

Ke-H1-P3300 Type 33 Star Fortress Fold System

Designed in [YE 33](#) by [Taisa Kage Yaichiro](#) for use with the [Iori-Class Star Fortress](#), the Type 33 Star Fortress Fold System is installed on the Star Fortresses of the [Seventh Fleet](#) due to their more mobile nature. The system has modifications to allow it to carry large numbers of ships along for the fold, emergency systems to help get the fortress out of harm's way quickly, and a notably long range between folds.

Nomenclature Information

Class: High-Use Large Scale Hyperspace Fold System Nomenclature: Ke-H1-P3300 Designers: [Kage Yaichiro](#), [Star Army of Yamatai's Seventh Fleet](#), [Hotaru Star Fortress](#) Production Bay Seven ([Project THOUGHT](#)) Manufacturer: [Ketsurui Zaibatsu](#), [Star Army of Yamatai's Seventh Fleet](#) Government: [Yamatai Star Empire](#) Organization: [Star Army of Yamatai](#) Date entered service: [YE 33](#) Role: Long range, large scale, repetitive FTL transport

Speeds and Performance

- Speed (Hyperspace Fold): 1c - 262,980c (0.50 ly/m)
- Charge Cycle: Technically 1 second for every light-year, Alternate Charging Eliminates need for charge times¹⁾
- Cool Down Cycle: 5 minute cool down between folds²⁾
- Field Boost Range: 5 kilometers from hull in one direction at a time, maximum area of 698.3 cubic kilometers³⁾

General

About the Type 33 Star Fortress Fold System

The [Iori-Class Star Fortress](#) was initially designed to move to a site and stay there for months or years, so the hyperspace fold systems of the Iori reflected this. When the [Seventh Fleet](#) was defined as a Rapid Response fleet without territorial holdings in mid-YE 33, [Taisho Ketsurui-Motoyoshi Katsuko](#) required that [Hotaru Star Fortress](#) and [Himitsu Star Fortress](#) be upgraded with a fold system geared toward this purpose, including more regular use.

Yaichiro had been assigned the role of the Seventh Fleet's Chief Engineer, and given complete control of Production Bay Seven at Hotaru in a spiritual continuation of the Starship Improvement Program of the [Fifth Expeditionary Fleet](#). Veteran designers from the Starship Improvement Program still loyal to Yamatai

were consolidated with trusted [Project THOUGHT](#) to form a seasoned development team, which set to work on the design.

Developing two independent fold systems was briefly explored, but would require excessive space in the lori, so a more complex single system with redundancies was explored instead. The more elaborate fold system was to be built around several design goals:

- Have an indefinite range to allow for uninterrupted folds
- Integrate a superior cooling system to allow for fast cooling time and help with indefinite fold range
- Integrate two capacitor banks with independent charging capability
- Include a one use Liquid Helium cooling system for a one-use cooling for emergency folds
- add an Integrated Field Booster to allow the Fold system to transport a large number of ships with the Star Fortress or even another lori

Systems

Fold System

The Type 33 Star Fortress Fold System is a significant upgrade to the [YE 25](#) version it replaces, the miniaturization of technology allowing for a more advanced system and redundant subcomponents to be installed. It is geared not toward the occasional fold, but for regular large-scale use by an lori far more mobile than initially intended. The actual fold system includes state of the art technology as of [YE 33](#); including improved cooling systems, better maintenance access, improved reliability, and generally less wear. Its speed matches that of the old fold system, but can be used with far more regularity.

Dual Capacitor Arrays

The Dual Capacitor Arrays are a compromise from the failure to integrate two fold drives. Both are able to hold a full fold's charge each indefinitely, and the individual high-durability capacitors can be disconnected and discharged by the system individually for maintenance. The system is even able to charge one array at one minute per light-year while the other array is being used to fold. As the fold system only crosses half a light-year per minute, the system charges the second array twice as fast as it drains the first in this system.

Capacitors can even be quickly disconnected and connected between the two arrays by the system, ensuring that one array has a full charge whenever possible – even if some damage is sustained to a few of the capacitors. This also means that a capacitor can be charged in one array and quickly transferred to the other array, though this may shorten the life of the capacitor over time. The capacitors are field replaceable components, and can be swapped for new ones created in a Fabrication Area or already in stock.

This design effectively removes the requirement for a fold charge time when properly utilized, and makes the charged state the default for the system where most other systems are uncharged by default.

Integrated Field Booster

The Integrated Field Booster is based on the Ke-B4-P3301 - Hyperspace Fold Field Booster of the [Yamato-Class Flagship](#), and is designed to allow the lori to carry the bulk or entirety of its fighting force with it. It is capable of extending five kilometers from the hull, but only in one given direction at a time. If done dorsally or ventrally, the lori is capable of folding with a second lori in an emergency – a design aspect put in place due to the fact that the Seventh Fleet has two lori-Class Star Fortresses and a wish to allow them to support each other if needed.

Emergency Flash Cooling System

In addition to the usual standard cooling system, the fold system is laced with insulated containers which contain liquid helium. In an emergency, this liquid helium can be used to flash-cool the fold system and allow the abrupt end to a cool down period. Then the craft can execute an emergency fold to escape whatever threat justified the decision. The whole process takes a matter of seconds.

Unfortunately, the fold system only stocks enough liquid helium to do this once before replenishment is needed, and an in-depth check of the fold system is mandated after use due to the risk of damage. Because of this, increased downtime and maintenance is typically required after use.

Use and Tactics

Because the fold system is a significant upgrade, various tactics and protocols apply in both its regular maintenance and its combat use.

Unlike most other fold systems, the system is kept 'primed', or charged for fold at a moment's notice in wartime. The general idea is that if an array isn't charged or in use, it is in the process of charging – even if one array is in use mid-fold, the other array can be charging. The emergency flash cooling system is maintained and kept stocked with liquid helium, and the capacitors in the two capacitor arrays are routinely checked and replaced as needed. These elements are considered basic to this system's routine operation and allow the system to react to threats or orders with minimal delay.

When engaging in a combat operation, the Integrated Field Booster allows the lori to carry craft with it. Given that the maximum volume allowed to be carried with the lori by the system is nearly 700 cubic kilometers, this means that the lori can easily carry the entirety of its fighting force along at a respectable half a light-year per minute, not even counting the lori's internal Production Bays. This has many practical uses.

The craft with the lori can engage upon leaving the fold quickly and in a cohesive formation rather than folding in individually. It is also possible to have the forces within the fold bubble pre-deploy their starfighters and power armor if needed. If the situation calls for it, the other ships can utilize their own fold systems more quickly after the start of the battle if needed for any specific reason. By using these systems to arrive and depart battles, it is also harder for the enemy to gather accurate numbers on the size of the fighting force.

Because there are two lori in the Seventh Fleet, the system was also designed with the intention of being able to carry a second lori, held ventrally or dorsally by graviton beam projectors like checkers stacked on top of each other. With this method, one lori could carry a second disabled lori more easily to an alternate location, and have roughly 260 cubic kilometers left over with which to transport accompanying ships. This again does not include the room in the Production Bays of the lori.

Though the fold system has no need to be caught charging if used properly, the cool down cycle remains. An lori is expected to be able to hold its own for the duration of the cool down cycle, but the Emergency Flash Cooling System can be utilized if absolutely necessary. This is usually used only in rare situations, such as an emergency retreat quickly upon folding itself and its forces into a combat area, or to evade an attack assumed to be more devastating than the potential risk to the fold system. Circumstances meeting this later criterion may include things like the destruction of a nearby celestial body or a high speed, coordinated suicide attack on the lori.

1)

The fold system's dual capacitor banks can hold two charges indefinitely, and one can charge while the other is in use. There is no reason to ever lack the energy to fold if effectively used.

2)

Can be eliminated once per combat operation with an emergency fold utilizing the Liquid helium to force a rapid cooldown stage, but the fold system may take damage from the process.

3)

when aimed dorsally or ventrally this can be used to transport another lori, can be used to carry ships in any configuration

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