

Entropy's Shroud Electronic Warfare Suite

"It is said the best victories are those that are not fought for, so it stands to reason the best defenses are those that cannot be hit." – The Art of Never Again, Chapter 702: Operational Artistry

The Entropy's Shroud is an integrated electronics warfare suite of astounding complexity. The system uses a phase inversion system to sample an incoming sensor signal, analyze it, then return an antiphase signal in order to cancel it out to give the impression of an empty void upon sensors. However, a ship can use its sensors to scan surrounding objects or interstellar medium and record the way scans are reflected or refracted in order to mimic them, and thereby use its own ECM system to blend in rather than create a seemingly empty hole inside a nebula. Actual methods vary depending on the type of sensors it detects; evanescent wave generators are used to scramble electromagnetic signals, while spatial destabilizers generate a wake that disrupts most forms of subspace, gravimetric, and even optical scanning.

Evanescent waves decay exponentially with distance, so the Entropy's Shroud has a very low energy signature in comparison to similar high-powered ECM systems. Ships using passive or long-range scans can be easily canceled out using antiphases, but at shorter ranges detecting these vessels is somewhat easier. The same signal decay that prevents it from being detected at long ranges means the Entropy's Shroud can only be used for defensive purposes; the evanescent wave field cannot be projected at long or even medium ranges at the intensity needed to actively jam enemy vessel's sensors.

The wake generated by the spatial destabilizers will disrupt at subspace and gravimetric sensors at up to 1 AU, but can also wreak havoc on propulsion systems and communications of similar design. A side effect of this wake is that the spatial distortions it creates disrupts the ability of vessels to manipulate spacetime, effectively creating a subspace interdiction field is created at up to 0.5 AU around the host vessel. Furthermore, the disrupted spacetime bends and twists light, thus preventing accurate optical targeting except at relatively short ranges.

Since the Entropy's Shroud is a high powered projector it can't be run in conjunction with shielding, lest the shield disrupt ECM projections. Even if power grid strain could be compensated for on a starship, the powerful electromagnetic flux and the spatial distortions of the generator would cripple the strength of shielding around the vessel. Likewise, any fighters, mecha, or starships that enter the Shroud find their shields overloading and even collapsing entirely as they close within a 0.25 AU radius.

Shroud systems occasionally connect to a number of independent servers to receive patch updates to ensure that it remains effective regardless of any enemy ECM or ECCM employed. In order to retain sufficient power to remain undefeatable, it remains incompatible with shielding systems due to the combined energy drain, as well as shield damage due to spatial distortions.

Abilities

Stealth

Provides immunity against long-range detection even when running at lower power strengths. Also provides stealth against lower quality scanners or passive scans at short ranges. However, it is

overwhelmed by concentrated scans by military-grade scanners at shorter ranges. Detection range of scanners increases when spatial destabilization is utilized due to gravimetric disturbances.

Spatial Destabilization

Creates a region of unstable space. Accuracy of attacks severely declines as the unstable space warps their trajectories. This effect is reduced as distance to target is decreased, since shots will have to travel through less unstable space before it hits its target. Guided weapons – those that correct their trajectory in flight – will usually fail due to conflicting and constantly changing sensor data.

Shield Disruption

Spatial disruption has an adverse affect on shielding at very short ranges where they are the most intense. Between the massive power drain and the spatial instability, a host vessel running an Entropy's Shroud cannot maintain shields for more than a few seconds. Other vessels in immediate proximity can maintain their shields normally as long as they do not stray too close.

Fighters and mecha, which normally fight at close ranges, are particularly vulnerable to this problem.

Point Defense Disruption

Weapons targeting fighters or mecha (both starship point defenses and fighter-to-fighter weapons) are usually ineffective regardless of range. This is because their high speeds and small sizes, which normally make them hard to hit in even “normal” space, only adds to the inaccuracy of point defenses when you consider the spatial instability.

Comm. Jamming

Degrades signals, may disrupt long-range communications at long and medium ranges. At point blank ranges it can disrupt short range communications as well.

History and Background

“You shall not fear the dark corners of the galaxy, but instead shall hide among them. You shall not seek to tame the natural hazards of the galaxy, but learn to live among them as they are; to gather them about you as an aegis against your enemies. Embrace the universe and it shall embrace you in turn. What greater ally is there than that which is immortal and timeless and infinite?” – The Art of Never Again, Chapter 112: Collected Sermons on Strategic Universalism

With its vast digital networks, virtual worlds being commonplace, and an overwhelming abundance of [Synthetic Intelligence](#), the Free State is inadvertently become a breeding ground that produces what are arguably the galaxy's best hackers. These vast number of electronic warfare specialists give the

Freespacers an intimate understand on not just digital warfare, but the importance of having hardware to support such endeavors.

Their pacifist ideologies frown on the so-called barbaric applications of brute force, the general consensus is that the realms of information and electronic warfare are fair game. When first contact was made it was realized they would need a means of defense against aggressors, but their decades of pacifism left their military technology sorely lacking. So instead of attempting to roughly patch together cheap replicas of shielding technology, they applied what they knew about communications and electronics warfare technology in order to produce Entropy's Shroud.

Sub-Systems

Electronics Package

Evanescent Wave Generator

An active cancellation system designed to jam most forms of electromagnetic communications and scanning, which may also be used as a phase inverter to cancel out signals rather than drowning them out.

Spatial Destabilizer

A much simpler approach to spacetime manipulation based on artificial gravity technology. Creates a far weaker subspace signature than traditional FTL drives.

Relay Probes

These drones are designed to orbit the host ship and reflect emissions and produce their own using secondary Entropy's Shrouds. This creates an irregular and shifting field of effect, thus prevents an enemy from calculating the field's epicenter to locate the host ship. These are only used on larger units mounting this device.

Calculator Probes

These probes are launched attached to communication tethers. Once they reach their target position outside the Shroud range, they can scan and triangulate enemy ships without interference and send back the targeting data via tether. This reduces the negative accuracy effects on the hosts' ship.

OOO Values

These are just guidelines on the effects and bonuses of this unit, with starship hit chances being based on directed weapons. These values are not static; they can be changed by other factors at a GM's discretion. For example, hit chance might increase significantly by using large area-of-effect burst weapons, physical cables may be used to restore communication for PA, and so on. *Note that all secondary effects, such as stealth, communication loss, and interdiction effect both enemies and allies, which includes the ship projecting the Shroud.*

- vs. Starship Superweapons – 50% hit chance
- vs. Starship Main Guns – 20% hit chance
- vs. Starship Secondary Guns – 10% hit chance
- Units lose computer tracking except at shorter ranges where targets can be acquired visually. Keep in mind spatial distortions will bend light and may prevent units from simply using high-zoom cameras to fire from long ranges. However, the projecting ship may use tethered probes to increase their own accuracy through triangulation.
- Units lose wireless communication inside the wake, at up to 0.50 AU from the Shroud's vessel
- Units count as being inside an interdiction field when within a 0.25 AU radius due to spatial distortions.
- Units will be considered stealthed and therefore extremely difficult to detect using passive or long-range scans, when within a 0.25 AU radius of the generating ship. Detection of stealthed ships becomes considerably easier as one closes distance.
- Units will take [DR 3] *per minute* against *shields only* when within a 0.10 AU radius, due to the powerful EM emissions and spatial warping putting persistent strain on the integrity of a shield. The projecting ship cannot maintain a shield at all due to the combined strain and power drain of running the Shroud.

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