"Failover" Damage Control System

Overview

The Way of the Failover is not so much an equipment module as it is an engineering style practiced by Free State starship engineers. This method had evolved from the time-honored Freespacer tradition of 'grin and bear it' when it comes to traveling the galaxy. Rather than trying to block damage all together through the use of high precision powerful equipment, a Failover ship instead uses rugged, versatile, low-demand equipment designed to operate under the worst possible conditions or when heavily damaged. Failover ships are renowned for their ability to take catastrophic amounts of damage – even so far as being cut clean in half – while their remaining sections retain most of their original functionality. Unfortunately, the cost for this style of engineering is a shunning of both energy weapons and shielding technology; those who refuse to follow the doctrine of low-tech ingenuity over high-end equipment will find their ships won't have the same degree of longevity.

Hull Reinforcement

The ship layout keeps power grid size to a minimum, thus eliminating the collateral damage traditionally caused by high output power lines and related power systems. Equipment loadout is usually kept to minimal power for this reason; projectiles and missiles are favored while energy weapon are neglected. Those systems that do require power are all sustained with secondary dwarf reactor vessels placed in nearby proximity, and operated by local gunnery S.I. computers that can continue fighting even without ship sensors or centralized commands. Other major systems have similar autonomous controls, designed to stabilize operation in the even of damage.

A thick later of gel lines all bulkheads, which upon contact with oxygen will react and expand in size many times over, thus automatically sealing any small to mid-sized breaches. The superstructure itself is built in a honeycomb pattern that adds considerable mass to the ship yet provides a much more reliable hull when damaged in excess. Halls between major sections are divided by triple reinforced blast doors that will seal upon the detection of pressure loss. Finally, since the majority of a crew is usually Automaton, most of the compartments have their atmospheric pressure lowered by a large factor in order to prevent explosive decompression.

Buckypaper Shielding

Both sides all bulkheads are also lined with multiple layers of buckypaper designed to stop incoming projectiles, contain the blast of internal explosions, provide near immunity against EMP weapons, and perhaps most importantly, acting as a capacitor to absorb gratuitous amounts of power and heat from energy weapons. Likewise, when encountering projectile attacks instead of energy-based ones these buckypaper bulkheads may be charged via capacitor into an effective energized armor.

OOC Notes

Each section is autonomous and operates completely separate from others. The destruction of a hull section will not compromise the rest of the vessel's structure nor systems operation. Each internal section has an armor rating of [DR 5]. If destroyed, the remaining damage from an attack will be transfered to an adjacent section.

Basically, every time a component (external armor or internal section) is damaged, it takes the damage. If a hit destroys a section, subtract from the DR of the weapon the maximum DR of the section (no matter how badly damaged the section was before the hit): what's left over is transferred to a nearby section. The ship is not considered “destroyed” until every single section is taken out.

Example: An Failover ship armored with rolled tungsten plating [Armor DR 4] is hit by a plasma burst for [DR 7]. The armor in that section is destroyed, and the underlying section [Internal DR 5] takes the remaining [DR 3] damage, and is left at [Internal DR 2]. A second burst [DR 7] to that damaged section would destroy it. That section would lose its last 2 hit points, but would still reduce the overflowing damage by its maximum DR, that is, by 5 (despite having only 2 points of those 5 left.) So, if it is hit by our second [DR 7] plasma burst, of this 7 points of damage, 2 are used up to kill off the remaining 2 hit points, 3 are “absorbed” by the destroyed section, and 2 spill over to the nearby section.

The point of this system is that Freespacer starships don't have critical systems, and there are no sensible points where to land ship-crippling blows. They have redundant, overabundant reactors and energy sources, extra rocket engines, spare solar sails, no command bridge and no centralized control avionics, allowing each single system to be activated and operated independently. It's not enough to just pierce the hull in a section and damage the sensible, defenseless inside of the ship: every single section and every single system must be individually destroyed. Because of this, furthermore, Freespacer ships are very easy to repair: the lack of specialized, hi-tech, complex and sensitive systems means that makeshift repairs can fix just about anything.