



# Chapter Seven

## Space combat

This chapter details the basics for space combat. These rules for starship combat presented here are designed to allow for roleplaying and involvement of the characters.

### The Space Combat Turn

Each turn in space combat lasts around one kilosecond (1,000 seconds) or 17 minutes of game time. In a combat turn, vessels have individual Initiative. Actions are taken in descending order of Initiative. If two vessels have the same Initiative, the vessel with the highest Thrust goes first. If they are still tied, then vessels act simultaneously. When a vessel acts, the crew members of the vessel take all of their actions at once. Each crew member gets a minor action and a significant action.

Once everyone has acted a combat turn is over and a new turn begins. Initiative is not re-rolled but is dynamic, and may be adjusted up and down by actions taken during a turn.

### Space Combat Checklist

Like personal combat, space combat is cyclical. Everybody acts in turn in a regular cycle called a turn. Each turn in space combat lasts one kilosecond. Generally, space combat runs in the following way:

1. The Referee determines the range at which the encounter begins.
2. All crew members are assigned to a position on board their vessel.
3. The Referee determines which characters are aware of their opponents at the start of the battle. If some but not all vessels are aware of their opponents, the vessels that are aware of their opponents are considered to get an automatic 12 on their initiative roll, giving them an Initiative of  $12 + \text{Dexterity DM}$ .
4. Any remaining vessels roll initiative. All vessels are now ready to begin their first turn of combat.
5. All vessels act in initiative order.
  - a. At the start of each combat turn, a Captain may declare that their crew is acting hastily.
  - b. The crew members of the vessel resolve their actions.
  - c. After every crew member has completed their actions, any damage is resolved if the vessel's weapon systems hit enemy ships.
6. When every vessel has had a turn, the combatant with the highest initiative total acts again, and Step 5 repeats until combat ends.

Movement is abstracted to 5,000 km hexes to allow for tactical battles as vessels attempt to maneuver into a position of pursuit and advantage against their opponents, or frantically try to shake pursuit. Range is similarly abstracted, needing only to note whether the range for all vessels involved for each round is Close, Short, Medium, Long, Very Long, or Extreme.

If two vessels randomly encounter each other while traveling, the encounter will begin at Very Long range. More often, ships engage near a planet, where the range is Short or Medium.

Close: 0 – 10 km same hex

Short: 10 – 1250 km 1 hex

Medium: 1250 – 10,000 km 1 to 2 hexes

Long: 10,000 – 25,000 km 3 to 5 hexes

Very Long: 25,000 – 50,000 km 6 to 10 hexes

Distant: 50,000 km+ over 10 hexes

### Crew Positions

At the start of an engagement, all crew must be assigned to a position on board ship. There can be only one pilot, but other than that, any number of people can occupy the same position.

- Pilot: Flies the ship, responsible for changing course and for evasive maneuvers.
- Captain: Commands the ship, and can use Leadership and Tactics skills.
- Drive Engineer: An engineer can be assigned to each of the M-drive and the J-drive.

- Gunner: Each turret has its own gunner. A character must choose which turret they are manning at the start of the combat.
- Bay Gunner: Each bay weapon has its own gunner.
- Damage Control: A character assigned to free-floating damage control can repair any system.
- Marine: Prepares to repel boarders, or to board enemy ships.
- Passenger: Passengers are all people aboard ship who are not assigned a position and are assumed to be waiting in staterooms.
- Chief Security Officer Commands marines, and can use Leadership and Tactics skills in boarding actions.
- Sensors Operator A character assigned to communications and sensors.

### Automated Positions

The ship's computer can cover several positions if it is running the appropriate software:

- Fire Control programs can either act gunners or aid existing gunners.
- A ship equipped with repair drones and Auto-Repair software acts as damage control.
- A ship running an Intellect program and Expert Pilot can be the pilot.
- A ship equipped with repair drones and running an Intellect program and Expert Engineer can be a drive engineer.

### Initiative

Each ship in an engagement rolls 2d6 to determine their starting Initiative score. The ship with a greater Thrust score gains a +1 DM to its roll.

The Captain of each vessel (or each fleet, if more than one ship is involved on each side) may a Tactics check. Success gives the vessel Advantage to it's attack or evade rolls. The Effect is added to the Initiative of the vessel (or fleet).

### Note on Personal Actions

As a space combat turn represents over 150 personal combat rounds, it stands to reason that crew members may engage in a lot of personal actions over the course of a single combat turn. Much of this is abstracted into the various space combat actions. Most personal actions have minimal impact on space combat. For crew members that do want to pursue a personal action during space combat, these actions count as minor actions on the space combat scale. This glosses over the remainder of the character's time during the combat turn, and highlights the primary acts that a character might want to pursue without taking away from the rest of the space combat.

### Space Combat Action Summary

<u>Description</u>	<u>Type</u>	<u>Crew Member</u>
Change Positions	Minor	Anyone
Personal Action	Minor	Anyone
Reload Weapons System	Significant	Anyone
Miscellaneous	Varies	Anyone
Coordinate Crew	Significant	Captain
Increase Initiative	Significant	Captain
Prepare for Boarding Action	Significant	Chief Security Officer, Marine
Repair Damaged System	Significant	Damage Control
Fire Sand	Reaction	Gunner
Point Defense	Reaction	Gunner
Trigger Screens	Reaction	Gunner
Attack	Significant	Gunner
Calculate Jump	Significant	Navigator
Move Ship	Minor	Pilot
Dodge Incoming Fire	Reaction	Pilot
Avoid Collision	Significant	Pilot
Break Pursuit	Significant	Pilot
Dock With Another Vessel	Significant	Pilot
Evasive Maneuvers	Significant	Pilot
Line Up The Shot	Significant	Pilot
Pursuit	Significant	Pilot
Ram	Significant	Pilot
Electronic Warfare	Significant	Sensors Operator
Intercept Enemy Communications	Significant	Sensors Operator
Maintain Communications	Significant	Sensors Operator
Sensor Lock	Significant	Sensors Operator

### Minor Actions

As in personal combat, minor actions are actions intended to perform tasks that do not require significant focus and concentration. Each crew member can take up to three minor actions per turn, at the loss of a significant action.

### Change Positions

Crew members changes crew positions, and are now considered to be manning their new position rather than their previous one.

### Move Ship

The pilot may move the vessel a number of hexes in a straight line, change facing in a hex one hex side per M thrust or g number, or a combination of the two; up to an amount equal to its Thrust. This requires no skill check.

### Personal Action

A crew member may pursue any personal action that generally takes less than a minute.

### Miscellaneous

The Referee may permit a character to perform a skill check or other action as a minor action if the use of the skill does not require the character's full attention or complex physical actions.

### Significant Actions

Significant actions are intended to do something within about 1/3 of a turn. You can perform a single significant action per turn, or forego it to perform a total of three minor actions.

### Take Minor Actions

A character can take two minor actions instead of a significant action.

### Attack

A gunner may attack any target within the range of the weapon system they are manning. The gunner attacks by making a Gunnery skill check roll at a DM determined by range, adding any Computer Targeting, Sensor Targeting, or other modifiers in effect this round for their vessel. The enemy ship may react by dodging, point defense or triggering screens (see Reactions). A gunner may fire any or all of the weapons in their turret at the rate of fire. A Laser turret with a RoF higher than one can either fire at multiple targets, or use continuous fire to stack the damage, for example a RoF 3 Laser could either fire at three targets, or do 3d6 to one target. A Barbette or Bay may only fire once per round. If the attack is successful it will inflict damage. Damage is resolved after all attacks have been made in a vessel's turn. Missiles do not impact in the same round they are launched; their damage is resolved in the combat turn that they impact their target.

### Avoid Collision

When a vessel is moving at Short or Close range through a debris field, traffic, an asteroid belt, a planetary ring, or similar situation where there is a reasonable chance of collision with another object, the pilot must make an Avoid Collision check each turn. A collision inflicts 1D6 damage for every point of the vessel's current speed.

### Collision Avoidance

<u>Situation</u>	<u>Difficulty</u>
Traffic (5 or more vessels within Short range), debris	Average (+0)
Asteroid field, light density	Difficult (-2)
Asteroid field, average density	Very Difficult (-4)
Asteroid field, heavy density	Formidable (-6)
Significant speed difference between ship and debris	DM -2

### Break Pursuit

If a vessel is being pursued (as per the Pursuit action) the pilot or driver may break the pursuit with a successful opposed Pilot skill check against his opponent. Once the pursuit has broken and the pursuing vessel loses all accumulated attack bonuses against that target.

### Calculate Jump

The navigator can hastily calculate a jump as a significant action in space combat. Normally an Easy (+4) Education-based Navigation skill check, hastening it to fit within one space combat turn imposes a DM-1 on the skill check.

### Dock with Another Vessel

The pilot must make a successful Average(+0) Pilot check. If the other ship does not wish to be docked with then make opposed Pilot checks; the ship trying to dock suffers a Disadvantage. When docked, boarding actions can take place.

### Coordinate Crew

The Captain makes an Average(+0) Leadership skill check. The Captain gains a pool of points equal to the Effect of the skill check (minimum of 1), which they can distribute to individual crew members as DMs (granting a +1 DM per point) on skill or ability checks during the combat turn.

### Evasive Maneuvers

The pilot operates the vessel in an erratic manner in an attempt to avoid being hit by opposing weapons fire. The Pilot makes an Average (+0) Pilot skill. If successful, any attack rolls targeting the pilot's vessel suffer a -1 DM penalty, or -2 DM with an Exceptional Success.

### Electronic Warfare

A ship's sensors operator may attempt to jam radio communications and sensor locks by making an opposed Intelligence-based Electronics check against the sensors operator of the opposing vessel. Electronic warfare can be used to break sensor lock.

Alternatively, electronic warfare can be used to attack smart missiles that are targeting the ship. The sensors operator makes a Difficult (-2) Sensors check and, if successful, a single attacking smart missile ceases attacking. The sensors operator may continue making checks to disable smart missiles until they fail one, with a cumulative -1 DM each time.

**Increase Initiative**

The Captain of a vessel may make a Leadership check and increase the Initiative of his vessel by the Effect of the check. This increase only applies for the following turn.

**Intercept Enemy Communications**

The sensors operator may attempt to intercept enemy communications. This requires a Difficult(-2) Comms skill check. Encryption (if any) must also be broken. Knowledge of enemy intentions can be valuable to a Captain, if they know how to use it. The Captain may make an Easy (+4) Tactics check to gain an advantage from intercepted communications. If successful, the Captain gains knowledge of the enemy's dispositions or intentions. This translates to a one-time DM+4 bonus to any skill check affecting the enemy (e.g. a pilot's attempt to evade a sudden attack, or a gunner's precise shot just as the enemy vessel turns to present a better target.) Of course, the enemy must have communications for them to be intercepted.

**Line Up the Shot**

A pilot may attempt to aid his gunners by providing a stable firing platform along an optimum attack vector. The pilot makes a Pilot check to aid their gunners, granting a DM+1 on all attacks rolls this turn with a success, or a DM+2 with an Exceptional Success.

**Maintain Communications**

The sensors operator can establish and maintain communications between allied vessels with a Routine(+2) Comms skill check. If there is significant interference or a lot of communications going on (e.g. due to bad comm. discipline among a fleet), treat as Considerable Noise (DM-2). Deliberate comms jamming requires an opposed Comms skill check with the jammer. If reliable communications are not established, vessels cannot act in concert, and Tactics skill cannot be applied.

**Pursuit**

If a pilot makes a successful opposed Pilot skill check against another vessel within Short or Close range traveling at the same speed as the pilot's vessel, the successful pilot has placed his vessel in pursuit of his target maintaining the current range

and matching the target ship move for move. Once a pursuit has been established, it must be maintained each turn to take advantage of the position. Maintaining a pursuit is a significant action that does not require a skill check. It is automatically maintained unless the target succeeds at the Break Pursuit action, manages to extend the range between the vessels to Medium or greater. For each turn (after the first) that a vessel maintains pursuit of another vessel, it gains a cumulative DM+1 to hit when attacking the vessel being pursued, up to a maximum of DM+4.

**Ram**

Ramming is a potentially suicidal maneuver in which a pilot intentionally crashes his vessel into the hull of another vessel. This action may only be attempted at Close range, and if the ramming vessel is moving faster than the target. To successfully ram another vessel requires an opposed Pilot skill check between both vessels. A collision inflicts 1d6 damage for every point of difference in speed between the two vessels.

**Reload Weapons System**

A crew member (usually the gunner) may spend the round reloading one spent missile rack, one spent sandcaster or other individual weapon system.

**Repair Damaged System**

A character on damage control may attempt to repair a damaged system by making an Education-based Mechanics check. If the check is successful, determine how many hits are repaired:

**Damage Repair Results**

<i>Mechanic Check Effect</i>	<i>Hits Repaired</i>
0	1
1-5	2
6+	3

A ship with repair drones and the Auto-Repair software also makes one or two repair checks on the vessel's turn (unless it is being used to assist other repair attempts). The standard Auto-Repair software makes the check with a +1 DM. These are battlefield repairs only and will break down as soon as the battle is over unless repaired properly.



### Sensor Lock

The sensors operator may attempt to spend the turn providing improved fire control and targeting data to the gunners, hopefully increasing their chances of hitting their targets. The sensors operator should make a Education-based Electronics skill check against the target's Sensor DM rating, for each vessel that is to be targeted. If successful, all gunners on the vessel gain a DM+1 bonus to their attacks this turn, or a DM+2 on an Exceptional Success. When using missiles the initial attack gets this bonus – the individual missile to hit rolls do not benefit directly. Smart missiles are unaffected.

### Miscellaneous

A character may make a skill check or do something else as a significant action when such an action requires the character's full attention, concentration, complicated physical actions or some combination thereof. Any skill check with a time interval of 1-6 minutes is simply considered a significant action during space combat.

### Reactions

A ship may react to incoming attacks. The following situations allow reactions:

- Targeted by a beam attack
- Incoming missile
- Attempted boarding

The vessel's thrust determines how many times it may react in a round.

<i>Thrust</i>	<i>Reactions</i>
1–3	1
4	2
5	3
6	4

### Dodge Incoming Fire

To dodge, the pilot must make a Pilot check. If successful, the attack suffers a –2 DM.

### Fire Sand

Turrets equipped with sandcasters can fire sand at incoming beam attacks. Each reaction spent on firing sand allows the gunner to make a Gunnery roll. If successful the damage of each beam in the incoming attack is reduced by 1d6. Resolve each beam separately. Each firing of sand costs one canister of sand. Sand can also be directed against incoming boarding parties. If the sand attack is successful, each target in the boarding party takes 8d6 damage.

### Point Defense

Turret lasers can be used to destroy incoming

missiles. The missiles can only be destroyed in the moments before they strike the spacecraft as they are too small and fast-moving to effectively target at greater ranges. The gunner must make a Gunnery check against the missile. If successful, the missile is destroyed. A gunner may keep making Gunnery checks against missiles until they miss an attack; each attack suffers a cumulative –1 penalty. Attacks may be directed against different incoming missiles. Point defense can also be used to attack incoming boarders in the same way.

### Trigger Screens

Screens can be activated as long as the commander or one of the gunners has Gunnery skill at Level 0 and the ship has the required screen type (particle against nuclear missiles, fusion guns, and magnetar weapons). Screens reduce the damage from the attack by 2d6 + the operator's Gunnery skill. Particle screens also negate radiation hits against crew from nuclear missiles, and fusion guns.

### Other Actions

Other types of action can take place during space combat.

### Free Actions

Some actions are so fast on the scale of space combat that they do not even qualify as a minor action. A character can perform as many of these free actions as he likes in a turn, although if he performs several the Referee may require him to spend a minor or even a significant action on his various tasks.

### Extended Actions

Some skill checks will take longer than a single combat turn to complete. Make a Timing roll for the task and then work out how many 17 minute combat turns it will take to complete. A character engaging in an extended action cannot do anything else but can abandon their action at any time and return to the normal Initiative order. A character who is hit by an attack while undertaking an extended action must make an 8+ roll using the skill in question with a negative DM equal to the amount of damage the attack causes (after armor). Failure indicates that this turn's work does not count towards the completion of the task. Failure by six or more (an Exceptional Failure) ruins the task and the character must start again.

### Delay

A vessel does not have to act when its turn comes up in the Initiative order. The Captain may decide to act at any later point during the turn, even interrupting the

actions of another to do so. When he acts, his Initiative is set to the count on which he acted. If the character has not acted by the end of the turn he may choose to act first in the next turn, effectively giving up his actions in the previous turn in exchange for an Initiative advantage. His new Initiative is set to one higher than that of the current first person in the order. When multiple characters are delaying and all wish to act first in the following turn, their Initiatives are all set to the same score and they act in order of Thrust as normal.



**Special Considerations**

The following are special considerations in space combat.

**Boarding Actions**

If two ships are Adjacent or docked, then a boarding action can be attempted. If the ships are docked, then the attackers may cross over safely via airlocks. If the ships are merely adjacent, then the attackers must use thruster packs or small craft to cross over. While crossing, the attackers may be attacked with point defense weapons or by firing sand. Once across, boarding actions can be resolved using the personal combat rules.

**Missiles**

Unlike beam weapons, which travel at the speed of light and so hit the enemy vessel almost instantly, missile weapons take time to cross the gulf of space. Missiles travel at Thrust 10 towards their designated target and their position can either be tracked as additional craft in the battle or, for the sake of simplicity, they can be assumed to strike after a number of turns dependent on launch range, as shown in the Missile Launch Range table. Missiles cannot be used at Adjacent or Close range.

**Missile Launch Range**

Range	Turns to Impact
Close	—
Short	1
Medium	1
Long	1
Very Long	2
Distant	2

When the missile is launched, the gunner must make a Turret Weapons or Bay Weapons skill check to determine the accuracy of the launch. The effect of the skill check determines the chance that the missile

will strike its target when it hits. A target may react to incoming missiles by dodging or point defense. This reaction does not take place until the turn the missiles arrive at their destination, so any target response must wait until then.

**Missile To-Hit By Skill Check Effect**

Gunnery check	Missile to-hit roll
Failed With Effect -6 or less	11+
Failed With Effect -2 to -5	10+
Failed With Effect -1	9+
Succeeded With Effect 0	8+
Succeeded With Effect 1-5	7+
Succeeded With Effect 6+	6+

**Smart Missiles**

The missile to-hit roll for smart missiles is always 8+ and if they miss they make another attack every turn until they are destroyed with point defense, jammed with ECM, run out of fuel or otherwise dissuaded.

**Planetary Maneuvers**

Within close range of a planet, certain planetary maneuvers become possible.

*Orbital Insertion:* The pilot may attempt to insert the ship into orbit around a planet. In an orbital insertion fails, the ship fails to enter the proper orbit, and the orbit will steadily begin to decay drawing the ship towards the planet’s atmosphere in an uncontrolled reentry (see Atmospheric Reentry below). This is a significant action requiring a Routine (+2) Pilot skill check.

*Atmospheric Entry:* The pilot may attempt to transition the ship out of orbit and into the atmosphere of a planet. This is a significant action with an Average (+0) Pilot skill check, with any applicable DMs from the Atmospheric Entry table. Exotic, Corrosive, or Insidious atmospheres should be treated as Standard unless specified otherwise.

Atmospheric Entry

World Values	DM
World Size 9+	-2
World Size 4 or less	+2
World Atmosphere 1 or less	Auto Success
World Atmosphere 2-5, 14(E)	+2
World Atmosphere 8-9, 13(D)	-2

Special Attacks

Several types of weapons have their own rules.

*Magnetar:* Magnetar or singers ignore armor and always roll on the Internal Damage table. Furthermore, they also automatically inflict a radiation crew hit in addition to any other damage.

*Fusion Gun:* Inflicts a radiation crew hit in addition to any other damage. The bonus radiation hit suffers a –DM equal to the ship’s armor.

*Particle Beams:* Particle beams inflict a radiation crew hit in addition to any other damage. The bonus radiation hit suffers a –DM equal to the ship’s armor.

*Nuclear Missiles:* Nuclear missile hits inflict a radiation crew hit in addition to their normal damage. The bonus radiation hit suffers a –DM equal to the ship’s armor.

*Sandcasters:* While the primary purpose of a sandcaster is to block incoming beam attacks, they can also be used as an attack. A sandcaster has a range of Close and inflicts 1 damage.

Damage

Systems can take a variable number of hits before being destroyed, depending on the system in question. A ship can endure one point of Hull damage per fifty tons, rounding down. A ship that runs out of Hull Damage will rapidly be incapacitated. A ship can endure one point of Structure damage per fifty tons, rounding down to a minimum of one. A ship that runs out of Structure breaks up and is completely destroyed.

The effects of damage are determined by subtracting the ship’s armor from the damage rolled by the weapon, then consulting the Space Combat Damage table to determine the number of hits inflicted. Then roll on the Space Combat Hit Location table for each hit. Small craft use the Small craft column. Vessels of 100 tons or larger use the External Hit (Vessel) column until a ship has suffered enough damage to wipe out its Hull, and then uses the Internal Hit (Vessel) column. A double hit applies two hits to the same location. A triple hit applies three hits to the same location.

Space Combat Damage

Damage	Effect
0 or less	No damage
1–4	Single Hit
5–8	Two Single Hits
9–12	Double Hit
12–16	Three Single Hits
16–20	Two Single Hits, Double Hit
21–24	Two Double Hits
24–28	Triple Hit
29–32	Triple Hit, Single Hit
33–36	Triple Hit, Double Hit
37–40	Triple Hit, Double Hit, Single Hit
41–44	Two Triple Hits
For every extra three points	+1 Single Hit
For every extra six points	+1 Double Hit

Space Combat Hit Location

2d6	External Hit (Vessel)	Internal Hit (Vessel)	Small Craft
2	Hull	Structure	Hull
3	Sensors	Power Plant	Power Plant
4	M-Drive	J-Drive	Hold
5	Turret	Bay	Fuel
6	Hull	Structure	Hull
7	Armor	Crew	Armor
8	Hull	Structure	Hull
9	Fuel	Hold	Turret
10	M-Drive	J-Drive	M-Drive
11	Sensors	Power Plant	Crew
12	Hull	Bridge	Bridge

Hull

Reduce the ship’s Hull by one. If a ship’s Hull is 0, then apply the hits to the location in the same row of the Internal Damage table.

Structure

Reduce the ship’s Structure by one. If a ship’s Structure is reduced to 0, the ship is destroyed.

Armor

Reduce the ship’s armor by one. If the ship’s armor is already 0, then this counts as a Hull hit.

### Turret

A random turret is hit.

*First Hit:* The turret's tracking mechanism is damaged. It can still be used, but all attacks suffer a -2 DM.

*Second Hit:* The turret and all weapons in it are disabled.

*Third Hit:* The turret and all weapons in it are destroyed.

*Subsequent Hits:* Count as Hull hits.

### Bay

A random bay is hit.

*First Hit:* The bay's targeting mechanism is damaged. It can still be used, but all attacks suffer a -2 DM.

*Second Hit:* The bay weapon is disabled.

*Third Hit:* The bay weapon is destroyed.

*Subsequent Hits:* Count as Structure hits.

### J-Drive

The Jump drive is hit.

*First Hit:* All attempts at Jump suffer a -2 DM to Engineering (jump) checks.

*Second Hit:* The jump drive is disabled.

*Third Hit:* The jump drive is destroyed.

*Subsequent Hits:* Count as Structure hits.

### M-Drive

The maneuver drive is hit.

*First Hit:* Reduce the ship's thrust by one.

*Second Hit:* Reduce the ship's thrust by 50%.

*Third Hit:* The drive is disabled.

*Subsequent Hits:* Count as Hull hits.

### Power Plant

The power plant is hit.

*First Hit:* Damaged.

*Second Hit:* The crew suffer a Crew Hit, rolling on the Radiation Damage column.

*Third Hit:* The Power Plant is destroyed and the ship is disabled.

*Subsequent Hits:* Count as Structure Hits.

### Sensors

The sensors are hit.

*First Hit:* -2 DM to all Sensors checks.

*Second Hit:* Sensors are disabled preventing the ship from making Sensors checks and on making attacks on targets beyond Close range.

*Third Hit:* Sensors are destroyed.

*Subsequent Hits:* Count as Hull hits.

### Bridge

The bridge is hit.

*First Hit:* The crew suffer a Crew Hit, rolling on the Normal Damage column.

*Second Hit:* The bridge is disabled. Until the bridge is repaired, the ship cannot take any Pilot or Sensor actions, it cannot jump, and any attacks suffer a -2 DM.

*Third Hit:* The bridge is destroyed.

*Subsequent Hits:* Count as Structure Hits.

### Fuel

The fuel is hit.

*First Hit:* Causes a minor fuel leak of 1d6 tons per hour.

*Second Hit:* Destroys 1d6 x 10% of stored fuel.

*Third Hit:* Destroys fuel tank.

*Subsequent Hits:* Count as Structure Hits.

### Hold

The cargo hold is hit.

*First Hit:* Destroys 1d6 x 10% of stored cargo.

*Second Hit:* Destroys 1d6 x 10% of stored cargo.

*Third Hit:* Destroys cargo hold and everything in it.

*Subsequent Hits:* Count as Structure Hits.

### Crew

Each hit on the crew indicates that radiation or flying debris has injured one or more crew. Roll 2d6 on the appropriate column on the Crew Damage table.

### Crew Damage

<u>Roll</u>	<u>Normal Damage</u>	<u>Radiation Damage</u>
4 or less	Lucky escape – no damage	Lucky escape – no radiation
5–8	One random crew member suffers 2d6 damage	One random crew member suffers 2d6 x 10 rads
9–10	One random crew member suffers 4d6 damage	One random crew member suffers 4d6 x 10 rads
11	All crew suffer 2d6 damage	All crew suffer 2d6 x 10 rads
12	All crew suffer 4d6 damage	All crew suffer 4d6 x 10 rads

### Ship Weapons Against Personal-Scale Targets

Ship weapons suffer a DM -4 to hit a specific target on the personal combat scale. The damage inflicted on the personal combat scale when ship weapons strike personal-scale targets is fifty times the point value of the spacecraft value, for example a laser that does 1d6 damage does 1d6x50 on the personal level. If a weapon does radiation damage including normal damage, add 4d6x10 rads damage. A Sandcaster's sand causes 8d6 damage.



## Movement

Move and fire. In each combat turn there is movement as a minor action. Thrust number is the same as it maneuver drive number, so if a ship is M6 it has 6 thrust. One thrust is one hex worth of movement, or it can turn in a hex one side per thrust number. It can only move in a straight line three hexes, representing 3 g's of acceleration, two if it a civilian vessel, the rest are used for either turning in the hex, or for reactions, such as dodging.

If a ship does accelerate in a straight line more than 3 g's, or 2 if civilian, or turns in a hex more than 3 g's for both, the crew must pass an Average (+0) or 8+ Endurance check, with each number over 3 being a negative modifier. This represents G-LOC or "g force induced loss of consciousness". If they do not pass, then they are incapacitated for a turn. For example someone with a 9 Endurance +1 for their Endurance DM, goes 4 g's acceleration, is a -1 DM for being over 3, has to roll a straight 8 or more to succeed. However, they roll an 11 and pass the check.

A ship can allocate Thrust either to movement (closing or increasing the range to a target) or maneuvering. The amount of thrust needed to close or open by one range category is given in the Range Table – the number given is the amount of thrust needed to move from that range category to either a closer or more distant one. A ship can spend thrust over multiple rounds to close or open a range category.

### Range Table

<u>Range</u>	<u>Distance</u>	<u>Thrust to</u> <u>Change</u>	<u>Example</u>
Close	0 to 10 km	1	Docked or Nearby vessels
Short	10 to 1250 km	1	Ships in same orbital path
Medium	1250 to 10,000 km	2	Surface to orbit
Long	10,000 to 25,000 km	3	Near a planet
Very Long	25,000 to 50,000 km	5	Within jump limit
Distant	50,000 km+	10+	Distant ships

If two ships are travelling towards each other, then add together the Thrust allocated by both ships to movement to see how close they are to changing range categories; if one ship is trying to escape from



the other then subtract the lower Thrust from the higher value to work out the effective change in position – the faster ship will either gain slightly or pull away slightly.

Any thrust not allocated to movement is allocated to maneuvering. Maneuvering does not change the range to the target but allows the ship to position itself better for an attack or to avoid incoming fire.

## Special Rules

These rules apply to movement, though can affect combat.

### Dog Fighting

Small craft can maneuver into the same hex at close range as an opponent, dog fighting, where they suffer a point defense attack and gain the ability to do double damage.

### Flip and Burn

A ship can flip and burn for one g worth of thrust, and then apply the rest of their thrust to slowing down. If they enter a hex containing another ship, it takes a hit like a fusion gun from the exhaust.

### Newton's First Law

Inertia means that a body in motion, remains in motion, a ship moving in a straight line, carries over the same g's of movement to the next turn as long as it remains moving in a straight line.

### Sensor Range Bands

<u>Range</u>	<u>Distance</u>	<u>Sensor Details Detected</u>
Adjacent	<1 km	Individual sources of neural activity (Very Advanced sensors only)
Close	1 to 10 km	Individual ship systems, level of neural activity (Very Advanced sensors only)
Short	10 to 1250 km	Fine visual details, individual heat sources, internal structure (Advanced and Very Advanced sensors only), presence of neural activity (Very Advanced sensors only)
Medium	1250 to 10,000 km	Source of EM emissions, external structure (Advanced and Very Advanced sensors only)
Long	10,000 km to 25,000 km	Ship configuration and shape, thermal activity, external structure (Advanced and Very Advanced sensors only)
Very Long	25,000 km to 50,000 km	Ship's presence and level of activity, basic object silhouette
Distant	50,000 km+	

### Weapon Range Modifiers

<u>Weapon</u>	<u>Close</u>	<u>Short</u>	<u>Medium</u>	<u>Long</u>	<u>Very Long</u>	<u>Distant</u>
Railgun	0	-1	-2	-3	Out of range	Out of range
Laser Beam	0	0	-1	-2	-3	Out of range
Particle Beam	-2	-1	0	-1	-2	Out of range
Fusion Gun	-2	-1	0	-1	-2	Out of range
Magnetar	-3	-2	-1	0	-1	Out of range
Sandcaster	0	-2	Out of range	Out of range	Out of range	Out of range
Missiles (flight time)	–	1	1	1	2	2

### Turret and Barbette Weapons

<u>Weapon</u>	<u>TL</u>	<u>Range</u>	<u>Damage</u>	<u>MCR</u>
Railgun	7	Close	2d6 (-2 to hit)	0.5
Rail Barbette	9	Close	4d6 (-2 to hit)	4
Laser Beam	7	Short	1d6	1
Particle Beam	8	Medium	4d6 + crew hit	8
Missile Rack	6	Special	Depends on missile	0.75
Sandcaster	7	Special	Special	0.25

### Combat Tables Notes

Magnetar array will not allow focusing at distant range. Crew hit is from radiation, and will degrade Computers and Electronics by one hit also if not hardened (fib).

### Bay

<u>Weapon</u>	<u>TL</u>	<u>Range</u>	<u>Damage</u>	<u>MCR</u>
Missile Bank	6	Special	Launches a flight of twelve missiles	12
Particle Beam	8	Medium	6d6 + crew hit	20
Fusion Gun	11	Medium	5d6	8
Magnetar	12	Long	5d6 + crew hit	50

### Large Bay

<u>Weapon</u>	<u>TL</u>	<u>Range</u>	<u>Damage</u>	<u>MCR</u>
Missile Bank	6	Special	Launches a flight of 24 missiles	24
Particle Beam	8	Medium	9d6 + crew hit	40
Fusion Gun	11	Medium	8d6 + crew hit	16
Magnetar	12	Long	8d6 + crew hit	100



### Range

Close: 0 – 10 km same hex

Short: 10 – 1250 km 1 hex

Medium: 1250 – 10,000 km 1 to 2 hexes

Long: 10,000 – 25,000 km 3 to 5 hexes

Very Long: 25,000 – 50,000 km 6 to 10 hexes

Distant: 50,000 km+ over 10 hexes

### Space Combat Checklist

Like personal combat, space combat is cyclical. Everybody acts in turn in a regular cycle called a turn. Each turn in space combat lasts one kilosecond. Generally, space combat runs in the following way:

1. The Referee determines the range at which the encounter begins.
2. All crew members are assigned to a position on board their vessel.
3. The Referee determines which characters are aware of their opponents at the start of the battle. If some but not all vessels are aware of their opponents, the vessels that are aware of their opponents are considered to get an automatic 12 on their initiative roll, giving them an Initiative of 12 + Dexterity DM.
4. Any remaining vessels roll initiative. All vessels are now ready to begin their first turn of combat.
5. All vessels act in initiative order.
  - a. At the start of each combat turn, a Captain may declare that their crew is acting hastily.
  - b. The crew members of the vessel resolve their actions.
  - c. After every crew member has completed their actions, any damage is resolved if the vessel's weapon systems hit enemy ships.
6. When every vessel has had a turn, the combatant with the highest initiative total acts again, and Step 5 repeats until combat ends.

Movement is abstracted to 5,000 km hexes to allow for tactical battles as vessels attempt to maneuver into a position of pursuit and advantage against their opponents, or frantically try to shake pursuit.

Range is similarly abstracted, needing only to note whether the range for all vessels involved for each round is Close, Short, Medium, Long, Very Long, or Extreme.

If two vessels randomly encounter each other while traveling, the encounter will begin at Very Long range. More often, ships engage near a planet, where the range is Short or Medium.

