PANTheon Integrated Electronics System (PANT-IES)

The *PANTheon Integrated Electronics System* (PANT-IES) is the primary computer system for the Star Army of Yamatai's Star Fortresses. It comes with integrated sensor, communications, fire control and electronic warfare systems and it became availible in YE 25.

About and History

The *PANTheon Integrated Electronics System* was designed by Kessaku Systems, and it became available in YE 25. It was originally developed for the Iori-Class Star Fortress and has also been included in the limited production models of the Zodiac-Class Star Fortress.

The system is constantly evolving through its own sentient artificial intelligence program so is in a constant state of upgrade. Components are upgraded as they are developed and released by Kessaku

Systems. The *Type 35 PANT-IES* is most recent version of the system, it was developed at the end of YE 34 in expectation for fielding in YE 35, in conjunction with planned upgrades to both Star Fortress designs.

The *PANT-IES* can be divided into several subsystems, which are distributed throughout the fortress: The PANT-IES Core, which consists of the power management system, processor, and central memory system; the inner layer, which includes the environmental control subsystems, force stabilizer (inertial dampener) control, internal security, unidirectional sensors, and bridge interfaces; and the outer layer, which holds the majority of the ship non-vital electronic systems: the remote detection device, mapping and navigation system, weapons control system, ship defensive systems, omnidirectional Sensors, telepathic communications, translator system, and common control interfaces.

PANTHEON

The PANT-IES is considered the Master System of the PANTHEON Network (Projected Access Nodal Transuniversal Heuristic Electronic Operations Network) command and control system.

General Information

Manufacturer: Kessaku Systems Designers: Kessaku Systems, Kessaku Anri Nomenclature: Ks-PIES-E35 Series Type: Star Fortress Integrated Electronics System Fielded by: Star Army of Yamatai

Main Systems

Ks-PIES-E3500 - The Core

Dimensions: 550m high and 140m wide

The core refers to the massive skyscraper sized central structure of the PANT-IES quantum computers. The Type 35 model has been improved due to advancements allowing for a more compact and modular design.

Pantheon Master Mentafexal Intelligence - PMMI

The system has three quantum computer systems that work in tandum. Quantum computers, unlike old computers which could only process 1 and 0, can process an effectively infinite range of digits, making them awesomely powerful. In addition, the PMMI's sub-particle memory system allows for truly magical access speeds. Clusters of enhanced processors and sub-processors work with hyper-dimensional faster-than-light information processing and femtotronic quantum data storage. This amazingly superior framework provides the environment for a highly adaptive and sentient artificial intelligence system.

More on the Artificial Intelligence

The AI-driven system can manifest itself as a hologram on the bridge, or through a synthesized body. Its personality and voice are often programmed by the residing fortress commander. The PMMI systems actively defend themselves. They are very particular about the hows and whys of any visitors to their room, and will defend themselves.

Integrated Systems

Sensor Modules

Ks-PIES-E3501 - Unidirectional Sensor Modules

Unidirectional sensors included in the PANT-IES include variable wide-band imaging clusters, long-range gravimetric and magnetic resonance, distortion, and interferometry sensors and spectrometers, electromagnetic trans-space flux sensors and imaging scanners, quark and gluon density scanners, and spin polarometers. These sensors have a range up to fifty light-years.

Ks-PIES-E3502 - Omnidirectional Sensor Module

Omnidirectional sensors of the P-IES include aetheric/quintessential field/differential/particle/wave sensors, scalar field sensors, subspace mass sensors, and unified field mass/energy sensors, and neutrino/tachyon sensors. These sensors have a range of 15 light-years.

Ks-PIES-E3503 - TQP-RDD

One of the most sophisticated electronic intelligence tools used by the Star Army, it can detect any ship or energy source by observing its mass and/energy by actually making TTD-based quantum linked observations of phenomena. There are three levels to scanning: a wide range passive scan, which monitors for unidentified energy objects and mass fluxes among a wide range of dimensions and phases; the second is an active scan. Active scans are used rarely because they can give away the presence (but not location) of a vessel to other ships. The active scan is a high-powered sweep of a particular phase and dimension. The third mode is a remote scan of a clearly defined area such as an enemy ship. Using the scan, the complete nature of the target can be recorded. Because of the massive scanning area, the sensors of a ship are not a single solution for quickly finding enemy targets, although they can keep track of them with ease once discovered. The PANT-IES's Transmetaphasic Quantum Particle/wave Remote Detection Device can track four target areas at a time.

Level	Range	Sphere Diameter	Resolution	Minimum Mass
1	100 light-years	10 light-years	Stellar	Star
2	80 light-years	1 light-year	Planetary	Planet

Level	Range	Sphere Diameter	Resolution	Minimum Mass
3	60 light-years	0.5 light-years	Lunar	5,000,000 kg
4	40 light-years	0.2 light-years	Rough	2,000,000 kg
5	20 light-years	58.8×109 miles	Low	100,000 kg
6	10 light-years	20 trillion miles	Medium	75,000 kg
7	5 light-years	500 billion miles	High	45,000 kg
8	1 light-year	1 billion miles	Molecular	20,000 kg
9	1 light-year	10,000 miles	Subatomic	10,000 kg
10	58.8×109 miles	100 miles	Total	20 kg

More on the RDD

The Remote Detection Device, being teleportation-based, has proven somewhat ineffective against ships with teleportation-oriented defenses. While the RDD can detect such vessels, scanning them yields no results. This is due to failure to create the quantum links necessary to perform the scan.

Ks-PIES-E3504 - Wave-front Affinity Resonance Monitoring System

WARMS is a monitoring system that is able to detect and calculate the probability wave front of a major quantum events (such as hyperspace folds or firing of main fortress weapons) before the events actually occur. It is possible to determine the time, location, duration, power, and type of each via a complex analysis of the wave front by the P-IES. Derived from both the much-maligned PARADOX system developed by the Qel'noran and the TQP-RDD developed by SARA.

Communications Modules

The PANT-IES uses the [Type 33 Star Army Communications Network Encryption System](https://wiki.stararmy.com/).

Ks-PIES-E3505 - Radio

Full spectrum, Dual-Modulation, range theoretically unlimited except by interference. Practical range is short, since the waves only travel at light-speed. A P-IES can also jam the spectrum with white noise and intelligent false radio traffic (such as fake missile guidance orders and IFF traffic).

Ks-PIES-E3506 -Laser

For close-range transmissions, it is more difficult for the enemy to intercept, because they have to be in the area of the beam. Also limited to light-speed.

Ks-PIES-E3507 - Subspace/Hyperspace

Allows faster-than-light transmission. A standard means of communication. The P-IES system is especially adept at detecting and decrypting messages sent with this means. The fortress can also thoroughly jam FTL communications within 5LY of its position.

Ks-PIES-E3508 - Transuniversal Quantum Relay

Delivers a message anywhere, instantly, but precise coordinates of the receiver must be available. Mainly used by P-IES and relayed through fortresss. Shields may interfere with TQR transmissions.

Fire Control Modules

Ks-PIES-E3508 - Fire Control Module

The PANT-IES does not use an independent Fire Control System per se, but operates a sub-system of itself dedicated to fire control operations. The FCS program compensates for all movement of the ship and of target ships, and can track upwards of a quadrillion targets ranging from pebble-sized shrapnel to planets. PMMI-FCS is a mainly offensive system, and ignores all but the largest incoming missiles, leaving the powerful shields (below) to dispose of the threat. Weapons under PMMI's control automatically: target sensitive areas of enemy ships; identify friendly assets; optimize beam power and range; guide missiles and torpedoes, assign (and reassign, if necessary) targets in real-time; and control ECM, and ECCM functions. PMMI-FCS usually controls all weapons systems but the GWB (which the tactical specialist controls).

Electronic Warfare Modules

Ks-PIES-E3510 - Star Fortress Electronic Warfare Suite

The P-IES is equipped with a powerful Electronic Warfare Suite. An improved version of the Type 31 Electronic Warfare Suite.

Features

- Filter communications for malicious, hidden, or unauthorized code.
- Transmit full spectrum electromagnetic waves and pulses to disrupt the electromagnetic sensor systems of enemy vessels. This can also disrupt radio communications.
- Emits low-powered transphasic energy waves to cancel electromagnetic pulses or waves projected by other vessels. Can also be used to deny ECM and ECCM deployed by enemy vessels by phasing them out.

- Utilizes the [Combined Field System](#) to project randomly oscillating distortion fields to disrupt, confuse and deny distortion-based sensors, mass sensors, and/or to create an [Anti-FTL Field](#).
- An array of volumetric projectors that can create the (massless) illusion of various fortresss or empty space. Range: 30 million km (1/5th of an AU).

Ks-PIES-E3511 - Psionic Signal Controller

The P-IES utilizes a [Psionic Signal Controller](#) to protect those on board from psionic and telepathic attack or manipulation.

Related Links

- http://en.wikipedia.org/wiki/Quantum_computer
- [Kessaku Systems](#)

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