

Zero Space : Starships

If this were a starship combat game, rather than a space fantasy roleplaying game, we would make this section much more complicated. A ship's mass would make Piloting rolls more difficult, different weapons would be more or less effective against different defenses, and so on. But it's not a starship combat game, so this section is deliberately quite simple.

Overview

All starships have five basic attributes: Computer, Engines, Defenses, Mass, and Integrity. Many starships also have Weapons, and some starships have specialized equipment such as camouflage fields, fully equipped medical bays, and tractor beams.

The Crew

On very small ships, a single crew member may be responsible for some or all of the ship's systems. In a starfighter, for example, the pilot, the navigator, and the engineer are all the same person. On larger ships, these responsibilities are usually distributed among specialists: the ship may have several pilots, navigators, and engineers, as well as dedicated scientists, sensor operators, and medical professionals.

In game terms, starships operate much like characters' personal equipment: the action value (AV) of the character using a starship's systems is equal to the character's relevant attribute plus the rating of the given system. For example, the action value of a character piloting a starship would be their Piloting (Agility) plus the rating of the starship's Engines.

If no crew member with the appropriate skill is available, the action value of the character making the roll is equal to the rating of the ship's system, and the crew member's attributes are ignored. For example, if no crew member with the Piloting skill is available, any member of the crew can attempt navigation rolls. The character's action value would be equal to the ship's Computer rating.

Table: Typical starship tasks

Task	Action Value	Difficulty Value
Analyzing scientific data	Science (Reason) + ship's Computer rating	Moderate (DV 3), remarkable (DV 6), extreme (DV 9), inconceivable (DV 12)

Charting a course	Piloting (Reason) + ship's Computer rating	Moderate (DV 3), remarkable (DV 6), extreme (DV 9), inconceivable (DV 12)
Evading pursuit	Piloting (Agility) + ship's Engines rating	Piloting (Agility) + ship's Engines rating
Flying through an asteroid field	Piloting (Agility) + ship's Engines rating	Extreme (DV 9)
Targeting an enemy ship	Starship Combat (Reason) + ship's Weapons rating	Piloting (Agility) + ship's Defenses rating
Using the ship's sensors	Science (Reason) + ship's Computer rating	Moderate (DV 3), remarkable (DV 6), extreme (DV 9), inconceivable (DV 12)
Withstanding enemy attacks	Piloting (Agility) + ship's Defenses rating	Starship Combat (Reason) + ship's Weapons rating

Order Of Play

As with personal combat, everything that happens in a round of starship combat is assumed to occur more or less simultaneously, but we make people take turns to keep the game orderly.

The most important factor in determining which starship acts before which is situational awareness. If a starship is not aware of their opponent, then they don't have the opportunity to attack. If the combatants become aware of their adversaries in a set order, then that is the order in which they act in combat.

However, if the various combatants become aware of each other more or less simultaneously, or if you would prefer to roll dice to see who goes first, the players and the GM should each make a Science (Reason) + ship's Computer roll at the beginning of the conflict. Turns proceed each round from the highest roller to lowest.

Combining Effort

Starship combat, piloting, and repair are exceptions to the Combining Effort rules. Combining Effort does not provide any additional benefit: larger starships have more to repair, but they also have larger crews, so it's assumed that everyone who can help with a given task already is, and it all balances out.

Computer

A starship's Computer is its most important asset, because without it, nothing on the ship works. The ship's computer can be used to analyze data or to chart a course through space.

Navigation

Navigation pertains to getting from one stellar body to another. This could be two stars, a star and a nebula, or just two arbitrary locations which are not in the same solar system. Navigation generally requires a Piloting (Reason) roll. The difficulty value (DV) of the roll is based on how well-known the destination is.

Table: Navigation difficulty value examples

Difficulty value		Examples
--	Routine	Navigate between two well-documented locations along an established route
3	Moderately difficult	Navigate to an unfamiliar location along an established route, or to a familiar location along an undocumented route
6	Remarkably difficult	Navigate to a location using incomplete course data
9	Extremely difficult	Navigate to a location using improvised course data
12	Inconceivable!	Navigate to a location using a blind guess

Note that the distance to the destination does not directly impact the difficulty value. However, the more remote the destination, the farther off-course the ship will be if the navigator fails to chart the correct course.

Orbital Mechanics

Orbital mechanics pertains to getting around within a solar system. Orbital mechanics usually requires an opposed Piloting (Reason) roll. The typical reason for making an orbital mechanics roll is to reach a destination before someone else does, because it's not really possible to get lost within a solar system. The action value (AV) of each ship is equal to the Reason of the navigator plus the Computer rating of their ship. The navigator who rolls higher has plotted a trajectory that will allow their ship to reach its destination several hours ahead of the other ship.

Sensors

A starship's sensors are used to find things and to analyze them. The item being sought or examined could be a specific asteroid, a crippled starship, a starship with a camouflage field, or a strange energy reading. Using a ship's sensors generally requires a Science (Reason) roll. The difficulty value (DV) of the roll is based on the subtlety of the thing being searched for or analyzed.

Table: Sensor operation difficulty value examples

Difficulty value		Examples
--	Routine	Locate an active starship within long range, locate a familiar energy signature within long range, analyze a familiar energy signature within medium range
3	Moderately difficult	Locate an active starship beyond long range, locate a familiar energy signature beyond long range, analyze an unfamiliar energy signature within short range
6	Remarkably difficult	Locate an inactive or disabled starship within long range, locate an unfamiliar energy signature within long range, analyze an unfamiliar energy signature within medium range
9	Extremely difficult	Locate an inactive or disabled starship beyond long range, locate an unfamiliar energy signature beyond long range, analyze an unfamiliar energy signature within long range
12	Inconceivable!	Analyze an unfamiliar energy signature beyond long range

1. Range Bands

Engines

A starship's Engines are its most important asset, because without them, it's going nowhere. Piloting a starship generally requires a Piloting (Agility) roll. The difficulty value (DV) is based on the complexity of the maneuver being attempted.

Table: Piloting difficulty value examples

Difficulty value		Examples
--	Routine	Landing at a starport or on level ground, docking with a relatively motionless starship
3	Moderately difficult	Landing in violent weather, flying through obstacles, docking with a moving but cooperative starship
6	Remarkably difficult	Flying through an incomplete space station at full speed, docking with a moving uncooperative starship
9	Extremely difficult	Flying through an asteroid field at full speed, docking with an uncooperative starship at full speed
12	Inconceivable!	Flying blind through an asteroid field at full speed

A failed Piloting roll will usually result in damage to the ship. For every failed Piloting roll, the ship loses one point of structural Integrity. It's difficult to destroy a starship by flying it poorly, but an exceptionally bad pilot can do it.

Pursuit

Closing with another starship is only easy if both pilots agree. Closing with a ship that wants to flee usually requires an opposed Piloting (Agility) roll. The action value (AV) of each ship is equal to the Agility of the pilot plus the Engines rating of their ship. The pilot who rolls higher has increased or decreased the range between the ships by one range band, depending on whether the better pilot wants to flee or pursue.

Interstellar Travel

Exact travel times

There is no equation to give you exact travel times based on the distance traveled and the Engines and Mass of the ship. The GM should decide the travel time on a case by case basis, using the rough guidelines given here.

The time required to travel interstellar distances increases logarithmically as the distance itself increases linearly. For example, a journey between two star systems in the same region of a galaxy typically takes from a few hours to a few days, traveling from one edge of a galaxy to the other takes a week or two, and traveling from one galaxy to the next takes a month or two. Ships which have higher Mass ratings are slower than less massive ships, and ships with higher Engines ratings

are faster than ships with lower Engines ratings. Travel using warp engines does not remove a vessel from our universe. However, due to the Lorentzian manifold (or "warp bubble") around it, the vessel is effectively blind, deaf, and incommunicado for the duration of its journey.

Defenses

A starship's Defenses are its most important asset, because it's a dangerous universe. Defenses, which may be armor, energy shields, or a combination of the two, protect a starship from enemy attacks and damaging environments. Withstanding enemy attacks and damaging environments generally requires a Piloting (Agility) roll.

Evasive Maneuvers

During the ship's turn, the pilot may choose to initiate evasive maneuvers. Performing evasive maneuvers grants the defending ship a bonus die on all defensive rolls. A ship which is using its action to perform evasive maneuvers continues to receive this benefit until the ship's next turn.

A ship taking evasive maneuvers is not able to attack (the ship can fire its weapons, of course, but they won't hit anything).

Shields Maximum

During the ship's turn, the crew members on the weapons and defensive consoles may agree to set shields to maximum. Setting shields to maximum grants the defending ship a bonus die on all defensive rolls, but a penalty die on all offensive rolls. A ship which has set its shields to maximum continues to receive this benefit until the ship's next turn.

Mass

A starship's Mass is its most important asset, because Mass rating reflects the physical structure and durability of the ship. A starship which is large or densely constructed will have a higher Mass rating than one which is smaller or less dense.

Integrity

Integrity represents a ship's ability to withstand damage. The higher the starship's Integrity rating, the more times it may survive attacks which impair it. A starship's Integrity is normally equal to its Mass rating. If a ship's Mass permanently changes, its Integrity also changes, but damage to a

ship's Integrity does not reduce its Mass.

When a ship is successfully attacked, one (or more, if using the optional margin of success rules) is temporarily subtracted from its Integrity. A ship which has lost more than half of its Integrity incurs a penalty die on any offensive or defensive action. A ship which has been reduced to zero Integrity is disabled: it is out of the fight, and it will probably require extensive repairs. Integrity may not be reduced below zero.

Normally, the crew of a damaged starship may repair half of the ship's lost Integrity (rounded down) by working on it for about a day. Further damage may only be repaired at a starship repair facility called a stardock. Most full-service starports have stardock facilities. Barring some extraordinary event, a ship's Integrity will be completely repaired after a week in a stardock.

If the ship has taken some other form of damage, such as damage to one of its systems, this damage is temporary. It is all repaired once the crew has had a day to work on it.

Weapons

A starship's Weapons are its most important asset, because a starship without weapons is simply a moving target. Starships can attack a number of times per round equal to the ship's rating in Weapons, or equal to the number of crew members at the weapons consoles, whichever is less (each crew member can only fire one weapon, once per round). Using a ship's weapons generally requires a Starship Combat (Reason) roll. The difficulty value (DV) is based on the defending pilot's Agility and the defending ship's Defenses rating.

The ship's rating in Weapons also dictates the range of its weapons. The range of the ship's weapons are covered in Range Bands, below.

Note that the ship's rating in Weapons is not the number of its physical weapons. A ship with a Weapons rating of 5 might have only two weapons, or it might have twenty, depending on the design, size, and placement of the weapons themselves.

Starship weaponry is much more powerful than the blasters carried by individuals. If a starship weapon is brought to bear against an individual rather than against a structure or another craft, the attack value (AV) is increased by 10.

Range Bands

As with terrestrial combat, there are five range bands in starship combat: close, short, medium, long, and remote. Standard starship weapons have an effective range based on the Weapons rating of the ship. Due to the vast distances involved, attacking more distant targets is usually not possible. If the GM declares that the attack is possible, the attacker incurs a penalty die when attacking a target beyond the ship's effective weapon range.

The "typical weapons" listed below are mostly for flavour. They don't usually make any difference in the game.

Table: Starship range bands

Weapons rating	Range	Typical weapons
1-2	Close	Arc generator, flak guns, turbolaser, railgun
3-5	Short (10 km)	Disruptor, particle cannon, plasma torpedo
6-8	Medium (50 km)	Nemesis cannon, fusion cannon, photon torpedo
9-11	Long (500 km)	Hellbore cannon, meson cannon, singularity torpedo
12+	Remote	Planetary defense battery, warp missile

If you'd prefer to emulate a setting more like *Star Trek* and less like *Star Wars*, multiply the weapon ranges by one thousand. So instead of short, medium and long ranges being 10 km, 50 km, and 500 km, they'd be 10,000 km, 50,000 km, and 500,000 km. (This doesn't actually make any difference in the game.)

Targeting Specific Systems

Standard cargo units
<p>A standard cargo module in the ZeroSpace universe is 28m x 15m x 15m -- 6300 cubic meters. This is referred to in naval architecture terms as "6300 tonnes". Most people assume that this is because 6300 cubic meters of water has a mass of 6300 tonnes... but this is just a very common assumption. No one actually knows how this volume became a standard, or why it is referred to by starship architects as "tonnes" of cargo capacity.</p> <p>Fun fact! A standard cargo module holds one Shadow Legion in cryostasis -- 1000 genetically modified, fanatically loyal soldiers of the Infinite Dominion in full armor (weapons and other equipment shipped separately).</p>

Before resolving whether an attack is successful, an attacker can declare that they are targeting a specific system: bridge, cargo, computer, crew quarters, defenses, engines, engineering, gravity control, environmental systems, sensors, or weapons. If the attack is successful, the attacker then rolls 2d6 and consults the "Targeting starship systems" table. If the attacker's system targeting roll is within 0-2 of the desired system, that system is affected as described; otherwise, the system rolled is affected as described.

For example, if the attacker was targeting the bridge (requiring a roll of 2), and the attack was successful, and rolled a 4, they would have successfully damaged the bridge. If they rolled a 5, however, they would have damaged the starship's computer, reducing the ship's Computer rating to zero until the end of the attacker's next turn.

Targeting a specific system damages a system instead of causing damage to the ship's structural Integrity; the target's Integrity is unchanged.

Table: Targeting starship systems

2d6	System	Effect
2	Bridge	Named crew members on the bridge are struck by exploding consoles or are pinned by falling debris, and incur a penalty die on all rolls until the end of the attacker's next turn; unnamed crew members are dead
3	Defenses	Defenses are offline (rating 0) until the end of the attacker's next turn
4	Engineering	Any systems currently offline remain offline an additional round
5	Computer	Computer and communications are offline (rating 0) until the end of the attacker's next turn
6	Crew quarters	Named crew members in their quarters are trapped until rescued; unnamed crew members are dead
7	Cargo/other equipment	Cargo or supplies are destroyed; if the ship has unusual equipment, that equipment is offline (rating 0) until the end of the attacker's next turn
8	Gravity control	Characters without the Zero-G Combat gift incur a penalty die on all rolls until the end of the attacker's next turn
9	Sensors	Sensors are offline (Computer rating 0 for sensor rolls) until the end of the attacker's next turn
10	Engines	Engines are offline (rating 0) until the end of the attacker's next turn
11	Weapons	Weapons are offline (rating 0) until the end of the attacker's next turn

Other Equipment

Camouflage Fields

Camouflage fields are an unusual defensive system based on the theory that an opponent can't destroy what they can't target. Camouflage fields do not provide any protection against direct damage. Instead, an attacker must make a successful Computing roll each round before they can attack a ship with an active camouflage field.

Detecting a ship with a camouflage field usually requires an opposed Science roll, in a high-tech version of "hide and seek". The action value (AV) of the seeking ship is equal to the Reason of the sensor operator plus the Computer rating of their ship. The defense value (DV) of the hiding ship is equal to the Reason of the camouflage field operator plus the rating of their camouflage field.

If the Science (Reason) roll of the sensor operator equals or exceeds the Science (Reason) roll of the camouflage field operator, the seeking ship may attack the hiding ship during its turn; if not, then not. The hiding ship has full use of its other defenses while using its camouflage field (assuming that they have not been damaged), but it may not fire weapons during the same turn in which its camouflage field was active.

Emergency Self Destruct

Self destruct systems or emergency destruction systems are present aboard most commercial and military starships. Initiating the self destruct on a spacecraft disengages its engine coolant system, quickly causing the vessel's power core to overload and explode, destroying the spacecraft after a set time period has elapsed (usually 10 minutes).

As a safety precaution, self destruct mechanisms are intentionally difficult to enable, and even more difficult to disable. Enabling the self destruct device requires a moderately difficult (DV 3) Engineering (Agility) roll. A self destruct device can be disabled during the first half of its countdown with a successful remarkably difficult (DV 6) Engineering (Agility) roll.

A ship which self destructs will explode with tremendous force, utterly destroying the spacecraft, and severely damaging any nearby spacecraft. Any vessel within short range (10 km) of the exploding starship will take an amount of Integrity damage equal to the Mass of the exploding starship.

Enhanced Sensors

Science vessels and scout ships often have enhanced sensors to assist with their missions. If a ship is equipped with enhanced sensors, the sensor operator gains a bonus die on any sensor-related Science roll.

Integrity Enhancement Fields

Integrity enhancement fields are a special type of Engineering system which uses energy shields to reinforce the ship's structure. Normally, a ship which has lost more than half of its Integrity incurs a penalty die on any offensive or defensive action. A ship which has Integrity enhancement fields does not incur a penalty die due to lost Integrity, as long as the ship's Engineering system is online.

Medical Bays

The rating of a ship's medical bay is added to a medical staff member's Medicine (Reason) when treating a patient. A standard medical bay on a starship is equipped to treat a variety of minor injuries and ailments, and normally has a rating of 1. Massive civilian cruise ships often have an enhanced medical bay, with a rating of 2, while large military vessels usually have a fully equipped hospital facility, with a rating of 3.

Megaweapon

In addition to the ship's other weapons, the ship has a single massive weapon around which the rest of the ship is built. This megaweapon can only be fired once every ten rounds (one minute) at a single target. When attacking with the megaweapon, the Mass rating of the attacking ship is added to its Weapons rating.

Overthrusters

An overthrunder is a colliding beam accelerator which creates intermediate vector bosons from the annihilation of electrons and positrons. If a ship is equipped with overthrusters, the pilot gains a bonus die on any pursuit-related or evasion-related Piloting rolls.

Point Defense Systems

Point defense systems offer an additional defense against fast attack craft (bombers, fighters, and interceptors). If a ship with a point defense system is being attacked by a fast attack craft, the defending ship gains a bonus die on its defense roll.

Tractor Beams

Tractor beams are gravitic weapons intended to prevent the target from moving. Using a tractor beam generally requires a Starship Combat (Reason) roll plus the rating of the tractor beam. The difficulty value (DV) is based on the defending pilot's Agility and the defending ship's Defenses rating.

Tractor beams do not inflict Integrity damage on the target. Instead, on a successful roll, the Mass rating of the attacking ship is subtracted from the Engines rating of the defending ship for as long as the tractor beam is focused on the target. If the target's effective Engines rating is reduced to zero, the target ship is unable to move.

Escaping from a tractor beam can be accomplished one of three ways: the tractored ship can move beyond the effective range of the tractor beam (based on the rating of the tractor beam); the tractored ship (or another ship) can reduce the ship with the tractor beam to Integrity 0, causing the tractor beam to shut off; or the fleeing ship (or another ship) can break the tractor beam's hold by successfully targeting the "cargo/other equipment" system of the ship with the tractor beam.

Ship Classifications

Warship classification is a field that has changed over time, and is an area of considerable disagreement. The system described here is that currently in use by the Imperial Strategic Command. Size categories are approximate; a ship may be classified with smaller or larger ships, based on its intended role and specific configuration.

Star Fortress

Mobile space station, capable of defending against entire fleets, and housing vast numbers of fast attack craft and smaller warships; 10,000 meters and larger

Computer 10, Engines 1, Defenses 14, Mass 11, Weapons 14

Dreadnought

Largest classification of capital ship, heavily armed and armored, and carrying numerous fast attack craft; 5,000 to 10,000 meters

Computer 8, Engines 2, Defenses 12, Mass 10, Weapons 12

Battleship

Largest warship in general use, heavily armed and armored, and a platform for smaller fighter craft; 2,000 to 5,000 meters

Computer 6, Engines 3, Defenses 10, Mass 9, Weapons 10

Battlecruiser

Heavy ship with the armament of a battleship but the speed and defenses of a cruiser; 1,000 to 2,000 meters

Computer 6, Engines 4, Defenses 8, Mass 8, Weapons 10

Heavy cruiser

Heavy, multi-use warship that can operate alone or as part of a formation; 600 to 1,000 meters

Computer 6, Engines 4, Defenses 8, Mass 7, Weapons 8

Light Cruiser

Light, multi-use warship that can operate alone or as part of a formation; generally, the largest starship capable of physically landing on a planet; 400 to 700 meters

Computer 6, Engines 4, Defenses 6, Mass 6, Weapons 8

Destroyer

Fast, maneuverable, high endurance warship, usually intended to escort larger vessels in a fleet; designed to protect against small, faster attackers; 300 to 600 meters

Computer 4, Engines 6, Defenses 6, Mass 5, Weapons 6

Frigate

Commonly used as a scout and patrol ship in dangerous areas; may participate in fleet actions, but does not usually stand in the line of battle with capital ships; 200 to 400 meters

Computer 4, Engines 6, Defenses 6, Mass 4, Weapons 6

Corvette

Smallest warship capable of participating in fleet actions; generally used as a courier and patrol ship; 100 to 200 meters

Computer 2, Engines 8, Defenses 4, Mass 3, Weapons 4

Patrol Ship

Small, lightly armed vessel which commonly operates independently; mainly used to patrol areas that are not considered dangerous; 50 to 150 meters

Computer 2, Engines 6, Defenses 2, Mass 2, Weapons 2

Fast attack craft (bombers, fighters, and interceptors)

Small, short range craft which operate in groups; 15 to 50 meters

Computer 2, Engines 10, Defenses 2, Mass 1, Weapons 2

Revision #3

Created 8 January 2019 21:26:50 by Maik

Updated 8 January 2019 21:28:41 by Maik