, hydrogen is extracted from the environment and used to power both the nuclear reactor and the thruster system.

Nuclear Fusion Reactor

This robust reactor is designed to allow the ship to operate indefinitely without relying on detectable Aether or dangerous Antimatter power generation systems. Its output is somewhat higher than the escape pod to power the STL and FTL components of the system, but the increase is minimal compared to other power systems and even natural stellar phenomena in space, especially due to the fact that the drone is only a fraction the size.

Propulsion

Hydrogen Thrusters

These thrusters are like those in the [Star Army Escape Pod, Type 30](#), but configured for the lower mass of the drone. It can travel as a max speed of 10 AU every minute with these thrusters.

Micro CDD

This is merely a CDD designed for super low power and super low mass applications, and lends itself to tiny bodies being moved under nuclear power. Designed to propel a mass far lower than a PA on the energy of a nuclear reactor, it is capable of only 370c—just over 1 LY per Day. Due to the fact it must stop every three days and recharge its hydrogen reserves, however, its actual practical speed rounds out to exactly 1 LY per Day.

This system is unable to transport masses larger than 2m x 2m x 2m.

Deflector Shielding

The Micro CDD has a VERY minute CFS component to it, but only enough to prevent collisions with other space bodies. (DR 2)

Sensors and Communication Interception

Being outfitted with the [Compact Integrated Electronics System \(CIES\)](#), the system has the same sensor capabilities of the CIES and also is in possession of all sensors and communications components available. It can intercept sensor data as well as communications, and scans every communications range it can with its systems—hence why this drone requires a ship-level IES system. However, it does not use most common forms of communication to “talk”, lest it be discovered, even though it can listen. As such, it can receive commands from PANTHEON in almost any format sent, though responding is trickier.

Communication and Networking

The nature of the system requires that highest security transmission is needed, and that broadcasts are not prudent for this design. As such, Point to Point systems are utilized.

In addition to the [TQR](#) available to most CIES systems, a custom communication system is used to permit Tachyon communication in a point-to-point manner without the communications issues which arise in shields.

Serial Tachyon

This is not unlike normal Tachyon communication, except it is actually a serial communication format at a very high bandwidth. Since the bit path is only one Tachyon wide, interception is quite difficult to manage. However, each receptor on a drone can receive 256 simultaneous Serial Tachyon Transmissions, though it can only send one at any given time.

Dynamic Networking

Given that the preferred point to point communication systems need a predetermined location for the system to work, it will first check its logs and instructions to seek a control point. This control point is usually one of several in home space at a predetermined site, and can inform the drone where all other drones are located, and their status. If there is activity in a specific area, the other drones will avoid contacting the other drone until it signals the ready state with control.

When the control point deems it safe (or can't be contacted) the drone will try to connect to the nearest drone where it's next scheduled location is, and the next nearest, and so on, up to five nodes. If it cannot locate five nodes, it attempts to use its propulsion systems to move to a more communication-worthy site. This prevents an enemy from "blinding" a drone and determining the location of all network nodes.

Once the drones are connected, they can share information and relay it to the control point through the makeshift network. The bandwidth of both the TQR and Narrow Tachyon is high enough for 256 units to directly connect to a single unit and relay all information to it. Due to this, "danger spots" which are in line with control points or other drones can be circumvented. by using other network "paths", especially since every drone can act as a 256 port router.

Mirroring

If a drone senses an enemy ship nearing the area, and it has enough time to covertly send data, it will copy its entire information database to another drone in the network. If discovered, it will complete the process and the other remote drone will mirror to yet ANOTHER drone, hopefully before IT can be intercepted. Upon capture or completion of mirroring, the Self-Destruct System will be engaged.

Self Destruct

If discovered or ordered to do so via PANTHEON or a control point, the drone is programmed to overload its nuclear fusion reactor and self destruct. Rather than the explosion ripping through the asteroid, the blast is contained within the one-DR-higher sphere, leaving a hollow asteroid with a rapidly crumbling Durandium interior hull. Due to this, it is useless as an attack. (DR 5 - DR 6 containment = DR 0)

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