Ke-S5-W4100 Aether Shock Array

Developed in YE 41 by Kage Yaichiro, the Ke-S5-W4100 is an aether shock array for the Azusa-class Light Gunship. It consists of the single lower spike of the Ke-S3-W4000 Aether Shock Array used on the Plumeria-class (2E) Medium Gunship and employs advances in technology from it.



Ke-S5-W4100 Aether Shock Array on the Azusa Light Gunship

An Aether Shock Array functions by emitting a powerful scalar interference pulse that creates a small rend in the fabric of space-time. When this occurs, all energy potentials in the target area are released into normal space simultaneously, causing horrific amounts of destruction. Arrays are typically designed for anti-starship or anti-fleet use and are restricted to the military. They are not to be salvaged and used by civilians.

This particular main gun is a single-spike variant much like the Ke-S3-W3900 Main Weapon Array of the Fuji-class Expeditionary Gunship, and is built from the lower spike of the Ke-S3-W4000 Aether Shock Array from the Plumeria-class (2E) Medium Gunship both to optimize construction and due to it being the ideal size. While this has led to compromises, the output is still more than suitable for the ship's needs. It is also designed with balance in mind, the ship able to park under gravity without risk of tipping over.

Discharge Information

This version of the weapon has similar modes when compared to the earlier Ke-S3-W4000 Aether Shock Array, but compromises have been made in the diameter of the pulse and beam modes and the range of its spread modes. It retains a mode that is pure plasma with the radiation and anti-plasma filtered out that is intended for atmospheric use, which is important given the Azusa's likely participation in Star Army Rikugun operations.

Firing Mode	Purpose	Rate of Fire	Area of Effect	Maximum Range ¹	Maximum Diameter
Filtered Pulse	Tier 9, Heavy Anti- Mecha	60 pulses/minute	Single Target	149,000,000 kilometers	20 meters
Rapid Pulse	Tier 10, Light Anti- Starship	60 pulses/minute	Single Target	149,000,000 kilometers	20 meters
Beam	Tier 13, Light Anti- Capital Ship	5 beams/minute	Single Target	149,000,000 kilometers	20 meters
Spread	Tier 12, Heavy Anti- Starship	2 spreads/minute	30° Cone	7,000,000 kilometers	3,751,288 kilometers
Wide Spread	Tier 12, Heavy Anti- Starship	2 spreads/minute	60° Cone	4,500,000 kilometers	5,196,152 kilometers

¹Though the weapon can fire and hit a stationary target a maximum of 149,000,000 kilometers (92,000,000 miles/1 AU) away, it should be noted that the weapon's discharge would take 8 minutes and 20 seconds to travel this distance. Faster-than-light sensors on enemy ships could easily allow an enemy to dodge in this span. Due to this, it is standard practice to consider 899,376 kilometers (~0.006 AU / 3 light-seconds) to be the functional range for this weapon in Rapid Pulse or Beam Modes. When firing a Spread or Wide Spread, however, the diameter of the shot widens with distance. This leaves an enemy less likely to be able to evade at the cost of reduced damage.

The array consists of a center firing node, a large upper assembly (which resembles a dagger blade), and a smaller lower assembly. The beam can be steered up to 75 degrees right or left, and up to 45 degrees down, but cannot fire higher than straight-forward due to the weapon's arrangement. Systems that make up this weapon were built in a modular fashion so that the sections composing the ship's main gun could be easily switched with other modules at a later time if desired. Exchanging the main gun's systems in this fashion requires about 3 hours.

OOC Notes

Finding the diameter of the spread was achieved by solving for the diameter of a cone with the formula (tan(half of angle A in degrees) * range) * 2.

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