

Spacecraft Operations

Detecting something in sensor range

Electronics (sensors) check.

Docking with another ship

Routine Pilot (spacecraft) check.

Flying in an atmosphere

Pilot DM -2 (if partially streamlined and atmosphere 3+); or DM -4 (if unstreamlined) with 1D damage (ignoring armour) per failure.

Landing at a starport

Routine Pilot (spacecraft) check.

Plotting a jump route

Easy EDU / Astrogation check, DM -parsecs.

Making a jump

Easy EDU / Engineer (j-drive) check, task chain DM from plotting, DM -months if behind on maintenance, DM -2 if using unrefined fuel, DM -4 if within the hundred-diameter limit.

Unlocking a locked airlock

Very Difficult Electronics (computers) check.

Gas Giant Operations

Layer 1: Wisp

Cannot skim fuel, offers no sensor interference, no real risk of orbital decay.

Layer 2: Extreme Shallow

Can skim fuel at $\frac{1}{10}$ the normal rate. Power loss results in orbital decay in 8D hours.

Layer 3: Shallow

Can skim fuel at $\frac{1}{2}$ the normal rate. Power loss results in orbital decay in 2D hours. Pilot checks have DM -1.

Layer 4: Deep

Can skim fuel at the normal rate. Power loss results in orbital decay in 2D minutes. Pilot checks have DM -2.

Layer 5: Extreme Deep

Power loss results in 2D damage each round, and orbital decay in 2D minutes. Pilot checks have DM -3.

Layer 6: Depths

Without special protection, 2D damage each round. Power loss results in 6D damage each round, and orbital decay in 2D minutes. Pilot checks have DM -4.

Layer 7: Abyssal Depths

4D damage each round. Pilot checks have DM -5. Sensors do not work.

Moving between layers

Pilot (spacecraft) check, DM largest negative. On failure, the ship bounces off the other layer and must succeed Difficult Pilot (spacecraft) check or take [LAYER]D hull damage.

Fuel skimming

Gain fuel equal to 1% of hull tonnage per pass, where a pass takes 2D minutes.

Sensors and Weapons

These are less effective in the atmosphere of a gas giant. See **Space Combat** section.

Running Costs and Maintenance

Item	Monthly Cost
Mortgage	varies
Life Support	Cr1000/stateroom (Cr3000 if double occupancy); Cr100/low berth; Cr1000/person
Fuel	Cr500/Rton; Cr100/URton
Maintenance	0.1%/12 of purchase price

Maintenance must be done at a shipyard at least once per year. If maintenance is skipped, roll with DM +months, on 8+ roll for critical hit:

2D	Critical Hit and Outcome
2 to 4	Fuel Leak Lose 1D × 10% capacity.
5 to 7	Drive Roll 1D. On 1 to 3 reduce Thrust by 1 and all Pilot checks are with Bane; on 4 to 6, J-Drive is disabled until repaired.
8 to 9	Weapon Fault All checks with one random turret (or weapon if no turrets) are with Bane.
10 to 12	Power Plant Power reduced by 25%; take a further 1D damage (ignoring armour); all crew take 2D × 10 rads/week.

Jump Travel

A jump uses 10% of the hull tonnage for every parsec travelled and takes 148 + 6D hours (about a week).

Bad Astrogation

Roll 2D + ASTROGATOR'S EFFECT. The jump is bad on 5 or less.

Bad Engineering

Roll 2D + ENGINEER'S EFFECT. The jump is bad on 5 or less.

Bad Jumps

If one check is bad, all crew must make END and INT checks, one Routine the other Difficult.

If END check is failed, the Traveller is nauseous and has DM -Effect for 2D hours after entry and emergence. Exceptional Failure incapacitates the Traveller for 2D × 30 minutes and imposes DM -6 for 4D hours.

If INT check is failed, the Traveller is irritable and has DM -2 for mental or interpersonal checks for the jump duration and 1D hours after emergence. Exception Failure causes a significant mental breakdown.

Very Bad Jumps

If both checks are bad, or the ship misjumps, as **Bad Jumps** with DM -2 and also:

2D + DM	Outcome
2 or less	No additional effects.
3 to 5	J-Drive needs 2D days recalibration.
6 to 8	J-Drive needs minor repairs.
9	J-Drive needs major repairs.
10 to 12	Intrusions occur.
13 or more	Severe intrusions occur.

Use highest DM of:

Bad Jump from both checks: DM -4.

Bad Jump from misjump: DM 0.

Jumped within 100 diameters: DM +2.

Jumped within 10 diameters: DM +4.

Intrusions destroy the portion of the ship they appear in, and also destroy the J-Drive in all cases. Destroys 2D-2% hull (2D+10% if severe) per day, requiring major repairs.

Misjumps

If ASTROGATOR'S EFFECT + ENGINEER'S EFFECT is 0 or less, as **Bad Jumps** (or **Very Bad Jumps** if both checks failed) and also:

2D	Outcome
2 or less	Destroyed or lost in jumpspace
3 to 4	Jumps 1D × 1D parsecs in a random direction. J-Drive destroyed.
5 to 6	Jumps 2D parsecs in a random direction. J-Drive severely damaged.
7 to 8	Jumps 1D parsecs in a random direction.
9 to 10	Duration increased or decreased by 1D days. J-Drive needs D3 days recalibration.
11 to 12	Emerge 100 × 2D diameters from target.

Repairs

Critical Hits

A Critical Hit can be temporarily repaired with INT or EDU / Engineer check, with DM -severity and DM +attempts but will break again after 1D hours.

Full repairs need a Engineer or Mechanic check (taking 1D hours) and spare parts:

Effect minus Severity	Parts Required
1 or less	1 ton
2	0.8 tons
3	0.3 tons
4	0.4 tons
5	0.2 tons
6 or more	none

A destroyed weapon or piece of equipment cannot be repaired with spare parts, and has to be replaced.

Hull Damage

Each lost Hull Point can be repaired with a Routine INT or EDU / Mechanic check (taking 1 hour), for 1 ton of spare parts per 10 Hull Points repaired.

Common Travel Times

Distance	at 1G		at 2G	
	at 1G	at 2G	at 1G	at 2G
Surface to Orbit				
10 000 km		33 min		24 min
Orbiting Satellite				
400 000 km	211 min		149 min	
Close Neighbour World				
45 000 000 km		37.3 h		26.4 h
Far Neighbour World				
255 000 000 km		88.7 h		62.7 h
Close Gas Giant				
600 000 000 km		136.1 h		96.2 h
Far Gas Giant				
900 000 000 km		166.7 h		117.9 h

See page 153 of the core rulebook for more.

Security and Hacking

See page 152 of the core rulebook.

Sensors

See page 150 of the core rulebook.

Travellers In Space

Zero-G

Acclimatisation

DM -1 on all physical skill checks unless the Traveller has the Athletics (dex) skill.

Recoil

Make an Athletics (dex) check when making a melee at-

tack or a ranged attack with recoil, or automatically miss and spin out of control.

Spinning can be stopped with an Athletics (dex) check.

Life Support

A Traveller without life support takes 1D damage per minute.

Vacuum

A Traveller in vacuum takes a cumulative 1D damage per round, ignoring armour, and 2D × 10 rads per round.

Radiation

See page 77 of the core rulebook.

2D + PILOT + THRUST + TACTICS EFFECT

Tactics: The commander of the ship (or fleet) may make a Tactics (naval) check, adding the Effect to Initiative.

Surprise: The surprised party skips their first round.

Round (6 minutes)

Each ship **Manoeuvres**, then
 Each ship **Attacks**, then
 Each ship's crew take **Actions**.
 Ship's crews can take any number of **Reactions**.
 There are different rules for **dogfighting**.

Range Bands

Band	Min	Max	Thrust
Adjacent	—	1 km	1
Close	1 km	10 km	1
Short	11 km	1250 km	2
Medium	1251 km	10 000 km	5
Long	10 001 km	25 000 km	10
Very Long	25 001 km	50 000 km	25
Distance	50 000 km	—	50

Manoeuvre Step

Move
 Spend Thrust (possibly over multiple rounds) to move up or down a range band. If both ships are moving, use relative Thrust.

If the ships enter Close or Adjacent range, switch to **Dogfighting** rules.

Aid Gunners
 Spend one point of Thrust and make a Pilot (spacecraft) check to start a Task Chain with the gunners.

Dock
 Make a Pilot (spacecraft) check. If the other ship is unwilling, make an opposed check with a Bane to the ship trying to dock.

Attack Step

One Gunner attacks per turret and the Pilot attacks with fixed-mount weapons. Make a DEX / Gunner (specialism) check with:

Bonus	DM
Short Range	+1
Pulse Laser	+2
Beam Laser	+4
Penalty	
Long Range	-2
Very Long Range	-4
Distant Range	-6

Action Step

Improve Initiative (Captain)
 Make a Leadership check. Add the Effect to Initiative for the next round only.

Jump (Engineer)
 Make both checks with DM -2 due to bringing the time-frame down to 1D minutes.

Offline System (Engineer)
 Make a EDU / Engineer (power) check to shut down any number of systems. Bringing any number of systems online requires a round.

Overload Drive (Engineer)
 Make a Difficult INT / Engineer (m-drive) check to increase Thrust by 1 for the next round only. Exceptional Failure inflicts a **Critical Hit** with Severity 1.

This check has a cumulative DM -2 on every attempt after the first. This penalty can be removed by making a Engineer (m-drive) check in 1D hours.

Overload Plant (Engineer)
 Make a Difficult INT / Engineer (power) check to increase Power by 10% for the next round only. Exceptional Failure inflicts a **Critical Hit** with Severity 1.

This check has a cumulative DM -2 on every attempt after the first. This penalty can be removed by making a Engineer (power) check in 1D hours.

Repair System (Engineer)
 See **Repairs** section. Only **Critical Hits** may be repaired, not hull damage.

Reload Turret (Gunner)
 The turret cannot be used for an attack this round.

Sensor Lock (Sensor Operator)
 Make a Electronics (sensors) check to gain a Boon to attacks against that target.

Electronic Warfare (Sensor Operator)
 Make an opposed Electronics (comms) check to jam communications.

Or Electronics (sensors) check to break a Sensor Lock.
 Or Difficult Electronics (sensors) check to destroy as many missiles in a salvo as the Effect (once per round).

Boarding Action (Marine)
 See **Boarding Actions** section.

Reassignment
 Change to another duty, able to act as it from the next round.

Reactions

Evasive Action (Pilot)
 Spend one Thrust to inflict the Pilot DM as a to-hit penalty to one specific attack.

Point Defence (Gunner)
 Make a DEX / Gunner (turret) check, with a laser turret, right before a missile salvo hits, destroying as many missiles as the Effect. Gain DM +1 from a double turret of lasers, and DM +2 from a triple turret of lasers.

A weapon used for Point Defence cannot also attack in the same round.

Disperse Sand (Gunner)
 Make a DEX / Gunner (turret) check and, on success, add 1D + EFFECT to the ship's armour against a specific laser attack.

This may also be used to attack a boarding party, dealing 8D points of damage to each member of the party.

Missile Combat

Range	Rounds to impact
Medium and below	0
Long	1
Very Long	4
Distant	10

For the purposes of evasive action, a missile salvo has an effective Thrust of 10. If a salvo hasn't hit in 10 rounds, it becomes inert.

Smart
 If launched below Short range, any Smart trait is lost.

To-Hit Roll
 Roll 2D + NUM MISSILES, plus any other modifiers (like Smart). A salvo launched at Distant range suffers DM -6.

Damage Roll
 Roll for damage as if it were a single missile and deduct armour, but multiply by the Effect of the to-hit roll (rather than add).

Damage

Add to-hit Effect to weapon damage. Armour reduces damage. Unlike normal combat, an Effect of 6 or more does *not* deal guaranteed damage.

The target suffers a **Critical Hit** every 10% (rounded up) of Hull Points it loses at Severity 1, and for every to-hit roll with an Effect of 6 which inflicts damage.

Double and Triple Turrets
 If a turret has different types of weapons, only one type

may be used to attack a target in a round. If the weapons are the same type, they can all attack, adding DM +1 to the damage per additional damage die.

Sandcasters can be linked in the same way to more effectively block laser attacks.

Damage Scale
 A spacecraft weapon attacking a ground target suffers DM -2 to-hit but $\times 10$ damage, with Blast 10.

A ground weapon attacking a spacecraft target gains DM +2 to-hit but $\div 10$ damage.

Scaling is done after any other modifiers.

Critical Hits

Roll for the Critical Hit location and apply its effect (see next sheet).

Any extra damage caused by the Critical Hit effect ignores armour, and may trigger a further Critical Hit by reaching another 10%-of-Hull-Points tipping point.

Severity
 The Severity of the hit is the damage which inflicted it, divided by 10, rounded up. If the location has already taken a Critical Hit, use the Severity of the current hit or one plus the Severity of the previous hit (whichever is greater).

Once a location has reached Severity 6, further Critical Hits inflict 6D extra damage.

Weapon Power Requirements

Weapon	Power Required
Beam Laser	4
Missile Rack	0
Particle Beam	8
Pulse Laser	4
Sandcaster	0
Turret	1

Close Range Combat (Dogfighting)

Combat rounds are 6 seconds long. Ships of 100 tons or more suffer DM -6 on all to-hit rolls.

Each round, make an opposed Pilot check, with:

Dogfighter	DM
Ship is 50 tons or more	-1
Ship is 100 tons or more	-2
For each extra 100 tons	-1
For each extra enemy	-1
Ship's thrust	+1 per point dedicated to dogfighting

On draw: neither ship may attack the other with fixed weapons.

On success: the winner chooses the relative position of the ships and gains DM +2 for to-hit rolls, whereas the loser suffers DM -2. The winner uses the difference as a positive DM in the next round's opposed Pilot check.

Gas Giant Operations

Sensors
 Checks to detect another vessel have DM -2 for every layer between them, not counting the Wisp layer.

Energy weapons
 For every layer down the firing ship is, not counting the Wisp layer: the weapon range is halved and each damage die is reduced by one (e.g. Deep reduces range to $\frac{1}{8}$ and damage to 2D-8).

Missile weapons
 These deal normal damage, but must pass an Average check when crossing a layer boundary or be destroyed (missiles designed to operate in a gas giant atmosphere must pass a Routine check). Entering the Wisp, Extreme Shallow, or Shallow layers does not require a check.

Boarding Actions

See page 163 of the core rulebook and page 17 of Pirates of Drinax.

Critical Hit Locations and Effects

2D	Location	Severity 1	Severity 2	Severity 3	Severity 4	Severity 5	Severity 6
2	Sensors	Checks to use sensors suffer DM -2.	Sensors inoperative beyond Medium range.	Sensors inoperative beyond Short range.	Sensors inoperative beyond Close range.	Sensors inoperative beyond Adjacent range.	Sensors disabled.
3	Power Plant	Reduce Power by 10%. Reduce Thrust by 1.	Reduce Power by 10%. Reduce Thrust by 1.	Reduce Power by 50%. Reduce Thrust by 1.	Reduce Power to 0. Reduce Thrust to 0.	Increase Hull Severity by 1.	Increase Hull Severity by 1D.
4	Fuel	Lose 1D tons of fuel per hour.	Lose 1D tons of fuel per round.	Lose 1D × 10% of fuel.	Fuel tank destroyed.	Increase Hull Severity by 1.	Increase Hull Severity by 1D
5	Weapon	Random weapon suffers Bane.	Random weapon disabled.	Random weapon destroyed.	Random weapon explodes. Increase Hull Severity by 1.	Random weapon explodes. Increase Hull Severity by 1.	Random weapon explodes. Increase Hull Severity by 1.
6	Armour	Reduce Armour by 1.	Reduce Armour by D3.	Reduce Armour by 1D.	Reduce Armour by 1D.	Reduce Armour by 2D. Increase Hull Severity by 1.	Reduce Armour by 2D. Increase Hull Severity by 1.
7	Hull	Spacecraft suffers 1D damage.	Spacecraft suffers 2D damage.	Spacecraft suffers 3D damage.	Spacecraft suffers 4D damage.	Spacecraft suffers 5D damage.	Spacecraft suffers 6D damage.
8	M-Drive	Checks to control spacecraft suffer DM -1.	Checks to control spacecraft suffer DM -2.	Checks to control spacecraft suffer DM -3. Reduce Thrust by 1.	Checks to control spacecraft suffer DM -4. Reduce Thrust by 1.	Reduce Thrust to 0. Reduce Thrust by 1.	Increase Hull Severity by 1.
9	Cargo	Destroy 10% of cargo.	Destroy 1D × 10% of cargo.	Destroy 2D × 10% of cargo.	Destroy all cargo.	Increase Hull Severity by 1.	Increase Hull Severity by 1.
10	J-Drive	Checks to use J-Drive suffer DM -2.	J-drive disabled.	J-Drive destroyed.	Increase Hull Severity by 1.	Increase Hull Severity by 1.	Increase Hull Severity by 1.
11	Crew	Random occupant takes 1D damage.	Life support fails within 1D hours.	1D random occupants take 2D damage.	Life support fails within 1D rounds.	All occupants take 3D damage.	Life support fails.
12	Computer	Checks to use computers suffer DM -2.	Reduce Computer Rating by 1.	Reduce Computer Rating by 1.	Reduce Computer Rating by 1.	Computer disabled.	Computer destroyed.

Effects are cumulative, *e.g.*

After a Severity 3 Sensors critical hit

Checks to use sensors suffer DM -2 and cannot be made at all beyond Short range.

After a Severity 3 Power Plant critical hit

Power has been reduced by a total of 70% (to 30% of original) and Thrust has been reduced by a total of 3 points.

After a Severity 3 Fuel critical hit

The ship is losing 1D tons of fuel per hour, a further 1D tons of fuel per hour and, in the last hit, immediately lost 1D × 10% of the remaining fuel.

After a Severity 3 Weapon critical hit

One random weapon suffers a Bane die to all checks, one random weapon has been disabled, and one random weapon has been destroyed outright. These could all be the same weapon.

After a Severity 3 Armour critical hit

Armour has been reduced by a total of 1 + D3 + 1D points.

After a Severity 3 Hull critical hit

The spacecraft has suffered a further 6D damage in total: one hit of 1D, one hit of 2D, and one hit of 3D. These may have triggered further critical hits.

After a Severity 3 M-Drive critical hit

Checks to control the spacecraft suffer DM -3 and Thrust has been reduced by 1 point.

After a Severity 3 Cargo critical hit

A total of (1 + 3D) × 10% of the cargo has been destroyed.

After a Severity 3 J-Drive critical hit

The J-Drive has been destroyed.

After a Severity 3 Crew critical hit

One random occupant has taken 1D damage, 1D random occupants have taken a further 2D damage (the original unfortunate could be in this second cohort), and life support will fail within 1D hours.

After a Severity 3 Computer critical hit

Checks to use the computer suffer DM -2 and the Computer Rating has been reduced by a total of 2 points.