MANDATE ARCHIVE

BANNERJEE CONSTRUCTION SOLUTIONS

FOR USE WITH *STARS WITHOUT NUMBER*

Space Stations on the Frontier

A frontier world is nothing without a space station of its own. It is a trifling outpost at best, a half-barbarous colony world that can service only atmosphere-capable tramp merchants and shuttlecraft. It can do nothing for the ungainly bulks of mobile asteroid smelters or naval warships. Some starfaring worlds are forced by circumstances or necessity to make do with a strictly planetary starport, but most worlds count it a point of pride that they should have a constant presence in the void above their world.

There are two major uses for an orbital station in post-Silence human space. In the first, an armed station can provide military protection for an entire planetary hemisphere, fending off pirates and forcing invaders to fight the station before they have the leisure to bombard surface structures. The space and power available for vast banks of targeting computers and ECCM countermeasures allow most stations to far out-range hostile ships, forcing them to engage and destroy the station before dealing with any surface defenses. For the many worlds that are wealthy and advanced enough to afford some sort of space defense but too poor to invest in a holistic planetary defense grid, a pair of well-armed space stations is the best they can do to protect themselves from raiders or worse.

The second major use is as a depot for ships unable to enter the planet's atmosphere. Mobile asteroid mining ships often fit this bill, and many worlds would be rendered vastly poorer without the steady influx of orbital mining products. Many worlds lack one or more vital metals or minerals that can only be found in space, and individual mining ships can't hope to efficiently lift down the thousands of tons of processed materials required by planetary industry. By building a specialized space station, the ships can unload their cargo there and let the station's dedicated lifters supply the planetary starport.

Even in the golden days of the Second Wave, many newly-colonized worlds struggled to build and maintain space stations. Without a jump gate to make transport cheap and quick, these colonists had to carry all their necessary supplies on the handful of ships that brought them to their new home. They did not have the luxury of packing along a thousand and one components for a space station when every spare kilogram of cargo space was needed for life-saving colonization supplies. Those pretech manufacturing devices that they did bring along were necessarily limited by the lack of a local infrastructure to support them, and in any case, they could hardly manufacture parts without the raw materials to feed them.

Bannerjee Construction Solutions

In 2305, Vikram Bannerjee was a minor research engineer working for Ralston-Huang Synergies, one with minimal prospects of advancement and several negative job evaluations. His supervisors admitted his ingenuity, but he could never be bothered to focus on a single system long enough to really understand it. The work bored him, and he was always pressing to move on to a fresh system to study.

Privately, Vikram admitted his supervisors were quite correct about his lack of persistent focus, but he had his own purposes, ones not entirely in alignment with the august gravity of Ralston-Huang Synergies. He accepted a buyout during a period of retrenchment and RHS thought no more of him. His non-compete contract was ironclad, and in any case he'd never come up with any improvements worth patenting.

Vikram promptly took his severance pay and bought several antiquated and drive-stripped shuttle bodies, two models of outmoded circuit printers, and the skeletonized remains of a depleted colonization ship that was sold for the cost of its metal. Within a month, he was able to demonstrate the virtues of his wide-ranging tech interests, as he disassembled his various purchases only to use their bits and pieces to build something better by far.

Vikram had a genius for salvage. From the scattered components of half a hundred different worn-out machines and depleted systems he could build sturdy, efficient station elements at half the price of comparable off-the-shelf parts. Better yet, he could use the dross and detritus of a colonial expedition to bootstrap the process, converting worn-out engines and empty hulls into the kernel of a useful station. These bare-bones skeletons were fragile until asteroid miners could bring in the raw materials for further development, but they held the key to building space stations where no colonist had imagined it possible. Bannerjee Construction Solutions was born.

The Lamplighter Foundation

While Vikram's proof-of-concept was intriguing, RHS promptly threatened him with a torrent of legal action if he didn't bring his precious schematics back to them at a price the proud engineer found insulting. The threat of legal action scared off Vikram's venture capital, and for a time it looked as it he would be forced to swallow his pride if he ever wished to see his plans reach the market.

His angel investor came in the form of the Lamplighter Foundation, a splinter group spun off from the Preceptors of the Great Archive. While the Preceptors wished to spread knowledge and practical skills throughout human space for the sake of mutual connection and cohesion, the Lamplighters had a more immediate goal. Many among them were convinced that the Terran Mandate was doomed to collapse in blood and chaos, and they were determined to nurture the seeds of a new age on worlds safe from the coming storm. To do that they needed colonies cast far from the core worlds, and Vikram's new plans promised to make that possible for worlds that otherwise would be prohibitively difficult to colonize.

RSH made good on its legal threats, but the Lamplighters had lawyers and money enough to hold them off while Vikram brought the

first of his schematic packs to market, tailored to the most common series of colonization seedships then in use. For a reasonable investment in the schematics, a colonial expedition could have a working geosynchronous space station within six months of landing. It was a roaring hit, and RHS gave up their legal efforts as the new influx of money allowed Vikram and the Lamplighters to buy the Mandate politicians they needed to quash RHS's suit.

The Poisoned Plans

While the plans were a great success, they also faced substantial danger of copyright infringement. Some earnest souls felt it only fair to spread the knowledge around, and since the fundamental good that Vikram was selling was the knowledge of how best to disassemble what men and women already owned, it soon proved difficult to keep a lid on the information. It helped that Vikram made so many different versions of the schematics for so many different models of seedship and colonization gear, but even this could only go so far.

Vikram was a proud man, and he was also a jealous one. It infuriated him that his efforts and those of his hired researchers were being stolen out from under his nose, worlds forging space stations without paying a centicred toward the man who had made it all possible. In a fury of practical spite, he began inserting subtle errors into the schematics he sold- delicate, near-imperceptible flaws in design and construction that could not be easily remedied without wrecking the other systems involved. These "poisoned plans" required a Bannerjee-approved system technician to oversee the construction of the station, or else they would introduce flaws into the final product that ranged from annoying to potentially lethal.

Some colonies stubbornly made do with the "clean" plans released for earlier colonization ships, but gradually it became more and more difficult to get the antiquated equipment involved, and even when they could, the collateral cost of using outmoded gear was often worse than the cost of paying Vikram his due. It wasn't worth saving a few million credits when it required the use of equipment that produced a ten percent greater chance of total colony failure than that inherent in more modern kit. Others attempted to reverse-engineer existing Bannerjee stations to come up with the solutions, but so many of them had been bodged together out of unique individual collections of parts that the secrets of one were of little use to the builders of another.

The Repositories

The Lamplighters were not amused at this turn of events. They recognized that their financial interests were bound up in Bannerjee Construction Solutions, but they could hardly expect that certified BCS systems techs would be available for hire in the interstellar wasteland they foresaw. They pressured Vikram to include some kind of fail safe, some emergency measure that could detoxify the poisoned plans in case of Mandate-wide disaster.

Grudgingly, Vikram acquiesced. A complete list of the errors and corrections necessary for rectifying the BCS schematics was compiled under close guard. These Confidential Construction Protocols were nicknamed "the Rigged Veda" in-house and watched more closely than the jealous engineer's own husband. It was an almost physical torment to Vikram when he was forced to see to the dispersal of copies among several remote locations on the frontier. Even then, he managed to see to it that only partial elements of the CCP were kept in any one place, enough to build a space station but with only a few of the more exquisite and advanced expressions of Bannerjee's genius.

These repositories were carefully guarded by robotic and automated defenses, with some rumors insisting that even braked AIs were involved in overseeing their security. They were to open only on the effective dissolution or incapacitation of the Mandate, as reported by an authorized representative of Terra. Given the suddenness of the Scream and the severing of links with the core worlds, it is remarkably unlikely that any of these repositories ever received formal word of the Mandate's collapse, and it might be wondered what kind of proof they would demand should any of them yet be found.

The locations of these repositories have all long since been lost in the chaos of the Scream and the Silence. BCS never publicized them greatly to begin with, and those worlds that already had functioning Bannerjee stations had no reason to go haring off after the secrets of constructing more. Colonization pressures were somewhat limited in the wake of pan-human disaster.

Bannerjee Stations Today

Presently, many frontier worlds have access to Bannerjee schematics, almost always of the poisoned variety. Assorted engineers and astrotechnical firms make a sideline of selling ostensibly-clean plans, but most of the time this simply means that the schematics they offer have negative side-effects small enough to be tolerable. Power inefficiencies and habitat discomforts that would have been intolerable to the humanity of the Second Wave hardly bear mentioning to populations that have survived the Silence.

Because of the emphasis on salvaging existing tech to build the station core, Bannerjee stations remain enormously popular in the new age after the Silence. Antiquated caches of pretech junk can be turned to useful employ with the right set of schematics, and worlds that could never hope to buy new parts from a richer neighbor can still aspire to raise a station with scrap and salvage. The inefficiencies and limitations that made a "poisoned" Bannerjee station intolerable to Second Wave humanity qualify as rock-solid reliability by the standards of the present.

Despite this, rumors persist of the BCC repositories and the marvels to be found within the Rigged Veda. Those remaining Bannerjee stations that were constructed by approved technicians are some of the best-functioning stations remaining on the frontier, and the idea that any and all future stations might be built to these specifications is intoxicating to a certain kind of explorer or technician. Every so often some band of adventurers claims to have found the coordinates for a repository, and set forth to plunder it of its secrets. Those few that return always report their sad mistake- and yet there always seem to be a few clean schematics on the market that are so much more recent than any of the common run....

Stations in Space Combat

The full details of handling orbital defenses are beyond the scope of this document, but it can be said that a functional, properly-armed space station can protect up to an entire hemisphere of a world. Between gravitic braker guns, beam weapons with augmented targeting and ECCM, and greater mass for power plants and cooling arrays, an attacking space force needs to take out all the armed space stations over a hemisphere before it can effectively bombard.

Drop pods laden with ground troops are sometimes launched during such engagements, but such orbital assaults are a risky tactic. The drop pods are vulnerable to station gunnery, and are cut off from any real air support until the invading fleet can batter down the space defenses. Orbital drops are most common against surface-to-space gun emplacements or as decapitation strikes against planetary governments.

Ordinary cargo shuttles have almost no chance of making it to the surface past a hostile station. They are vulnerable to station fire for five rounds while landing, at AC 9, with no armor and 2 hit points. Almost any hit will destroy them utterly. Drop pods are optimized for opposed landings and are vulnerable for only one round, with AC 4, no effective armor, and 5 hit points.

Ships that evade a station's sensors can make it to and from the surface without engaging the station. This requires all the usual stealth measures given in the core rule book, and it also requires that the ship avoid all weapons discharges. The energy signatures are a dead giveaway to an observer, and a single volley from an atmosphere-capable ship's weaponry is rarely enough to make any real difference to a world's defenses.

Most space stations function exactly as any other ship in combat. They have the same sort of statistics and the same rules for weaponry

Space Station Design and Fittings

Space stations can be fitted with all the usual equipment and weaponry that might be found on a cruiser-class ship. Most stations dedicate a large amount of their tonnage to orbital lifter systems or cargo space, but almost all stations have at least one cruiser-class weapon for defense.

Space stations cannot make use of augmented plating, grav eddy displacers, or foxer drones, however, as these defenses are either useless to the station or rely on a ship's movement to function.

and defenses. Stations are generally treated as cruisers for purposes of maximum weapon and fitting sizes and costs, and have no Speed at all. While they can move from one hemisphere to the other by means of maneuver jets and 24 hours of time, they are far too slow to chase fleeing ships, perform maneuvers, or avoid engagements.

Because stations have no spike drives, they are unable to use spike phasing. They always exist and shoot in phase 0, meaning that attackers will never have to worry about their shots going awry and will always be able to hamper the station's gunnery by remaining in the highest spike phase available to their engines. For this reason, most space stations prefer to mount weaponry with the phasing property.

Stations always get one free round of attacks on an incoming hostile force, representing the station's superior range. They may also target fleeing ships normally for one round after the ship successfully flees, for much the same reason.

Stations reduced to 0 hit points do not explode. Instead, they become incapacitated as if they had succeeded in a Tech/Astronautics roll to avoid detonation.

BANNERJEE STATION HULLS									
Model	Cost	Armor	HP	Crew Min/Max	AC	Power	Free Mass	Hardpoints	Class
Model Twelve	5m	5	120	20/200	9	50	40	10	Cruiser
Peerless	7.5m	10	100	30/1000	9	60	100	10	Cruiser
Shantadurga	15m	15	80	50/300	7	85	50	18	Cruiser

Model Twelve stations were the most common BCS constructions on the far frontier. Advanced armor composites were in short supply on new colony worlds, so Bannerjee experimented with design schematics that buffered the Model Twelve in thick layers of asteroid-mined ablative materials. The resulting stations were "softer" than a dedicated military orbital, but could take enormous punishment before losing hull integrity. Maximum station occupancy was limited, but remote frontier worlds rarely had need to accommodate more than a relative handful of spacers at any one time.

Peerless stations were a refinement produced for the use of more successful colonies, ones that managed to draw significant trade to their system. Much of the space filled by ablative material in the Model Twelve was given over to further cargo room, and the hab deck was greatly expanded. More advanced armor composites were also specified for the hull cladding. Some uninhabitable worlds that

bore valuable resources had "colonies" consisting of a single Peerless station orbiting the planet.

Shantadurga stations were a comparatively late development for a market that insisted on a Bannerjee military orbital. While not as sophisticated or efficient as a station designed by a specialized miltech firm, the Shantadurga was substantially cheaper and could be built from the same mix of salvage and scrap that other Bannerjee station models used. Crew space was increased over the Model Twelve in order to accommodate combat losses and damage control, and yet more internal compartments were baffled with armor fill. The scrap tech gave the Shantadurga a very tough and resilient hull, but a bolt powerful enough to overcome the armor found a comparatively fragile station behind it. Still, it generally requires at least a cruiser-class warship to threaten a Shantadurga, and such a ship is far more than many modern navies can field.

STARSHIP FITTINGS

Weapon	Cost	Power	Free Mass	Min. Class	TL	Function
Fleet Targeting Array	40k*	6#	4#	Cruiser	4	*Gives +2 to hit to all nearby friendly ships*
Orbital Lifters	300k	10	5	Cruiser	4	*Moves up to 20,000 tons/day to and from the surface*
Sensor Shadowing	25k*	2#	1#	Frigate	4	*Conceals a ship from stationary sensor arrays*
# Multiply requirements by 2 for frigates, 3 for cruisers, and 4 for capital ships						
* Multiply cost by 10 for frigates, 25 for cruisers, and 100 for capital ships						

Fleet Targeting Arrays can be mounted on any hull capable of supporting them. Orbital Lifters, however, require a fixed space station in order to operate smoothly, and cannot be mounted on ships. Sensor Shadowing requires a spike drive to assist it and cannot be mounted on a space station.

Fleet Targeting Arrays rely on massive banks of ballistic computers to overcome enemy ECCM. A ship with a fleet targeting array grants itself and all friendly ships in the combat a bonus of +2 on hit rolls. This bonus does not stack with multiple targeting arrays.

Orbital Lifters are a complex array of grav barges, orbital beanstalks, and rail lifters. While they require a geostationary orbit over the receiving starport, they can shuttle up to 15,000 metric tons per day to and from the station. A surface to orbit transit requires only fifteen minutes on an orbital lifter.

Sensor Shadowing relies on the creation of metamass bodies at strategic locations around the energy profile of a starship. These bodies act as an effective absorption screen for most conventional scan frequencies. Manipulating them is slow, however, and so the ship must have a clear idea of the exact location of the sensor array they are attempting to elude. In effect, this means that the shadowing only assists against space stations and other fixed scan sites, and not against starship scans. Sensor shadowing apply a -5 penalty to all checks to detect or scan the ship. Sensor shadowing strains a ship's own sensor array, however, and applies a -5 penalty to all hit rolls and sensor checks while in effect and for 12 hours after it is deactivated. Sensor shadowing does not stack with emissions dampers or other stealth measures, but emissions dampers might affect ships that are unhindered by the shadowing.

STARSHIP WEAPONS

Weapon	Cost	Damage	Power	Free Mass	Hardpoints	Min.Class	TL	Special
Braker Gun Battery	1m	Special	20	10	3	Cruiser	4	
Jitter Beam Projector	1m	3d8	15	5	3	Cruiser	4	*AP 15, Phase 3*
Photonic Siege Cannon	3m	6d10	40	20	10	Cruiser	4	*AP 20, Special*
Sunshine Field	2m	2d6	15	10	2	Cruiser	4	*AP 10, Cloud, Phase 2*
Devourer Launcher	8m/50k	Special	10	5	3	Cruiser	5	*AP 10, Ammo 5*

While some of these weapons are impractical for anything short of a station or dedicated cruiser, any of them can be mounted on any hull capable of supporting their power and mass requirements.

Braker Gun Batteries employ advanced gravitic principles and vast capacitor banks to redirect kinetic energy at a distance. While too clumsy to work against short-ranged attacks such as ship-to-ship munitions, the guns are extremely effective at repelling orbital projectile bombardments. Any projectile large enough to pose a significant danger to a surface installation can be targeted and redirected outward into space. The battery can handle a large number of incoming projectiles at once, and so any station with an operating braker gun battery can protect a hemisphere against any volley short of a that launched by a major bombardment fleet. Braker guns function automatically against bombardment projectiles so long as they are functional and manned.

Jitter Beam Projectors draw on large capacitors to simulate some of the effect of a spike drive enhanced metamass beam, pulsing the beams through high-phase oscillations. While unable to reach a very high spike phase, many stations favor them to help counteract the effects of an enemy ship's spike phasing.

Photonic Siege Cannons are special sublight weapons designed for cracking military orbitals. The guns are far too clumsy to hit a mobile spaceship, but they can wreak havoc equivalent to a capital ship's main battery on a hapless orbital. The massive power draw of these weapons tends to require a dedicated siege ship design to support them, and then a fleet of support vessels to keep it alive long enough to crack an enemy station. Few stellar nations have the need or wealth to build such task forces.

Sunshine Fields rely on a mesh of short-range MES lasers embedded around a station's hull. While the lasers are too weak and short-ranged to affect larger ships, the "sunshine" can prove lethal to attacking fighters or boarding shuttles.

Devourer Launchers are rare pretech weaponry designed to project a spray of ferrophagic nanite projectiles at a target. On a hit, the projectiles immediately begin digging in and eating the hull of the targeted ship. For each successful hit, the target takes 1d10+5 damage at the beginning of each round until the ship mounting the launcher is destroyed or the ships disengage. Armor and AP apply to this damage as normal. For example, after 3 successful hits, the target ship takes 3d10+15 damage at the start of each turn until the launching ship is blown apart, withdraws, or is evaded.

Model Twelve-Class Space Station

					Power: 50/8 free		**Mass:** 40/1 free	

Cost: 8,420,000	**Hit Points:** 120	**Crew:** 20/200	**Speed:** -	**Armor:** 5	**AC:** 9

Weaponry Jitter Beam Projector (+3 to hit/3d8+1, AP 15, Phase 3), Plasma Beam (+3 to hit/3d6+1, AP 10)

Defenses Hardened Polyceramic Overlay

Fittings Armory, Braker Gun Array, Lifeboats, Cargo Lighter, Ship's Locker, Workshops, 3000 tons of cargo space

Operating Cost 421,000 yearly maintenance, 1,090,000 yearly for a crew of 30 spacers maintained year-round

This particular station load out represents a typical Model Twelve over a relatively poor frontier world. It gets occasional business from asteroid mining craft, but the volume of cargo is too small to justify an orbital lifter system. The braker gun array and energy weaponry serve to protect the population centers below from orbital bombardment, as the world isn't wealthy enough to afford a holistic planetary defense grid or a dedicated military orbital.

Peerless-Class Space Station

	Power: 60/5 free	**Mass:** 100/2 free

Cost: 11,445,000	**Hit Points:** 100	**Crew:** 30/1000	**Speed:** -	**Armor:** 10	**AC:** 9

Weaponry Jitter Beam Projector (+3 to hit/3d8+1, AP 15, Phase 3), Plasma Beam (+3 to hit/3d6+1, AP 10)

Defenses Hardened Polyceramic Overlay

Fittings Armory, Braker Gun Array, Hydroponic Production, Lifeboats, Orbital Lifters, Ship's Locker, Workshops, 13000 tons of cargo space

Operating Cost 572,250 yearly maintenance, 1,460,000 yearly for a crew of 40 spacers maintained year-round

A bustling interstellar trade hub might be served by this class of orbital, with cargo space and lifters sufficient to empty the bellies of the most voracious asteroid miner or merchant freighter. Most such stations still retain a basic level of armament as an emergency fallback, even though a dedicated military orbital or system defense fleet is usually available to worlds wealthy enough to need a *Peerless*-class station. Most *Peerless* stations also retain hydroponic atmosphere and farming systems to serve the hundreds of transients and traders that often take up residence aboard the station.

Shantadurga-Class Space Station

	Power: 85/2 free	**Mass:** 50/0 free

Cost: 21,520,000	**Hit Points:** 80	**Crew:** 50/300	**Speed:** -	**Armor:** 15	**AC:** 7

Weaponry Spike Inversion Projector x3 (+4 to hit/3d8+1, AP 15, Phase 2), Gravcannon (+4 to hit/4d6+1, AP 20), Smart Cloud (+4 to hit/3d10+1, Cloud, Clumsy)

Defenses Hardened Polyceramic Overlay

Fittings Armory, Braker Gun Array, Cargo Lifter, Drop Pod, Hydroponic Production, Extended Medbay, Lifeboats, Ship's Locker, Survey Sensor Array, Workshops, 1000 tons of cargo space

Operating Cost 1,076,000 yearly maintenance, 3,650,000 yearly for 200 trained military spacers maintained year-round. Military personnel have lower day wage costs, as much of their expense falls under different budget headings.

This *Shantadurga* station plan is characteristic of a wealthy world's first-line orbital defenses. Many such worlds are rich enough to afford a pair of *Shantadurga*-class orbitals to stand watch while additional planetary defenses are built groundside. Those planets that expect serious and lasting conflict often prefer more purpose-build military orbitals, but a pair of these stations is more than enough to scare off anything but a specially-equipped interstellar invasion fleet. This particular plan includes fittings for a drop pod to dispatch troops to any location in the hemisphere within 15 minutes, an extended medbay to deal with battle casualties, and a survey sensor array to increase the station's odds to detect infiltration forces early. It also replaces the bulky, cheap jitter beam projectors with spike inversion models.

Trebuchet-Class Siege Cruiser

	Power: 50/4 free	**Mass:** 30/0 free

Cost: 15,225,000	**Hit Points:** 60	**Crew:** 50/400	**Speed:** 0	**Armor:** 15	**AC:** 4

Weaponry Photonic Siege Cannon (+4 to hit/6d10+1, AP 20, Special)

Defenses Augmented Plating

Fittings Spike Drive-2, Advanced Navigation Computer, Armory, Cargo Lighter, Fuel Bunkers, Lifeboats, Ship's Locker

Operating Cost 761,250 yearly maintenance, 3,650,000 yearly for 200 trained military spacers maintained year-round. Military personnel have lower day wage costs, as much of their expense falls under different budget headings.

Siege cruisers are a rare breed of interstellar warship designed to take out enemy orbitals as a prelude to a full-dress planetary assault. While brutally effective against space stations, the *Trebuchet* class is helpless against smaller foes, and usually requires a full task force's support in order to avoid being torn to pieces by system defense fleets. These ships are even dependent upon the cargo lighters of logistical support craft. There are few worlds with both the wealth and the enemies necessary to justify siege cruisers- or their even more drastically specialized capital-class brethren.

Bannerjee Station Flaws

Stations designed from BCS plans almost always have at least one flaw embedded in the resulting space station. The poisoned plans were crafted with the same restless brilliance as the rest of Bannerjee's offerings, and it is virtually impossible to permanently correct these problems without creating a cascade of additional, even worse engineering crises. Most post-Silence builders are willing to accept this drawback in exchange for the cheapness and durability of a Bannerjee station.

On completion of a station, its chief architect must roll a Tech/Astronautics skill check at difficulty 10. On a success, he or she may pick one of the following flaws. Otherwise, the flaw of a newly-constructed Bannerjee station is determined randomly.

Each station flaw comes with a list of additional complications and situations that might arise from that flaw. When designing adventures for a world with a Bannerjee station, you might choose to add these complications to the list of potential adventure elements.

STATION FLAWS	
Roll	**Flaw**
1	Cranky Atmosphere
2	Temperamental Guns
3	Mooring Lockup
4	Unreliable Power
5	Radiation Leak
6	Sensor Defect

Cranky Atmosphere

The atmosphere filters are perpetually breaking down, requiring constant care by at least one tech for every two people breathing on the station. Hydroponic bays are not affected by this flaw.

Complications: One of the atmo techs is incompetent, and his bungling results in the toxic contamination of the station deck the PCs are on. Terrorists sabotage the station's vacc suit locker before crippling the defective atmo scrubbers. The filters are pulling in traces of a toxic world's upper atmosphere without lighting any of the warning sensors.

Temperamental Guns

Before each round of combat, roll 1d6. On a 1, the station cannot fire any system reliant on a hardpoint.

Complications: The gunnery board goes haywire, opening fire on any ship that attempts to dock or undock. Political schemers plot to wire the guns to bombard a rival planetside. A gunnery test causes a dramatic capacitor blowout when the guns fail to discharge.

Mooring Lockup

Each day, roll 1d10. On a 1, the station's mooring system is frozen, and it refuses to let go of any docked ships for 24 hours. Cutting a ship loose will do 1d10 damage to the station, bypassing armor.

Complications: The lockdown extends to the station's internal hatches, sealing people inside the compartments unless they can cut their way out or hack the lockdown override. The lockdown freezes airlocks and egress ports in an open position. Power umbilicals start to fry the systems of a locked ship.

Unreliable Power

Each week, roll 1d10. On a 1, sometime within the next 7 days, the fusion plants will fail for thirty minutes- usually the first time a significant draw is put on them. Most stations will be able to keep lights, air, radio, and gravity on backup power, but no other operations are possible.

Complications: The power fails during a vital maintenance function and must be restored before catastrophic damage results. The power fails during a maneuver meant to move the station out of a severe radiation wave or asteroid strike. The power threatens to fail during combat, and the PCs must smash or blow up several locked-on systems aboard the station before their power drain kills the guns and dooms the station to destruction.

Radiation Leak

Each week, roll 1d10. On a 1, one level or area of the station is suddenly subjected to a brief draft of radioactive gases leaked from the ventilation system. All not in vacc suits must make a Radiation save as per the core rules or lose 1 point of Constitution within five minutes.

Complications: The radiation is limited and fails to trip the alarms, slowly and subtly poisoning occupants at the rate of one Radiation save per day until discovered and repaired. The radiation destabilizes gengineered plants or alien beasts aboard the ship, resulting in dangerous life forms. The station's crew are altered humans who actually require the radiation to maintain health.

Sensor Defect

Each day, roll 1d6. On a 1, the station is unable to detect any ship that is not voluntarily broadcasting its navigation signal. Furthermore, a ship in the outer rim region of a system can recognize this blindness by piecing together interference patterns, provided someone aboard has at least Computer-1 skill and takes a half-hour to check the signals.

Complications: Pirates have a traitor aboard who induces this flaw at a pre-arranged time to allow for a close approach and boarding attempt. The station starts to report a half-dozen phantom readings during space combat. The sensors quirk to an odd scan spectrum, picking up a signal from an ancient alien derelict beyond the system's outer rim.

1D10	STATION ADVENTURE SEEDS
1	A Friend has a position of importance aboard the station, but an Enemy seeks to cause a Complication in order to justify a demotion.
2	Smugglers are moving a Thing through the station, when a Complication confuses their plans and drops the Thing's hidden location right in the PCs' laps. They must get it before an Enemy can find and retrieve it.
3	Hidden in a secret compartment in a Thing is a map to the location of a lost Bannerjee Repository. The Thing is currently being kept aboard the station until an Enemy unaware of the secret compartment can come collect it.
4	A Friend claims to have a clean Bannerjee schematic perfectly suited for creating a precious and useful piece of pretech hardware, and his business depends on building it quickly. The precise model of obsolete gear needed to make it is in the hands of an Enemy, however, and no other samples of that antiquated tech can be found nearby.
5	The station was built by a huckstering company that claimed to use clean schematics. In fact, they'd simply failed to realize that the flaw in the schematic was very subtle and unusually vicious, and involved the secret mutation of hydroponic plant life into an invasive, sinister form of life bent on killing everyone aboard.
6	An alien or splinter-culture warship turns up in a boiling rage. It appears that one of the pieces of scrap used to build the station was actually a precious religious or historical artifact of theirs, and they want it back. However, removing it threatens to bring down the entire station.
7	A group of revolutionaries seeks to seize control of the station and bombard a Place at the very height of a solemn and sacred public celebration there.
8	Scrappers used elements of poorly-understood alien technology in creating the station. That technology was actually the housing for a damaged AI unit, which has just awoken and is not amused at its current new "body". It seeks to kill its inhabitants unless somehow placated.
9	The PCs are commissioned by a Friend to retrieve a vital part from a Place planet-side in order to prevent a severe station meltdown. A reactionary Enemy seeks to stop them, and when they get back, a Complication strikes just as they attempt to enact the repair.
10	An Enemy is in league with a group of pirates, and has arranged for them to strike just as a precious Thing is being held aboard the station. In the confusion, a Friend is taken hostage.

Space Station Terms

Above: Opposite the current gravity.
Aft: Opposite the direction the station is orbiting.
Below: In the direction of the current gravitic pull.
Bulkhead: An internal wall within the station.
Compartment: A "room" aboard a ship or station.
Deck: Both a level aboard the station and the floor of that level.
Fore: In the direction the station is orbiting.
Port: When facing fore, the left-hand direction.
Hatch: A door aboard a ship or station.
Inboard: Toward the center of the station.
Outboard: Toward the exterior of the station.
Starboard: When facing fore, the right-hand direction.

Space Station Layout

Most Bannerjee stations are built with thee habitable decks in an oval-section cylinder. Highdeck is the uppermost and usually contains the fusion plant, backup bridge, and living quarters. Middeck contains offices, businesses, and the maintenance core. Lowdeck contains heavy industrial areas, the main bridge, and docking bays and umbilicals for visiting ships. Beneath lowdeck is a layer of artificial gravity generators, maneuver jets, and other fittings that are only accessible through service hatches.

For full maps of a Model Twelve station, consult the adventure Hard Light by Sine Nomine Publishing, available at DriveThruRPG.

Want More?

Want a fully-detailed Bannerjee Model Twelve space station for your own use, complete with personnel breakdowns, keyed maps, and a description of important internal features? Want an example of how to use a station like that as both a base of operations and a simmering steel pressure cooker of greed, betrayal, and old crimes come home to roost?

Pick up **Hard Light**, an adventure setting for *Stars Without Number* characters of levels 1-3. In addition to the details of Brightside Station and its perilous existence in the blazing stellar shadow of a half-molten planetoid, you'll get details on the enigmatic alien Sky Tombs carved into the cold stone of the outer rim asteroids. In addition to three fully-detailed Sky Tombs, you'll get a page of mini-geomorphs and several pages of stocking instructions for creating your own randomized alien mausoleums.

You can find **Hard Light** for sale at DriveThruRPG, along with the free core rulebook for *Stars Without Number*, the old-school-inspired game of interstellar adventure in the wake of galactic collapse.