To Build A Better Starship

The TBS Sci-Fi PDF tells us that a generic starship has a Maneuver rating of –2, can carry up to 800 passengers, travels at an average speed of 2500 miles per second, has an AC of 70 and has a Body of 70,000, but it lacks many details about customizing starships. The next few pages are an attempt at giving TBS GMs and Players ideas for customization without overwhelming them with monotonous stats contrary to the spirit of TBS.

Explanation of Terms

Below you'll find a table that expands the starship stats from TBS Cosmic. It uses some terms not defined there:

Base AC: The Base AC is the one used when multiplying by the vessel's Scale to determine the hull's Body. The table categorizes starships into six classes based on Hull Body and Scale. Below you will find various optional construction elements and ship components that affect AC but do not increase Hull Body.

Reinforced Hull: Armor fortification increases the AC of the covered area by ¼ of the base AC.

Organic: These vessels are living beings and have been born, hatched, grown etc. They have Intelligence, Willpower and Charisma stats as normal characters. Organic vessels tend to adapt their own armor and tend to have an additional 1/3 of the base AC as additional armor.

Plasma and Light: Extra-dimensional vessels often manifest in the material universe as either malleable liquid or light vessels, and hence, are extremely hard to hit and damage. Plasma and light based vessels double the base AC.

Types of Drive Systems

Base Sub-Light Speed: These drive systems; also called impulse, represent the minimum propulsion required for interstellar travel. If you want space dogfights, and games of space chicken, these are the drive system for you, but when it comes to traveling between solar systems, there're a little on the slow side. You might want to invest in a Jump drive, a faster linear drive, or a cryogenic device to keep you on ice until you reach your destination. Gravitational fields also affect sub-Light speed. Exposure to gravity outside of an atmosphere reduces maximum acceleration by ¼. Within an atmosphere it is reduced by ½. That reduction factor increases or decreases relative to the gravity of Earth.

Base Hyper Speed: Hyper drives allow for faster than light travel and are ideal for quick getaways and bouncing around from solar system to solar system, but combat and tracking in at hyper speed is virtually impossible without missiles moving at Hyper

Speed. Hyper speeds can only be engaged outside of gravitational fields and atmospheres, well, unless you want to risk major environmental disaster (adventure seed). Prolonged travel at hyper speed reduces the rate of aging by a factor of 10. In other words, a cumulative ten years' time in hyperspace would only cause the effects of one year's normal aging.

Base Warp Speed: Only the most technologically advanced space faring societies have developed Warp technology. Warp drives are capable of ten times the acceleration of comparable hyper drives. The age reduction factor for prolonged periods in warp is 100.

Base Jump: Jump drives provide alternate solution to traveling long distances from conventional linear drives. Jump technology can develop independently of Hyper and Warp technology. Each starship with a Jump drive has a jump radius equal to the ship's Scale in Miles. Anything within that radius jumps along with the vessel itself. Jumps are measured in Light Years.

Special Notes Regarding the Above Drive Systems, Speed and Acceleration:

With the exception of Jump, each drive system is capable of any of the slower forms of interstellar travel at relative capacity, unless disallowed by the GM. For Example, Warp drives are also capable of Sub-Light and Hyper speeds. Since Jump technology does not involve going from point A to point B in using theoretical linear acceleration, Jump drives are not capable of other modes of travel.

Acceleration Multipliers

Obviously, not all Sub-Light, Hyper, etc. drives will accelerate at the same rate. If you want to sup up your vessel's speed, use the listed speed as a base and multiply it by whole numbers until you reach the speed you want. You would express the new speed as "Sub-Light x2", "Warp x2" etc. Each Acceleration Multiplier also increases a ship's Maneuver Rating by 1.

Acceleration Multipliers and Power Sources

Various power sources add or subtract from a ship's Acceleration Multiplier.

Nuclear Fusion, Ion etc: These are your standard Sci-Fi power sources and provide a baseline for acceleration (+0).

Liquefied Gas: This represents the current real world state of spacecraft fuel (-4)

Solar: … cheap, clean, and abundant (usually) source of fuel, but slower to process (-1)

Cell: A power cell is any object used to retrieve energy that then powers a drive system. The "battery life" of a cell varies by type, but assume one year of continuous use unless the GM says otherwise (+1)

Psychic and Magical: The force of a psychic, or magical, character's Will powers these ships. The character must make a Will roll verses an assigned difficulty each time he or she maneuvers the ship. The base acceleration multiplier for psionically-powered vessels is equal to ¼ the character's Will MSB.

Biological, Photosynthetic, etc: This power source category is reserved for living ships. The base acceleration modifier is equal to 1/10 of the vessel's base AC.

Weapon Ports: Weapon ports represent the number of weapons to scale that a vessel may have mounted on it. A review of the damage scaling rules in TBS Sci-Fi might be helpful when choosing weapons. The weapons listed in TBS Sci-Fi, particularly rail guns, work great with starships. Of course you would disregard the number of hands required for the weapon and keep in mind that range as well as damage is to Scale. Each weapon fills one port, with the exception of missiles, mines and bombs. These weapons are grouped in batteries. One battery takes up one port; the number of missiles per battery is determined by a ship's Scale. Divide the scale by 20 to determine the number of missiles per battery. This convention is only useful in dogfights between vessels with the same scale; otherwise follow the standard damage rules outlined in TBS Sci-Fi with projectiles, as you would with other weapons.

Other Applications of Weapon Ports

Advanced Sensor Arrays: A weapon port can be exchanged for an advanced sensor array. All vessels are understood to have a radial sensor range equal to twice (x2) their Scales in square Miles. Each advanced sensor array doubles that rage, or it might enable the detection of cloaked vessels, psychic energy, etc. within normal range.

Cloak Generators: These devices shield vessels from detection from conventional sensors and the naked eye. Usually, ships cannot fire weapons when cloaked. Only one cloak generator is needed to cloak an entire vessel.

Shield Generators: Vessels may exchange multiple weapon ports for multiple shield generators. When engaged, each shield generator temporarily increases a vessel's AC by ¼ of its original AC. Shield Generators do not increase Hull Body.

Targeting Systems: Targeting systems assist gunners in locking onto potential targets. They add an additional (+2) to the gunners' attack rolls for every multiplier level. Only one port is required for any level of targeting system.

Bays: Bays are areas non-essential to the functioning of the vessel itself, used as anything from passenger compartments, medical stations, hangers, etc. The size of a bay is relative to Scale. A bay may accommodate a number of human sized passengers equal to the ship's Scale divided by 10 comfortably. So a bay in a Class 6 vessel could accommodate 10,000 passengers, 100 fighters, 10 Yachts or 1 Destroyer! The average Carrier holds 10 fully loaded fighters per bay, etc. Bays maybe exchanged for weapon

ports at a rate of 1 to 3. Note that regardless of the number of bays exchanged for ports, any vessel is understood to always have the minimum crew and /or cargo capacity for the number of people equal to its Class number.

Basic Hull Classifications And Specs

Hull Body Class (Note: Hull Body equals the Base AC times the Scale as per TBS Sci-Fi.)	Class 1: Space Probes; Escape Pods	Class 2: Commercial Personal Transports	Class 3: Shuttles, Fighters; Drop Ships	Class 4: Yachts, Corvettes, Scouts, Freighters,	Class 5: Research, Medical, Destroyer, Carrier and Ag Ships	Class 6: Space Stations; Planet Killers
Tech Level	6-7	6-8	7-8	7	8	8-9
Scale	1:1	1:10	1:100	1:1000	1:10,000	100,000
Avg. Base AC Range	10-30+	20-40+	30-50+	60-80+	70-100+	100-300+
Maneuver Rating	+2	+1	0	-2	-4	-8
Base Sub-Light Speed [Mi/Sec]	25	50	250	2500	25,000	250,000
Base Hyper Speed [xSPDoL]	N/A	N/A	5	10	30	50
Base Warp Speed [xSPDoL]	N/A	N/A	N/A	100	300	500
Base Jump [Light-Years]	N/A	N/A	N/A	N/A	100	300
Weapon Ports (to Scale)	N/A	4	6	8	10	30
Bays (to Scale)	1	3	5	10	20	50+

Starship Costs

I tend to resist the idea of construction systems because that kind of stuff should be left to conversations between Players and GMs, but if you'd like a construction system, I've developed this one inspired by the cosmic item construction guidelines from TBS Cosmic:

First, to determine the number of construction points available for a vessel, multiply the vessel's Tech Level by 100.

Second, to determine the cost of Hull specifications, determine what Base AC you want for the vessel and multiply that number by the Class of the ship. At this point, the vessel

is understood to have all the basic specs listed in the table above with the exception of Jump and Faster than Light capabilities. You can fill weapon ports and bays according to the specs without spending additional construction points.

Third, to increase speed and add Jump and FTL capabilities, use the guidelines below:

Increased Sub-Light speed costs 5 times the desired acceleration modifier in construction points. Jump and Hyper drives cost 20 times the desired acceleration modifier in construction points. Warp drives cost 30 times the desired acceleration modifier in construction points.

Fourth, to determine the cost of a customized power source, multiply the acceleration modifier of the power source by 10. Negative acceleration modifiers increase construction points.

Fifth, multiply the total number of additional modifiers from total points of increased functional AC, to bonuses from targeting systems and advanced sensor arrays, etc. by 10 to determine remaining costs. Note that non-physical stats for organic vessels do not require the expense of construction points.

Remember that as with any aspect of a role-playing system, everything depends on personal preference. If these guidelines don’t work, change them, or come up with new ones. The Basic System community would welcome them.