

Intercept rules are written in the same order as the sequence of play below. Read this entire page and then start playing, following each step and reading its rules as you go along. The Design sequence rules can be omitted unless you wish to design your own ships. Page 49-52 hold duplicates of most tables, organized by subject in the order you'll need them, print them out for reference during play.

Sequence of play

Movement

Drift & gravity

Ships, missiles, asteroids etc are all affected by gravity and move in the same manner; continue the previous vector and then apply gravity. Untracked ships do their drift on their hidden player map. No thrust, turns or rolls yet. Declare jumps.

Tracked ships turn and thrust (reverse initiative order)

Tracked ships turn and thrust on the common map in reverse initiative order ie lowest initiative goes first. First turns, then aerobrakes followed by thrusting, after thrusting you may still turn using the Turning after thrusting rules.

Untracked ships turn and thrust, missiles launch and thrust

Untracked ships and missiles do movement on the hidden player maps. Note P for popped in, S for silent running R for rolled, if you drift mark with a ring around.

Missiles launch and thrust (reverse initiative order)

Tracked ships tell the other player their launches, which become tracked too, untracked ships plot their launches in secret. Missiles thrust and note remaining Gs if they hit a target square. Missiles must be within launcher range at all times but within launcher arc only when actually attacking.

Sensors

Scans (A/B order)

Perform up to two sensor scans in A/B order. Target asks questions regarding Sun glare, Shadow & Sun columns and Planet LOS, and act accordingly.

Check Lost tracking from aft centerline, Planet LOS and max range.

Combat

Beam and missile attacks (initiative order)

Combat is resolved in Initiative order with each ship firing its beam weapons and then missile impacts before continuing to the next ship, this goes on until all ships have had the opportunity to attack.

Perform each beam attack with hit rolls, defense rolls, hitlocation, penetration and damage before continuing with the next beam battery. When all beam batteries of the ship have had an opportunity to fire we go on to any missile volley impacts from the ship. Missile volley attacks are done with hit rolls, defense rolls, hitlocation (last turn separation determines attack arc), penetration and damage.

Dockings, ramming, landing and crashing (initiative order)

Dockings, ramming, landing and crashing occur after all ships and missiles have had a chance to attack, in initiative order.

Check Lost tracking from damage and stun results

Repairs

Repair crew may move to any location and attempt making repairs, VGood result allow them to move and repair again. Powering up attempts must be done at the Power location. Repair crew remain where they last moved to until the next repair phase. After the repairs phase is done it is time to perform or abort any jumps. Boarding action prohibit repairs and powering up.



Good 3-5 hitmargin

Fair 0-2 hitmargin

Miss 1-3 missmargin

Bad 4-6 missmargin

VBad 7+ *missmargin*

1 steps of turning, VBad initiative
Track on 12+ signal. Contact on 6-11 signal

Computer dice pool

One D6 per Model # is used as a dice pool, replenished every turn. Add dice to any tasks *just before* rolling and pick the two best two D6 as your result. A **fleet tactician** may share dice from his pool, see page 3. Hyperspace jumps require 1D6 per Jn to perform, pages 26-27.



Playing Intercept may seem daunting at first but is quite simple as long as you try to learn it in small increments. The game is played in 15 minute game turns on a 10 000 km grid, distance between Earth and moon is about 38 squares. Each turn has a strict sequence of play and the order within each phase is determined by the Initiative rules. Typically, an encounter starts with both sides hidden and both sides moving on their hidden plotting maps until one or both gets a Tracked result on the other. The tracked ship then move on the common map and that is where any combat takes place.

A good way to learn vector movement and Initiative rules is to play an encounter without sensor rules and gravity with both sides on the same board and no hidden plotting, there are still lots of tactical choices to be made.

A lot of situations call for a task to be performed; a ship piloted, weapons fired, repairs made etc. A task states a target number that should be beaten with a roll of two six sided dice, 2D6, plus various modifiers, positive modifiers are added to the roll and negative are subtracted.

The degree you beat or missed the target number determines the task result which can be one of six named results, three of them successes and three failures. The task results are, from best to worst:

Very Good 6+ hitmargin The task went as good as it could. Impressive!

Good 3-5 hitmargin You managed competently and professionally.

Fair 0-2 hitmargin You made it but it not by much.

Miss 1-3 missmargin You nearly made it, damned.

Bad 4-6 missmargin You botched the task, are you really qualified for that?

Very bad 7+ missmargin Oh my God! You totally screwed it up.

Pilot task

This task is by far the most important in Intercept and will be rolled by every ship that is tracked or was tracked the last turn, the target number to roll against is the ships *Size*. Untracked ships that wasn't tracked the last turn need not roll and can turn however they like to simplify play, they must still roll when aerobraking, landing, docking or ramming, see page 4 for details.

Computer dice pool

All ships must have a computer of at least rating 0 but computers rated 1 or more also have 1D6 per number as a dice pool. This pool is replenished once every turn and is used up to improve Task rolls by adding extra dice before rolling and you picking the two highest dice. Dice must be added just before rolling and when they are gone they are gone (until the next turn). Computer dice pool can be used on all Pilot, Sensor, Attack, Defense, Repair and Power up rolls, every task that rolls 2D6.

Fleet tactics allow you to share dice between ships, see page 3, and hyperspace jumps must use 1D6 per jump number to perform a jump, if you don't have the dice you cannot jump, see page 26-27 and 38.

A/B order

Leftmost uncrossed box determine A/B order and fractional thrust

Look at the picture at bottom left, showing the lower left part of a map-sheet. At the bottom row of the map are boxes marked with A or B which are crossed off as turns are completed. The leftmost uncrossed box determine if it is an A or B turn, the boxes also hold the fractional values required for extra thrust on certain turns, see page 5 for details.

The player designated A roll Pilot tasks, perform Sensor scans A/B turns is also used as the final tie-breaker for Initiative, so the disadvantage of rolling and scanning first is somewhat balanced by winning tied initiatives.

If there are more than two sides the players should make up their own turns orders like this; ABC on turn 1, BCA on turn 2, CAB on turn 3, ABC again on turn 4 etc.

Initiative

Initiative or “who goes first” is important in this game, especially since damage is *not* dealt simultaneous ie you may shoot down a ship without it getting a chance to shoot back. Initiative is only used when one or more ship is tracked.

Initiative

Maneuver is performed lowest to highest while combat is performed highest to lowest. The reason is simple; it is better to move last as you then know your enemy's move while it is better to shoot first as damage and damage results take effect immediately.

Initiative is determined as follows (in order of priority):

- 1 Untracked ships have higher Initiative (ignore 2-5 if Untracked)
- 2 Higher Pilot task result have higher Initiative
- 3 Higher Ship tactics have higher Initiative
- 4 Higher crew station win ties (Bridge > Full > Limited)
- 5 Break ties with player A wins on odd, B on even turns, note on DataCard.

Ship tactics

Ship tactics allow multiple ships in a *group*, all with the same position, vector, facing and roll, to move and fight as one, you can even form batteries of weapons from different ships under your command, three fighters with one laser each can attack together with as a three gun battery with a DM of +3 for example. Ship tactics also break Initiative ties.

The skill level limit the max number of ships controlled, see table at right. A Good skill level Ship tactician may command 5 ships plus his own ship for example.

The Pilot of the tactician ship roll against the *largest ship Size* under command, and the result is then shared by all ships under command, they move and fight as one ship for Initiative purposes. The tactician may be the same individual as the pilot at no penalty. All other ships commanded ships must still have Pilots, be capable of maneuvering and are still treated as having performed a task for Dualrole purposes, they simply skip rolling and get their task result from the tactician.

Largest ship Size in this context means Size of any ship and worst Hull damage of any under command, this may not necessarily be the same ship as the one the tactician is on.

Fleet tactics

Fleet tactics may share a ships dice pool to other ships under his command. add extra dice pool dice to any roll of ships within range but the total number of shared dice are limited by skill level, your own dice pool of course and a task roll may never use more dice than the receiving ships full dice pool. A Fleet tactician may be the same person as the Pilot or Ship tactician but usually isn't. The table at right shows the max number of dice shared and the max range to ships you share them to, the number in parenthesis is the range in the optional Large scale rules. A Good skill level Fleet tactician could share up to 3 dice up to 10 squares away.

Dualrole

Sensors is only a task if you actually rolled the task

Attacking and defending count as one task, not two

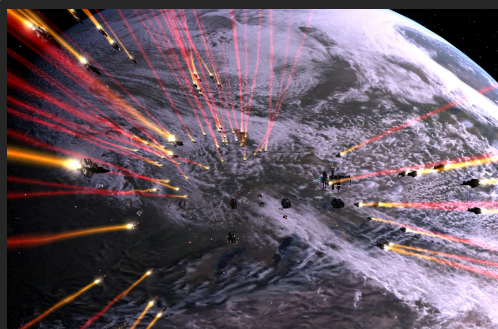
Count as one less task if the ship is less than 500 m3 (100 dTon)

Task order: Pilot, Scan, Gunnery, Repair

Ship and Fleet tactics does not count as tasks

When crewmembers perform more than one task in a turn they suffer progressively worse penalties. The most common situation is when you have Dual role gunners ie gunners also perform sensor tasks. If your ship is marked Dualrole gunners and they actually rolled the Sensor task they would suffer -2 on all their Gunnery rolls, offensive as well as defensive. Multiple Gunnery rolls such as attacking and defending, defending against multiple attacks etc does *not* count as multiple task and does *not* incur penalties. If the ship is less than 500 m3 (100 dTon) treat the number of tasks as one less.

Example: A fighter Pilot can Pilot and attack/defense without penalty and incurs only a -2 if Piloting, Scan and attack/defense in a turn.



Highest Initiative attacks first, sometimes destroying the enemy before they even had a chance to retaliate

Initiative

Untracked win initiative over tracked and thereafter there's a list of tie breakers in descending order as follows:

Initiative descending priority

- 1 Untracked ships win (ignore 2-5)
- 2 Highest Pilot task result win
- 3 Highest Ship tactics win
- 4 Higher station win (Bridge > Full > Limited)
- 5 Side A win on odd, side B on even turns

Ship and Fleet tactics

A **ship tactician** may extend his command to multiple ships, all with the same position, vector, facing and roll**. They all move as one and attack as one big ship and batteries may be combined between ships**. The Ship tactician may, *without penalty*, be the same person as the Pilot of the ship.

A **fleet tactician** may share his ships computer pool to other ships under his command but a ship may never roll more dice than its computer allows. Skill level limit the number of dice shared and how far away the helped ship may be from the helper.

| Skill level | Ship tactics ships* | Fleet tactics dice, range |
|--------------|---------------------|---------------------------|
| No skill | 1+0 | 0+0 |
| +1 | 1+1 | 1D6, same sq. |
| +2 | 1+2 | 2D6, 3 squares |
| +3 | 1+5 | 3D6, 10 squares |
| +4 | 1+8 | 4D6, 30 squares |
| +5 or better | Unlimited | Unlimited |

*Own + other ships under command

**Max nbr of dice, max range in squares

Dualrole

Crew performing more than one task in a turn suffer progressively worse penalties. Sensor or Gunner crew in (parenthesis) are dualrole if they rolled Sensor task and then Attacking or Defending. All attacks *and* defense rolls in any combination are considered *one* task in total.

| Number of tasks* | Skill reduction | DM |
|------------------------|-----------------|----|
| Dual role (2nd task) | -1 lvl | -2 |
| Triple role (3rd task) | -2 lvls | -4 |
| Quad role (4th task) | -3 lvls | -6 |

*The number of tasks is reduced by one if all craft under command are less than 500 m3 (100 dTon).

PILOT SIZE+

| Situation | DM | |
|-------------------|-------------|-------|
| Crew damage | -1 or -3 | |
| Hull damage | -1 or -3 | |
| Roll Size+ on 2D6 | Task result | Steps |
| Succeed by 6+ | VGood | 8 |
| Succeed by 3-5 | Good | 6 |
| Succeed by 0-2 | Fair | 4 |
| Fail by 1-3 | Miss | 3 |
| Fail by 4-6 | Bad | 2 |
| Fail by 7+ | VBad | 1 |

Failed results are shown in italic

Movement sequence

1 Drift

Repeat the ships last move and note the position, apply gravity if applicable, this is your Drift.

2 Turns and rolls

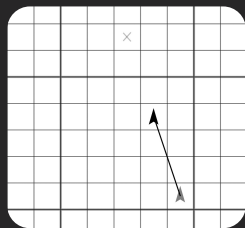
Turn and/or roll up to limits by Pilot task result.

3 Thrust

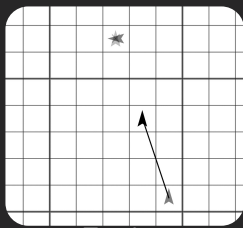
Apply thrust in the direction the ship is facing.

4 Turning after thrusting

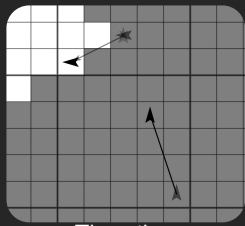
You may turn after thrusting but each step of turning now costs double. After aerobraking you your turning costs double too, turning before the aerobrake cost as normal.



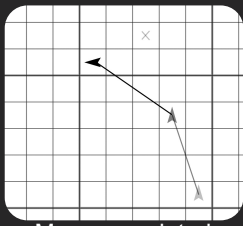
Drifting



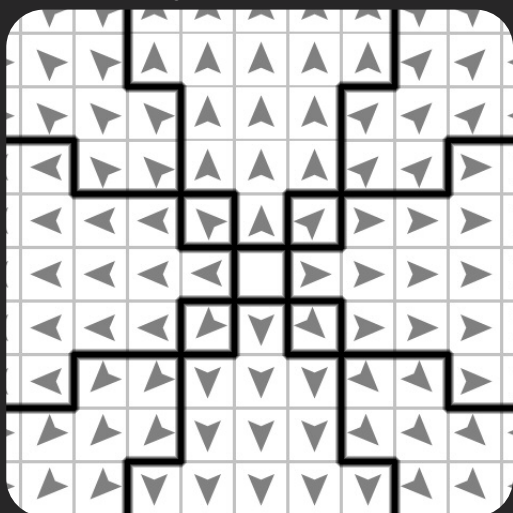
Turning



Thrusting



Move completed



Legal thrusts

Movement

Vector movement, a scary term to some, is the way ships and missiles move in Intercept, it is also happens to be the way real spaceships move. Movement in Intercept is done in three simple steps; Drift, Turn and Thrust. Drift can be done in any order as it is entirely automatic, Turn and Thrust are done in reverse initiative order ie the ship with the worst initiative goes first and then the second worst and so on. Untracked ships do Drift, Turn and Thrust in secret, after all tracked ships are done.

Directions and facings

A ship is always facing in one of 8 directions. Draw the ship as a pointed arrow in the direction of its nose, typically but not always in the direction it thrusts. The direction it is moving has no effect on the direction its nose faces.

Movement sequence

Initiative is based on higher steps of turn from the Pilot task result (left)

Turn and thrust is done one ship at a time, in reverse Initiative order.

Rolling cost 3 steps of turn.

You may only thrust to squares in your foward facing arc.

The movement sequence consist of Drift, Turn and Thrust. Do Drift for all Tracked ships and missiles before Turn and Thrust. Turn and thrust is done in reverse Initiative order, worst Initiative goes first, best goes last, declare any missile launches when your ship moves. After all ships have Turned and Thrusted its time to do missiles, in reverse Initiative order too. Missiles ignore turning as they can thrust in any direction.

Drift

Look at your ships last move and repeat it, draw a small cross where the new position would be (gravity may alter this, see page 16). This is called your Drift square and if done right your Current position should be exactly midway between your Drift and your Past (except for gravity effects, see page 16). Perform drift on all tracked ships at the same time, before any turning or thrusting, there are no choices involved so the order doesn't matter. A stationary ship would have its drift, present and past in the same square. Take care to keep the ships facing when doing the drift as facing and movement direction are totally independent in Intercept. Aerobraking is done at the end of Drift, see page 17-18 for details.

Turn

How many steps of turning a ship can do depends on the Pilot task result but Untracked ships can turn however they like. Turn your ship up to the number of steps, left or right, or spend 3 steps to roll the ship. Look at the firing arc diagram in the combat section to bring your weapons to bear on the enemy.

Thrust

Each ship does its Thrust right after turning and can only thrust into squares in its forward facing arc as show in the picture at left, there is no strafe thrust or reverse thrust. A ship may also elect to drift and not thrust at all. Drifting makes a ship easier to hit but also slightly better at hitting others. Landings, crashes, dockings and ramming occur after turning and thrusting.

Turning after thrusting

Normally you do all your turning or rolling *before* any thrusting but if you also want to turn *after* thrusting you may but any turns *after* thrusting cost double. For aerobrakes, turning before the brake cost normal but any turning made by you after the brake cost double, see page 17-18 for details.

Popped in or out

Pop in at any time except after attacking or defending this turn

No Scan*, attack* or defense* when popped in and no Surface repairs

**Neutrino or Mass sensors and meson gun and screens are still useable*

A popped in ship has its weapons and sensors protected inside the hull but also unusable. You may pop in any time, you must pop in when aerobraking or landing in an atmosphere, you lose all launched missiles and tracks when you pop in. Ships are assumed popped out again at the start of each turn.

Fractional thrust

Full Gs are usable every turn, remaining fractions give +1 G on certain turns.

0.75+ fraction get one extra G on turn 1, 2 and 3 of every 4 turns.

0.5+ fraction get an one extra G on turn 1 and 2 of every 4 turns.

0.25+ fraction get an extra one G turn on turn 1 of every 4 turns.

The boxes at the bottom of the map-sheet holds fractions for each turn as shown in the figure at right. Note that thrust values are different for loaded and unloaded ships. Also use these boxes if you have a Floater with less than 1 G.

Rolled

A rolled ship treat their firing arcs in reverse, top becomes bottom, bottom becomes top, left is right, right is left, front and fixed remain the same of course. Ships must be rolled to land on the Darkside of planets and asteroids and if a ship is in the same square as an asteroid they are in the Shadow column if rolled and Sun column if not.

Maps

The game is played on square grid maps where one square equals 10 000 km and one turn equals 15 minutes. The distance between the Earth and Moon is about 38 squares in this scale. The direction to the central star is always upwards towards the top of the page.

The map is divided into 5x5 square boxes, designated with letters A-G for columns and numbers 1-11 for rows, individual squares within each box are designated 1-5 horizontal and 1-5 vertical. The exact center square of the map is in column D, row 6, square 3 3, or 'dee six square three three' for short. Note that the rightmost column is named G/A and the lowest row is numbered 11/1, to give overlap when playing on multiple mapsheets.

Several map templates can be found in the InterceptBundle.zip to print.

Plotting

Each player has his own map for plotting and there should also be a common map for tracked ships. Untracked ships move on their respective secret maps. Do not start using plotted movement and especially not with planets unless both players can do movement without error. If the sensor rules are not used one common map is of course all that is needed.

Plotting is done entirely on each players secret map. Ships rarely back up on old positions but when that happens old positions may have to be erased for clarity so draw with pencil (0.5 mm HB). I write the turn number next to each position to avoid getting out of sync.

Thrust Decide on where to thrust and then draw the ships final direction as a sharp triangle with the point facing in the final direction, typically the same as the thrust direction unless using Turning after thrusting. Finally draw a straight line connecting the previous position with the new and write the turn number next to your ship.

Drift Draw a circle around your ship to indicate drifting. Ships with less than 1G thrust may sometimes be unable to thurst from Fractional thrust above, you may still decide to thrust in that case, to become harder to hit maybe?

Missiles Untracked ships launch their missiles in secret. Mark with an M and the its starting performance, 5G5 for 5g15min, 3G6 for 3G30 min etc.

Popped in (mark plot with a P when popped in)

Pop in all surface mounted sensors, gunports and missile launchers. This will prohibit Scans, except for Neutrino and Mass (who can see straight through the hull), and no weapons may fire except Meson guns & screens and nuclear dampers (who can all 'shoot' through the hull).

Silent running (mark plot with S until powered up again)

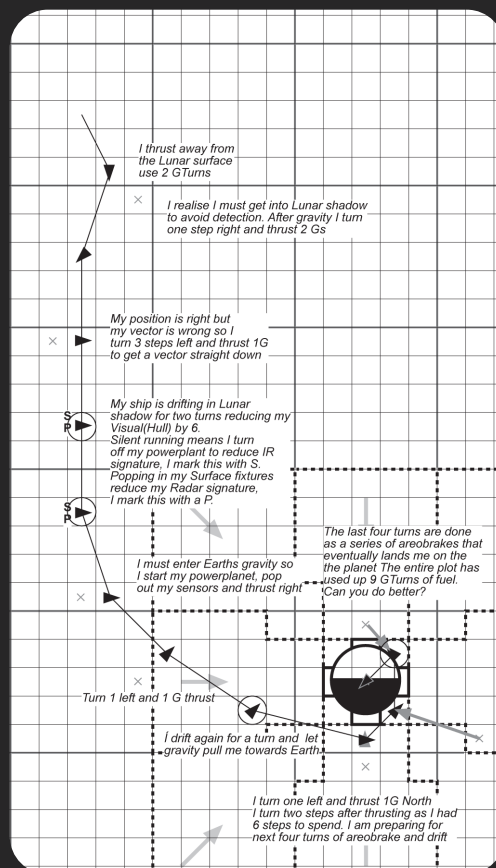
Powerplant is shut down and no system that uses power can be used, that includes all sensors except Visual/IR and floorfield as well as beam weapons, floater and impulse drives. Fusion or fission thrusters and missile launches can still be used (but really, silent running while fission/fusion thrusting is stupid).

Rolled (mark plot with R as long as ship is rolled)

A ship that has rolled will be upside down with its left and right arcs reversed as well as top and bottom, fixed arc remain the same.

VB player
ractional thrust

| A | B | A | B |
|-------|-------|------|---|
| 0.25+ | 0.75+ | 0.5+ | |



Complex plotting example

The turn prior to aerobrake is 1 step of turning, 1G gravity, 1G thrust towards planet and 2 steps of turning after thrusting, costing 6 steps.

The first aerobrake is 3G, 2 from Atmos drag and 1 from the ships wings

Scan modifier table

Scan size affects your scan according to the table below, each size also has a range limit. Consecutive identical Scans give a +1 on Strength per turn to a maximum of +3.

| | Vis, IR, Neutrino | | Max |
|-------------------|-------------------|-------|----------|
| Radius | Mass | Radar | range |
| Pinpoint 1x1 | +3 | +6 | 1 box |
| Pinpoint 2x2 | +2 | +4 | 2 boxes |
| Pinpoint 3x3 | +1 | +2 | 3 boxes |
| Box 1x1 | -1 | -2 | 5 boxes |
| Box 2x2 | -2 | -4 | 10 boxes |
| Box 3x3 | -3 | -6 | 15 boxes |
| Box 5x5 | -5 | -10 | 25 boxes |
| Integration bonus | +1* | None* | - |
| Light damage** | -1 | -1 | - |
| Severe damage** | -3 | -3 | - |

*Identical Scan from same ship, max +3

*Radar get no Integration bonus

**Use lowest damage of top/bottom/left/right

Questions to Scanner

After a Scan is declared the target should ask the scanner a bunch of questions.

Does your Scan touch your ships Sunglare

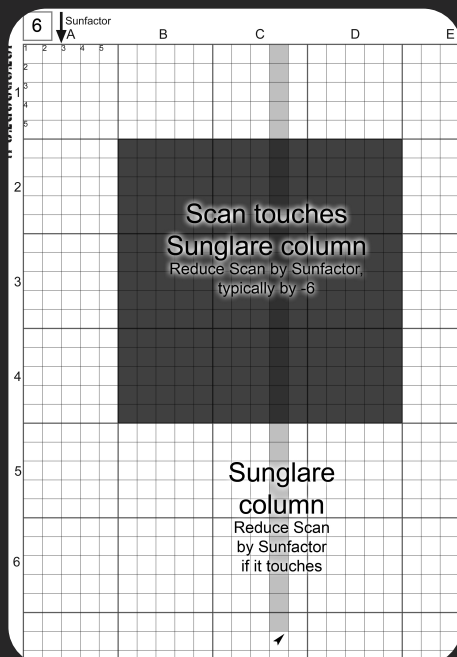
If yes subtract -6 (Sun) from the Scan strength
Always ask this question

Does the Scan touch sun or shadow column

Are you in one of the opposite columns?
Only ask if the Scan touches a Sun or Shadow column. Only ask if the map has asteroids or planets.

Does the planet block parts of your Scan?

If yes what near or far arc is blocked?
Ask even when the Scan does not touch a gravity well as it might still originate from a gravity well. Only ask if the map has planets



Sunglare column is one square wide and stretches from the ship towards the sun. Any scan that touches it suffer Sun reduction, typically -6.

Sensors

Knowing the sensor rules well will probably win you more battles than any other part of these rules, it is also what sets Intercept apart from other space combat games as it allows double blind movement without a referee.

Using sensors resembles the old game Battleship; choose an area on the map to scan and if an enemy have targets there they may become detected. Larger scans mean lower sensitivity so if you search too large an area the enemy may go undetected despite being inside the area you scanned.

Scan

Scan = Sensor + Scan modifiers (calculated. by *senser*)

Integration bonus give +1 per identical Scan (up to +3)

Max range is Scan size x 5 (see table at left)

The individual map squares are called *squares* and the 5x5 square areas are called *boxes*. Smaller scans have better scan modifiers, as can be seen in the table at left, but the chance of a target actually being inside the area is of course correspondingly smaller. Each Scan has a max range that the entire Scan must lie inside. The max range is always 5 times the Scan size.

Add your ships Sensor rating to the Scan modifier from the table at left, this is your Scan strength, or Scan for short, the higher the better.

Scan questions

'Does Scan touch Sunglare' is the only question if the map has no planet

After the scanner has declared his Scan the target should ask him some questions based on the circumstances of the Scan. Look at the questions in the column at left. The results of these questions may be a Scan reduction from Sunglare or some areas of the Scan ignored by the target. More details on planet LOS can be found on page 20-21.

Sun

Sun is 6 in earth orbit

+1 per orbit inward towards sun, -1 per orbit outwards down to +0.

The *sunfactor*, called Sun hereafter, represents the strong light, microwaves and neutrino emanating from the central star, the Sun, and is typically 6. Scans touching the Sunglare column as mentioned below subtract Sun from Scan strength and ships not in the planet shadow column add Sun to their Visual(Hull) signature, there are more Sun effects when landed on planets.

If your scenario does not take place in earth orbit, add one per orbit inward or subtract one per orbit outward.. Earth is 6, Mars is 5, Venus is 7 etc. Write the Sun value in the upper left corner of the mapsheet, see the picture at left.

If you want an even more detailed way to calculate Sun use the following formula and round to nearest whole number; never below 0 of course:

$$\text{Sun} = 6 - 4 * \text{Log}10(L/R), L = \text{Luminosity}, R = \text{Orbit radius in AU}$$

Sunglare

Sunglare is handled by the target asking the scanner

Scans touching the Sunglare column reduce strength by -6 (Sun)

Mass and Radar Scans ignore Sunglare

Sunglare is handled by the target. After a Scan has been called out the target asks the scanner if the Scan touches his Sunglare column which is a one square wide column from his ship up towards the sun. If the scanner answers yes the Scan strength is reduced by 6 (Sun), Sunglare is ignored if the scanning ship is in a planets Shadow column but then other rules apply; see the section on Planetary LOS for details.

Signatures

The signatures of a ship are affected by what it does, and where it is located. Apply the modifiers from the following list:

Sunshine Visual(Hull) + 6 (Sun)

Shadow column Visual(Hull) + 0

Drifting Ignore all thrust signatures ie all sigs with (Thrust) in parenthesis.

Popped in (P) Radar(Hull) -6 except if the ship is Open frame.

Silent running (S) use IR(Hull) instead of IR(Power), ignore Neutr(Power)

Mass(Hull) -6, only applicable if the ship has a floorfield.

Signal

Signal = Scan + Signature (calculated by *target*)

Signal 0+ gives Indication, higher may give you Contact or Tracked

A target with a Radar Signal of 0+ learns the position of the scanner.

Signal is what sensor will see, the higher Signal the better information he will have on the target, signal of less than 0 means you don't see anything. A ship performing a Radar Scan with an Indication or better result (0+ Signal) must tell the target its position, from radar illuminating the target.

A Signal of 0+ makes the target at least Indication, how high Signal that is required for Contact or Tracked depends on the Sensor task result, consult the Signal chart at right for details, if you don't perform a Sensor task roll use the Fail column.

Indication tells you the signal strength(s) and that something is there but nothing more, target must tell you all Signals that were 0+. Stronger Signal give you Contact (as an Indication but also the actual position) or Tracked which means you get position, vector and facing and he will from now on tell you his move beforehand, every turn as long as tracking lasts, no need to Scan to keep him tracked. Tracking may be lost under certain circumstances, read on.

Lost tracking

A ship can lose track of a Tracked target under certain circumstances, this is checked after movement and then again after combat, Losing track means the target goes back to hidden movement and the tracker need to re-track the ship again. All tracking ships must lose tracking for a Tracked target to be lost.

Target in the aft centerline when thrusting (details at right)

Target blocked from tracker by planetary LOS

Tracker has all sensors Critical+ damaged.

Tracker has crew Critical+ damaged or getting a Crew Stun result.

Target beyond max range as given by the Max tracked table at right.

Sensor types

Visual/IR

Sunglare, planet LOS, planet shadow

Visual/IR sensors are basically telescopes that can operate in Visual *or* IR mode. Visual/IR are affected by planet LOS and may also suffer Sun glare. Visual typically pick up sunlight reflected from the hull or thrusters. Visual masking consist of a very black coating that absorbs the visible light. IR uses the infrared spectrum and typically pick up power-plant radiators. IR can also detect ships with turned off powerplants from their ambient hull temperature.

Radar

Planet LOS

Indication+ give away scanner position at the end of the Sensors phase

Radar emit microwaves that bounce off the target back towards the sending ship. Radar scans are easy to detect but radars but radars also spot targets faster from the doppler information they give back.

Radar falls off faster than normal sensors which is shown in their Scan size column. Radar masking is radar absorbing materials and cleverly angled surfaces. Open frame ships have significantly higher radar signature.

Neutrino

Sunglare, even when in planet shadow

See details on page 42.

Mass

Cannot Scan to or from gravity field

See details on page 42.

SENSOR 0+

If Signal is 0+ you get an Indication and roll a Sensor task to see what Signal gives you Contact or Tracked. Signal 0+ always give at least Indication.

| Result | Indication | Contact | Tracked |
|--------|------------|---------|---------|
| VGood | 0+ | 1+ | 2+ |
| Good | 0+ | 2+ | 4+ |
| Fair | 0+ | 3+ | 6+ |
| Fail | 0+ | 6+ | 12+ |

Unnoticed No information is given.

Radar Indication or better from Radar scans always give the position of the scanner, as long as the target ship has a working radar, reveal it after all scans are done.

Indication The target tells you that it is inside the Scan area somewhere but neither its position nor its vector. Radar reveal scanner pos.

Contact The target tells you its position but not its vector. The target also tells you all 0+ Signals and what *general type* each Contact Signature is; reflected hull, fission or fusion power, fission, fusion or impulse drive etc. Radar reveal scanner pos.

Tracked The location and vector and identity is revealed. Tracked targets move in the open and before non-Tracked ships. Tracked status is kept until lost tracking occurs (see text), there is no need to Scan to keep a target Tracked. Radar reveal scanner pos.

Integration bonus

For each *consecutive identical Scan* ie the same Scansize and position, and from the same ship and sensor, you get a cumulative bonus of +1 up to max +3. You get no integration bonus from Radar.

Aft centerline

Tracking is lost for targets in your Aft centerline. If your ship is thrusting or using the Floater it is blind in its Aft centerline. Targets in your Aft centerline cannot be attacked and you get a -3 DM when defending against attacks from there.

Max tracked range table

Max tracked range from Sig+Sensor.

| Visual, IR | | |
|----------------|-------|----------------------|
| Neutrino, Mass | Radar | Max (boxes) |
| -3 | -6 | 1 box |
| +0 | +0 | 3 boxes |
| +2 | +4 | 5 boxes ¹ |
| +4 | +8 | 15 boxes |
| +6 | +12 | 50 boxes |
| +8 | +16 | 150 boxes |
| +10 | +20 | 0.15 AU ² |
| +12 | +24 | 0.5 AU |
| +14 | +28 | 1.5 AU |
| +16 | +32 | 5 AU ³ |
| +18 | +36 | 15 AU ³ |
| +20 | +40 | 50 AU |

1 One lightsecond (Ls)

2 One lightminute (Lm)

3 One lighthour (Lh), (2 lighthours really)

Combat

When movement is finished it is time for actual combat, if at least one ship if at least one target is Tracked. Combat is done in decreasing initiative order ie the highest initiative ship attacks first etc.

Pick the ship with the highest initiative that have not yet attacked.

Beam attacks are performed before Missile impacts

For each beam battery attack:

Roll to hit from each attack, roll defending screens if any.

Roll hitlocation and damage, taking ARM vs PEN into account.

For each missile volley attack:

Roll to hit from each attack, roll defending screens if any.

Roll hitlocation and damage, taking ARM vs PEN into account.

Repeat with the next lower initiative ship until all ships are done. Yes, damage is inflicted immediately so the target may be shot to junk before it gets its turn to retaliate. Large ships get low initiative so they must be defended by fighters, just the way we like it.

Firing arcs

Targets in your Aft centerline cannot be attacked, ignore if you Drift

Untracked and Aft centerline are defended against at -3 DM.

Missile attack arc is determined from Same square attack arc rules

Turrets and bays may be mounted left, right, top or bottom, fixed weapons may only be mounted front. Turrets and bays fire in a 180 degree field of fire with a narrow overlapping zones, the so called money lanes where gunner take bet on who will bag the kill. Fixed mounts fire front only, they use the same arcs as the thrust arcs.

Left or Right mounts fire to the left or to the right, top mounts fire forward and bottom mounts fire rearward but this is reversed if the ship is rolled. Fixed mounts are unaffected by rolls as they are coaxial with the ship. Damage is tracked separately for Top, Bottom, Left and Right it is important to keep track of how a ship is rolled, if a facing was exposed to the attack it can also takes damage.

Aft centerline (thrusting only)

Targets in the aft centerline can't be attacked and defense is -3 DM

Tracked targets in the aft centerline will lose their tracked status

Drifting ships completely ignore all aft centerline effects.

Thrusting ships are blind to their aft centerline from drive exhaust, floater, grav and impulse drives emit Mach particles so they too blind the aft centerline.

Same square attack arc

Ships and missiles use separation from last turn

Missiles launched this turn uses separation from launching ship

Co-vector high Initiative pick adjacent square of target for attack

Co-vector missiles pick adjacent square of target for attack

When the attacker and target are in the same square, how can you tell what direction the attack came from? Simple really, just check how the two ships were separated the last turn, for arc determination only, the attack is still 0 squares in range of course. Missile launched this turn use the separation of the launching ship instead.

Co-vector If the separation in the last turn was also 0 (meaning they are co-vector) the high Initiative may pick what adjacent square the attack came from, for arc determination and hitlocation rolls. Co-vector missile attacks also pick adjacent square for arc determination and hitlocation rolls, but as co-vector missiles have really low PEN and DAM, -12 on each, this rarely happens.

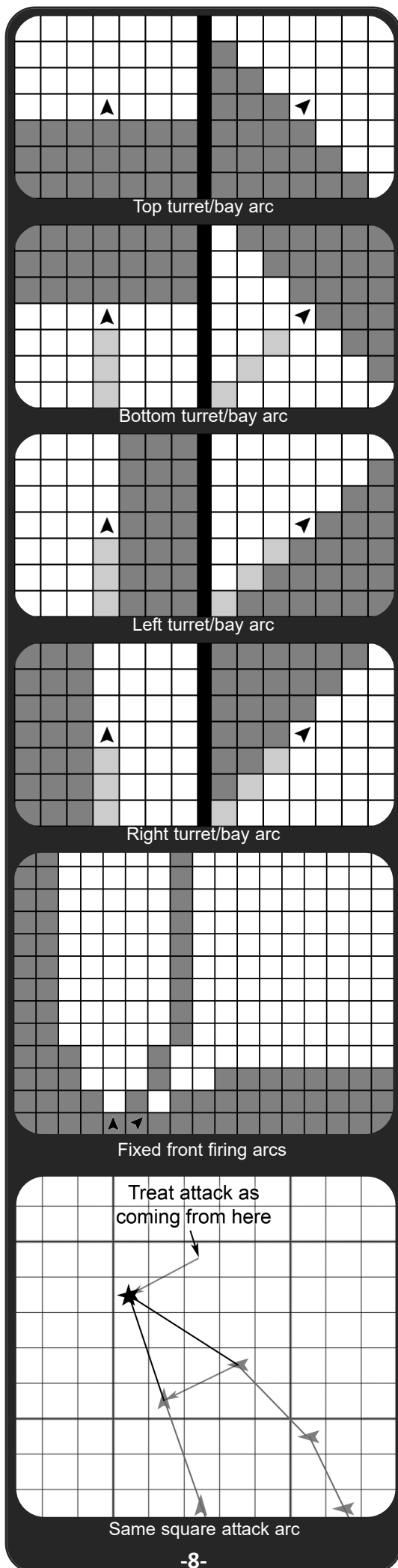
Ships may pop in at any time during combat

Popped in ships may only pop out at the start of a new turn

Ship is popped in if it aerobraked or took off from planet with atmosphere.

Ships *may not* pop in if they have attacked or defended this turn

Ships *may still* pop in if it Scanned popped out during Sensors phase



Beam battery and missile volley

Attacks with multiples of the same weapon type should be grouped into batteries to increase hit chances and reduce dice rolling. Consider using the Spray fire rule if you want multiple hits. Each battery roll as one attack with a DM based on the number of weapons from the table at right. Note the number sequence 2, 3, 9, 30 or 90, may look weird but simplifies filling turrets and bays with weapons. Ships under the same Tactician may even group weapons from different ships but never for defense. The attacked ship may use one battery to defend against a missile volley but other ships may attack the missiles as if they were ships.

Underpower

Underpower limit how many turns of attacks in a row

Underpower has separate values for Thrust, Drift or Jump prep

Missiles and sandcasters are unaffected by underpower

If a ship doesn't have enough power to operate all its beams it may only fire a certain number of turns in a row. Underpower only affect beams and only attacks, except when Underpower is *No fire* where only missiles and sandcasters may be used. A laser can never be used to both attack and defend in the same turn. Ships have one rating for thrusting and one for drifting and there's also an Underpower value for jump prepping, read more about it under the Hyperspace rules on page 26-27.

Target drifting

+2 if target drifted

Ships that don't thrust get a +2 for being so easy to predict, beam defense get a +2 if the *attacker* is drifting but only if the attacker is also tracked. Target thrust is measured from gravity adjusted Drift, yes, this means that if you negated gravity with your Floater you *are* considered thrusting, despite moving in a straight line. The attacker predicted that you would follow gravity, not doing it is the same as thrusting.

Dualrole

Gunner or Sensor crew in parenthesis are Dualrole

Ship and Fleet tactics are not considered tasks

Pilots under tactician command *are* considered doing a task

When crewmembers perform more than one task in a turn the suffer skill reductions or DMs, multiple repairs in a row from VGood results does only count as one task so they don't get progressively harder. Small crafts, less than 500 m3 (100 dTon) treat the number of tasks as one less. Attacking missiles using Spray fire as if they are ships is legal but pretty hard (12+ for range 1), if you then also defense fire against them the defense will be Dualrole.

Triplerole and quadrole rarely crop up, consider them optional. Not even Luke in his X-wing was quad role as Artoo did the repairs for him.

The order tasks are performed are

Pilot, Scan, Attack, Defend, Repair, the order of attack and defense might be reversed depending on initiative results.

Sprayfire

Spray fire is optional for any beam or 3+ volley missile impact attack

Spray fire is mandatory for all missile proximity attacks

All Spray fire hits are rolled as Fair hits (lowest D6 of 2), you buy more hits for lower damage on each. Spray fire attacks may cause multiple hits on Surface areas so the cumulative damage rules apply of course. Spray fire attack or not must be decided upon before rolling to attack.

Spray fire may also be used against missile volleys or same square ship formations with the same vector and type. Each hit removes a missile, which particular ship hit is determined randomly by making a list of the ships and rolling randomly using adjacency as dictated by the table. Why not pick that spunky farmboy and take him out of the squadron?

Beam battery & missile volley table

Weapons of the same kind in an attack should be grouped together with a single attack roll. Missile attacks also use this table for volleys.

| Number of units in battery | DM |
|-------------------------------|--------|
| Battery or volley members 2 | +2 |
| Battery or volley members 3+ | +3 |
| Battery or volley members 6+ | +4 |
| Battery or volley members 9+ | +5 |
| Battery or volley members 30+ | +6 |
| Battery or volley members 60+ | +7 |
| Battery or volley members 90+ | +8 etc |

Underpower

Beams attacks may be limited in how long they can attack in a row. Severe damage to Power location shift Underpower one degree worse (one row down in the table).

| Power | Attack turns in a row* |
|------------------|------------------------|
| Full power 200%+ | All+ |
| Full power 100%+ | All |
| Underpower 50%+ | 2 turns |
| Underpower 20%+ | 1 turn |
| Underpower < 20% | No fire** |

*Severe power damage use one row down

**No fire also prohibit defenses, except sand

Spray fire table

Any beam attack, and any 3+ impact missile attack may *opt* for Spray fire. Proximity detonated missiles *must* chose Spray fire.

| Hit result | Sprayfire |
|------------|-------------------------------|
| Very Good | 3 Fair: 1 picked, 2 adjacent* |
| Good | 2 Fair: 1 random, 1 adjacent |
| Fair | 1 Fair: 1 random |

*Locations outside 1-6 miss

Dualrole

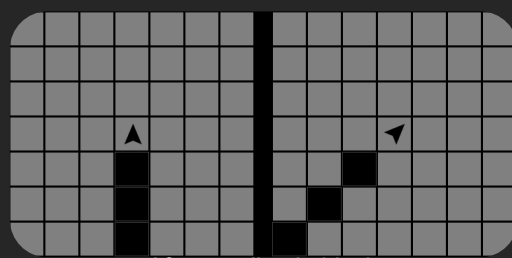
Crew performing more than one task in a turn suffer progressively worse penalties.

| Number of tasks* | Skill reduction | DM |
|------------------------|-----------------|----|
| Dual role (2nd task) | -1 lvl | -2 |
| Triple role (3rd task) | -2 lvl | -4 |
| Quad role (4th task) | -3 lvl | -6 |

*The number of tasks is reduced by one if all craft under command are less than 500 m3 (100 dTon).

Aft centerline

Aft centerline rules does not apply when drifting, when thrusting you are blind in your Aft centerline. Targets cannot be attacked and you get a -3 DM when defending against attacks from there. You will also lose track of targets in your Aft centerline.



Aft centerline in black

BEAM ATTACK RAG TABLE

Lasers, particle accelerators and mesonguns all use this table to determine the target number for hits.

| Range | To hit roll |
|-------|-------------|
| 0* | 9+* |
| 1 | 12+ |
| 2-3 | 15+ |
| 4-10 | 18+ |
| 11-30 | 21+ |

*Treat as range 1 unless also co-vector

*Use Same square attack arc rules, page 8

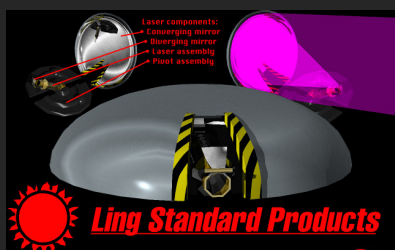
| Beam to hit modifiers | DM |
|-----------------------|----------|
| Target Size | +Size |
| Battery units | +DM |
| Target drifting | +2 |
| Dualrole | -2 |
| Crew damage | -1 or -3 |
| Weapon damage | -1 or -3 |

BEAM DEFENSE 9+

Sandcaster against lasers and Meson screens against meson guns, there is no screen against particle accelerators.

| Screen to hit modifiers | DM |
|-----------------------------|--------------|
| Battery units | +DM |
| Defender drifting | +2 |
| Untracked or aft centerline | -3 |
| Dualrole | -2 |
| PEN > ARM | -1 per point |
| Crew damage | -1 or -3 |
| Weapon damage | -1 or -3 |

| Result | Effect on attack |
|----------------------|----------------------------|
| VGood | Attack stopped |
| Good | Attack two steps worse |
| Fair | Attack one step worse |
| <i>Miss or worse</i> | <i>No effect on attack</i> |



Beam combat

Beam weapons (lasers, particle accelerators and meson guns) fire before missiles impacts, lasers can also defend against missile attacks, but *lasers cannot attack and defend in the same turn*, if DualRole gunners rolled a Sensor task they suffer the DualRole penalty when attacking or defending with beams. Look up the range to the target on the Beam to hit table and apply any DM from the Beam hit modifiers table. Roll one attack per battery and inflict the damage immediately. Hitlocation and damage is dealt with further on in the rules.

Beam weapons fire at full penetration and damage inside their effective range, at PEN -3 and DAM-3 at up to 3 x effective, and not at all beyond that.

Ships in the same square attacks treat range as 1 unless also co-vector

Beam targets learn the position of attackers under certain conditions, see each entry below, missile attacks does *not* reveal position this way.

Lasers

Target learns attacker position if they have a working Optical sensor

Lasers may attack or defend but not both in the same turn

Lasers fire pulses of coherent light at ever shorter wavelengths as technology increases. Lasers are inherently short range weapons because of the difficulties of focusing without prohibitively large mirrors. Lasers are used against thin hulled ships and against missile fire. Only lasers may fire at missiles.

Particle accelerators

Target learns attacker position if they have a working Optical sensor

Particle accelerators fire pulses of neutrons at relativistic speeds. As the particles have much shorter wavelength than lasers they have longer effective range. Hits by particle accelerators also damage living tissue more; damage on Crew and Repair crew is considered one level higher than the rest of the sections hit.

Meson guns

Target learns attacker position if they have a working Meson screen

Meson guns may fire when Popped in

Meson guns fire mysterious particles that go through normal matter much like neutrinos but after their lifetime is over they spontaneously decay into energy causing an explosion and large amounts of radiation. Armor have no effect on them, they can even be fired when Popped in as the beam goes right through your own armor too. Hits by meson guns also do one level worse damage on Crew and Repair crew.

Defenses

Beam defenses are sometimes called 'screens' from an old Terran tradition. They all reduce the degree of success by which the attack was made. Defenses suffer a negative -1 DM per point the defense ARM is lower than the attacks PEN. Lasers against missiles have no such DM though.

Lasers mounted fire at impacting missiles. Lasers may also fire at missile volleys as normal ships with Fair, Good or VGood killing 1, 2 or 3 missiles of the volley.

Sandcasters fire crystals that disrupt and scatter the incoming laser pulses, they are aimed at the attacking ship hence the +2 DM for attacker drifting. Sandcasters can be fired when Powered down and ignore Power damage.

Meson screens manipulate the lifetime of the incoming particles so they either decay before hitting the ship or after passing through the ship. Meson screens can be used when Popped in.

Lasers may attack or defend but not both in the same turn

Untracked or aft centerline attackers are defended against with a -3 DM

Only one screen battery per ship may defend against each attack.

A single battery may defend against each and every attack volley.

The above make very good reasons to group beam weapons into few batteries and also to group screens into few batteries.

The ship with the defense roll its defense roll (7+ +Skill +modifiers).

If you don't have Tracked on the attacker or he attacks from your blind aft centerline you suffer a -3 DM, look up other DMs from the table at left.

Missile combat

Missile movement is done at the end of the movement phase (reverse initiative order), regular missiles must thrust their full G (any remaining Gs when impacting become positive hit DMs, see Remaining thrust Gs at right). Cold start missiles behave as ships, they may drift or thrust as the launcher sees fit, limited to its amount of fuel (measured in GTurns). Missiles that miss their target may continue moving if fuel and endurance permit, except proximity detonated and nukes, for obvious reasons. Launcher range is only limit how far from launcher the attacks can be made, the same holds for launcher arc.

Small missiles mass 50 kg and are launched from turrets or fixed launchers. This is the only class of missiles that civilians can buy or use.

Medium missiles mass 500 kg and are launched from bays, turrets or fixed launchers. This is the largest class of missiles permitted for Star mercs.

Heavy missiles mass 5000 kg and are launched from large bays or fixed.

Launch position

Missiles launch from launching ships drift position

Missiles must be inside launcher range at all times

Missiles must be inside launcher arc to attack

Cold start missiles move as regular ships and count fuel use vs GTurns

Missiles are assumed to thrust during the entire turn. They are therefore launched from the ships Drift position instead of its current position. This may sound wrong but ships and missiles are actually thrusting during the entire turn. If missiles were to benefit from a launching ships acceleration they couldn't also benefit from their own acceleration, could they? We simply assume that the missiles were launched at the start of the turn and have been thrusting during the turn free from the launching ship.

Missiles must be within launcher range at all times and also inside launcher arc when impacting. Calculate attack arc from the Same square attack arc rules on page 8.

Impact vector

Impact vector is the separation of target and missile from the last turn

Impact hit DMs affect missile attacks and defense equally

Impact vector is extremely important for missiles, as well as docking and ramming. Low impact vectors increase hit and defense chances while lowering damage while high impact vectors do the opposite. Impact vectors of 2-4 work normally with no modifiers, consult the table at right. Beam attacks are *not* affected by impact vectors, except when defending against missiles or rams.

Defenses

Lasers may attack or defend but not both in a turn

Untracked or aft centerline attackers are defended with a -3 DM

One laser and one damper battery can attack each missile volley

These batteries may defend against each and every attack volley

Missiles have two specific defensive systems or 'screens' as they are sometimes called; lasers and nuclear dampers, nuclear dampers only affect nuclear missiles. Both are used by firing at incoming missiles before they can hit the ship. The results of lasers and dampers are cumulative, both reducing the result of the missile attack.

Proximity detonation

All missiles attack directly or use proximity detonation, decided by the missile launcher operator. Proximity attacks give +3 DM to hit and PEN & DAM -6 for damage. Always use the Spray attack rules for Proximity detonations where greater degree of success gives more hits rather than better damage.

| | |
|-------|--|
| VGood | 1 picked Fair hit and two random Fair hits |
| Good | 2 random Fair hits |
| Fair | 1 random Fair hit |

Nuclear missiles (optional)

Nuclear missiles ignore the PEN and DAM modifiers from the Impact vector table as their damage doesn't rely on momentum. See the optional nuke missile rules on page 23 for details.

MISSILE ATTACK 15+

Impacting missiles roll this task, misses may continue moving if fuel and endurance permits, unless proximity detonated or nukes, of course.

| Missile to hit modifiers | DM |
|--------------------------|----------|
| Target Size | +Size |
| Proximity detonation | +3 |
| Impact vector | +DM |
| Volley units* | +DM |
| Remaining Gs | +1/G |
| Target drifting | +2 |
| Dualrole | -2 |
| Crew damage | -1 or -3 |
| Weapon damage | -1 or -3 |

*Use the Battery units table on page 9

MISSILE DEFENSE 9+

Lasers may attack or defend but not both.

One laser battery and one nuclear damper battery may defend against each missile volley. Missile attack arc is based on impact direction.

| Missile defense modifiers | DM |
|-----------------------------|----------|
| Small/Medium/Large missiles | +0/+2/+4 |
| Impact vector | +DM |
| Battery units | +DM |
| Defender drifting | +2 |
| Untracked / aft centerline | -3 |
| Dualrole | -2 |
| Crew damage | -1 or -3 |
| Weapon damage | -1 or -3 |

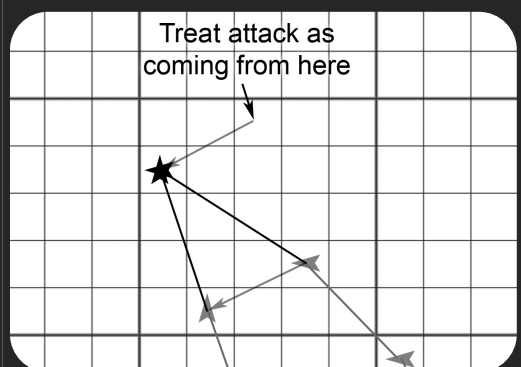
| Result | Effect on attack |
|----------------------|----------------------------|
| VGood | All missiles shot down |
| Good | Attack two steps worse |
| Fair | Attack one step worse |
| <i>Miss or worse</i> | <i>No effect on attack</i> |

Impact vector

Impact vector is the separation from last turn

| | Impact vector | | | | | |
|------------|---------------|----|----|---|----|----|
| Effect | 0 | 1 | 2 | 3 | 4 | 5+ |
| Hit DM | +4 | +2 | +1 | - | -1 | -2 |
| PEN & DAM* | -12 | -6 | -3 | - | +3 | +6 |

*Missile PEN and DAM only, Nuclear missiles ignore PEN and DAM modifiers



Hitlocation

All components of a ship belong to one of its nine hitlocations; the five internal locations of Hull, Crew, Core, Power or Thrust, and the four Surface areas, one for each overlapping arc. Damage is tracked separately for each of these locations, note that some hitlocation (1, 5 and 6) skip Surface damage.

The Repair Crew is always located in one of these sections and if the repair crew is in the struck hitlocation it suffers the same damage as the location that was hit. Armor is ignored for Surface damage if *Popped out* or use the armor of the hull if *Popped in*.

Interior hits

Fair Roll hitlocation, see picture and table at top left.

Good Roll hitlocation but attacker may opt for adjacent entry

VGood Attacker pick hitlocation

Your attacks degree of success, modified by defense, determine how you roll hitlocation; Fair hits roll 1D6 on the table, Good hits also roll 1D6 but the attacker may then pick an adjacent location on the table and VGood hits let the attacker choose hitlocation. Some of the hitlocations also has Surface noted, indicating that you also cause Surface hits, see below.

Spray attacks treat hitlocation differently, see page 12 for details.

Surface hits

All hits hit Interior locations but location 2-4 also hit Surface areas. Surface hits use the Full damage column when Popped out and the same damage column as the Interior hit when Popped in, see Penetration and damage on the next page for details.

Surface hits are divided into four areas: Top, Bottom, Left or Right, each must be repaired individually. Most attacks will hit two of these areas but attacks from any of the centerlines will hit three areas, look at the pictures at left to determine which areas are hit.

Front centerline hits Top, Left and Right

Aft centerline hits Bottom, Left and Right

Left centerline hits Top, Bottom and Left

Right centerline hits Top, Bottom and Right

Always try to attack from the target centerlines, especially the aft centerline. Aft centerline defensive fire is at -3, no attacks are possible, hitlocation rolls will very rarely hit the sturdy Hull hitlocation and we hit three Surface areas unless we hit Power or Thrust locations. Finally, the target will have to reacquire you next turn as tracked targets in the aft centerline loses the Tracked status. Watch the six'o'clock as fighter jocks used to say!

Damage

Damage come in discrete classes; **Light, Severe, Critical** or **Destroyed**.

Scratch isn't really a damage level, it is simply the minimum damage result needed to get Stun or Continuing Damage, more on that on the next page.

Light The location is barely damaged and it might work a bit oddly.

Severe The location works but at half capacity.

Critical The location no longer work but may still be repaired.

Destroyed The location is damaged beyond repairing

Cumulative damage

Scratch+ damage remove any Jury Rig regardless of previous damage.

If a location that is already damaged suffer new damage the resulting damage depend on the old and new damage as follows.

Higher new damage raises the damage to the new result.

Equal new damage raises the damage one level.

Lower scratch+ old damage remain, remove any Jury Rig.

White Lowest, Gray 1D6, Black highest

HITLOCATION

Fair hit Roll 1D6
Good hit Roll 1D6, attacker may pick adjacent
VGood hit Attacker pick from table

| Roll | Internal / Surface |
|------|--------------------|
| 1 | Hull / - |
| 2 | Hull / Surface |
| 3 | Crew / Surface |
| 4 | Core / Surface |
| 5 | Power* / - |
| 6 | Thrust / - |

*Left / right ARM value when power is on / off

Top hits

Bottom hits

Left hits

Right hits

Centerlines, Black is aft centerline

-12-

The amount of damage suffered from an attack is determined by modifying PEN for effective range or impact vector and then comparing PEN vs ARM and to get penetration. Compare DAM vs DAB and roll, once for Interior damage and once for Surface, the results are read from the respective column. One interior location and up to three surface location may receive damage. Interior locations may also get Stun or Continuing Damage results.

Penetration

If PEN - ARM is 0+ roll damage, check Surface damage separately

Beams (including Meson guns) modify PEN & DAM by Effective range

Missiles (except nukes) modify PEN & DAM by Impact vector

Modify PEN & DAM by Effective range for beams and Impact vector for missiles, Meson beams completely ignore Penetration and always use causes Full penetration. Power location may have two ARM values; use the left one when powered up and the right one when Silent running.

Damage roll

If DAB - DAM is -6 or higher roll damage

Roll Interior locations and Surface locations damage separately

Stun on interior location if roll is a 6 and Scratch+ damage

Continuing damage on interior location if roll is 1 and Scratch+ damage

Destroyed result in all but Hull use Pass-on-damage

If DAB - DAM is 0 or less ignore the hit completely, if 1+ roll for damage. using the lowest of 2D6, 1D6 or highest of 2D6 for Fair, Good and VGood hits respectively. Note that Spray attacks always use the lowest of 2D6. If the Interior location suffered a Scratch or higher a roll of 1 also give it Continuing damage and a roll of 6 gives it a Stun, see below for details.

A damage result of less than Scratch are ignored, jury rigs remain, no Stun or Continuing damage. yeah, the table even says *no effect*, get it?

Higher damage raises the damage to the new result and removes Jury Rig.

Equal damage raises the damage one level and removes Jury Rig.

Lower scratch+ damage has no effect except removing any Jury Rigs.

Continuing damage on an Interior damage roll of 1

Surface hits never cause Continuing Damage

A Scratch+ damage roll of 1 starts Continuing Damage

Continuing damage is rolled *after* repairs

Whenever a damage roll turns up a 1, note it as Continuing Damage (CD). After Repairs are made (any successful repair also removes the CD) and if the CD remains roll 1D6 for each CD: 1 and the CD fizzles out, remove it, 5 or 6 and the location gets one level worse. If this make it Destroyed the CD stops but a CD starts in the Hull location instead. Yes, a single Light damage with CD might eventually destroy the entire ship, however unlikely.

Stun on an Interior damage roll of 6

Surface hits never cause Stun

A Scratch+ internal damage roll of 6 gives a Stun result

Stun results are applied immediately (as is all damage)

Hull Randomly change facing by 1 step. Roll 1D6: 1-3 left, 4-6 right

Crew Lose all tracks and launched missiles

Core Lose remaining computer dice pool abort jump prep in progress.

Power Shuts down powerplant requiring a powering up roll in Repairs.

Thrust Randomly change facing by 1 step. Roll 1D6: 1-3 left, 4-6 right

Pass-on-damage

When a location other than Hull suffers a Destroyed result or if you hit an already Destroyed location, use *one row lower* than the rolled damage for the Interior location and apply it to Hull, this is called Pass-on-damage. Surface location damage never cause Pass-on-damage.

EFFECTIVE RANGE - BEAMS ONLY

Beam weapons beyond effective have reduced penetration and damage. Effective range does not affect hit probability.

| Range | PEN | DAM |
|------------------------|-----|-----|
| Inside Effective range | -0 | -0 |
| Inside 3 x EffRng | -3 | -3 |
| Beyond 3 x EffRng | No | No |

IMPACT VECTOR - MISSILES ONLY

Separation of the last turn between missiles and target determine the Impact vector

| Effect | 0 | 1 | 2 | 3 | 4 | 5+ |
|------------|-----|----|----|---|----|----|
| Hit DM | +4 | +2 | +1 | - | -1 | -2 |
| PEN & DAM* | -12 | -6 | -3 | - | +3 | +6 |

*Missile PEN and DAM only, Nuclear missiles ignore PEN and DAM modifiers

PENETRATION PEN-ARM

Meson attacks always use Full penetration

| PEN-ARM | Penetration |
|---------|-----------------------|
| 3+ | Full, normal damage |
| 0-2 | Partial, one row down |
| -1- | Stopped, No damage |

DAMAGE DAM-DAB

Surface hits causes neither Stun nor CD

A roll of 1 causes CD if Scratch+

A roll of 6 causes Stun if Scratch+

Destroyed results or hitting already Destroyed non-Hull locations cause Pass-on-damage

| DAM-DAB | Crew | Surface |
|----------------------------------|-------------|--------------|
| +1D6* | Hull | Core & Power |
| Partial Penetration one row down | Thrust | |
| 15+ | Destroyed** | Destroyed** |
| 12-14 | Critical | Destroyed** |
| 9-11 | Severe | Destroyed** |
| 6-8 | Light | Critical |
| 3-5 | (Scratch) | Severe |
| 0-2 | No effect | (Scratch) |
| | | Light |

*Fair hit: Use lowest of 2D6

*Good hit: Roll 1D6

*VGood hit: Use highest of 2D6

**Destroyed non-Hull also cause Hull damage

Pass-on-damage

When a location other than Hull suffers a Destroyed result or is hit when already Destroyed, give Hull damage from the same row, this is called pass-on-damage and can destroy the ship.

Radiation damage

Hits from particle and meson beams and nukes cause radiation damage on Crew and Repair Crew. Scratch+ results become one level worse.

Hitlocation damage effects

Surface

Light Attack/defense -1

Vis/IR/Radar -1*

Severe Attack/defense -3

Vis/IR/Radar -3*

Critical No attacks/defense

No Vis/IR/radar*

Destroyed No repair

Sensors use the lowest Surface damage

Hull

Light Max Streamlined hull, Pilot task -1

Severe Max Normal hull, Pilot task -3

Critical Max Open frame hull, No turning or thrusting, Pilot task worse than VBad

Destroyed Ship is destroyed.

Crew

Particle, meson and nuke hits give one level worse damage from radiation.

'Repairs' are done by Frozen watch or RC

Light Attacks, screens, sensors -1, Pilot -1

Severe Attacks, screens, sensors -3, Pilot -3

Critical No thrust, turn, attacks, defenses.

Destroyed No Frozen watch nor RC 'repair'

Core

Light Computer-1, Mass/Neutrino -1

Severe Computer-3, Mass/Neutrino -3

Critical Computer=0, No Mass/Neutrino

Destroyed No repair

Power

Light May only thrust 2 turns in a row*

Powering up -1

Severe May only thrust 1 turn in a row*

Underpower one degree worse

Powering up -3

Jump prep time x2

Critical No thrust*

No beam attack or defense**

No Jump prep, no Jump

Destroyed No repair

**Fission and fusion thrust unaffected*

***Missiles and Sandcasters unaffected*

Thrust

Light* May only thrust 2 turns in a row

Severe* May only thrust 1 turn in a row

1/2 remass

Critical* No thrust, 1/2 remass

Destroyed No repair

**Ignore Jury Rig and*

Jump drive

Jump drives are located in Thrust location but have separate damage effects. Always ignore any Jury Rigs as they are temporary remedies that will fail during the jump drives 1 week of continuous operation.

Light Jump task -1, Jn-1*

Severe Jump task -3, Jn/2 rounded down*

Half jumpfuel tankage gone

Critical No jumping, but repairable

Half jumpfuel tankage gone

Destroyed No repair

**Jn < 0 means no jump*

Damage effects

Surface

Sensors damage use *lowest* Surface damage of all four facings.

This section houses weaponry and sensors (except Neutrino and Mass which can see through the hull and are located in the Core location). Surface hits are divided into four locations two locations are always hit except when attacking from centerlines where three locations are hit:

Front centerline hits Top, Left and Right

Aft centerline hits Bottom, Left and Right

Left centerline hits Top, Bottom and Left

Right centerline hits Top, Bottom and Right

Hull

The hull section houses the hull itself, fuelscoopes, landing and docking gear, and the streamlining of the ship, it also houses any stealth masking. Hull section can take more damage than other locations because it consists of the entire ship.

A Destroyed Hull means the ship is destroyed, obviously.

Crew

The living space houses the control stations, bridge, living quarters, freezers and life-support. Frozen watch restore one or two levels of damage, this repair does not fall back to the original level when receiving further damage.

If you want to know if a particular crew or passenger is hit roll 1D6: Light 6+, Severe 4+, Critical 2+ and Destroyed all crew or passengers hit.

Core

The core section houses the computer, cargobay, internally carried craft and the missile magazine, it also houses any Mass or Neutrino sensors.

If you want to know if a particular craft or piece of cargo is hit roll 1D6: Light 6+, Severe 4+, Critical 2+ and Destroyed all craft and cargo are hit.

Power

Severe+ damage halves alt. fuel tanks (water, ammonia, methane)

The power section houses power-plant, fuel, fuel processing and batteries. Fission and fusion thrusters are unaffected by Power hits as they draw no power, Floater, Grav and Impulse are affected. Severe damage causes Underpower to be one degree worse or one row down on Underpower table:

All++

All

2 turns

1 turn

No fire

Thrust

Severe+ damage halves remass, jumpfuel and Jn rating (round down)

Repairs only restore remass and jumpfuel tankage, not lost content

This section houses the ships engines and their fuel if any. Engines are vulnerable because they are open to space, including Impulse drives. Thrust damage (and power damage for Impulse, Grav and Floater thrust) have damage effects that limits continuous use. After 1 or 2 turns the ship *must* Drift.

Damage control

Warships typically have repair crews to jury-rig battle damage during a fight. These repairs will be fragile makeshift jury-rigs and there is only so much you can do with such repairs. The effects of these rules is that damaged ships cannot be fully restored to pristine health and they are also more fragile after these makeshift repairs.

When a section is to be repaired you use the Repairs table and if successful mark that section with JR (for jury-rig). That section is treated as one level less damaged, multiple jury-rigs in the same location is not allowed. Whenever a section takes any damage the jury-rig on that section is removed, this also happens when the damage wouldn't affect the damage level.

Powering up from Silent running

Powering up is done in the repair phase

Untracked ships automatically succeed in powering up, no roll is done

Powering up from Silent running can take some time, especially on large ships and it is the job of the repair crew to do that. Repair crew must be in the Power location to power up, no roll is needed for using battery power.

The powering up roll is based on the ship Size on the assumption that a larger ship is harder to power up even with a full Repair Crew. A Fair result gives 1/2 Thrust and only missiles and sandcasters next turn, fission & fusion thrust don't use power and neither does missiles or sandcasters so they are unaffected by this.

Repairing crew damage

Crew can be repaired by Jury Rig or up to twice by Frozen watch

Repair crew can only be repaired Jury Rig, performed by themselves

Repair Crew can repair themselves as regular damage, don't forget the damage DMs. Repair Crew can also repair Crew damage this way, or Crew can be 'repaired by' up to two Frozen watch revivals, for a total of three steps if two Frozen watch revivals and one Jury Rig is applied. Frozen watch revivals have no effect on Repair Crew.

Repair crew taking damage

Repair Crew in a location being hit also suffer damage but track the inflicted damage separately. Repair Crew remain in the last section they attempted a repair, or simply moved in the Repair phase. They remain there until the next Repair phase. When the section they are in are hit they typically receive the same damage as the section hit but cumulative damage is handled separately from the section. If Hull or Surface is hit damage depends on penetration as follows.

Crew, Core, Power or Thrust RC receive same damage as section.

Hull or Surface full pen RC receive same damage as section.

Hull or Surface partial pen RC receive one level more damage.

Hull or Surface no pen Roll damage to RC as if a full penetration occurred.

Radiation damage

Meson, particle and nuke damage cause radiation damage

Crew and RC receive one level extra damage from radiation when hit

Radiation damage occurs from Particle and Meson beams and from Nuke missiles. Crew and Repair Crew receive one level extra in that case. If the RC happens to be in the Crew section when hit by radiation damage the Crew section receive one level extra damage as does the RC.

REPAIRS 3+ 6+ 9+

Roll a task 3+ for Light, 6+ for Severe and 9+ for Critical. A VGood results mean the Repair crew can continue repairing other locations, these extra repair rolls are *not* counted as tasks

| Modifier | DM |
|--------------------------------|-----------|
| Repair crew dmg Light / Severe | -1 / -3 |
| Repair crew Critical damage | No repair |
| Number of Gs above Floorfield | -1/G* |
| Undermanning | -DM |
| Preparation | +DM |

**Hull and Surface hits ignore Floorfield, Core is unaffected by Floorfield unless it also covers cargo and craft, all other locations reduce Gs thrust by the Floorfield strength.*

**No turns or rolls treat Gs as one less*

Powering up

| Ship size | Volume | Power up task |
|-----------|----------------------|---------------|
| 8- | < 5000 m3(1 K dTon) | 3+ |
| 9-10 | 5000 m3(1 K dTon) | 6+ |
| 11+ | 50 000 m3(10 K dTon) | 9+ |

| Modifier | DM |
|--------------------------------|-----------|
| Repair crew Light / Severe dmg | -1 / -3 |
| Repair crew Critical damage | No repair |
| Power Light / Severe dmg | -1 / -3 |

Result

VGood Power is on next turn, RC can continue repairing other locations.

Good Power is on next turn

Fair* Exactly as Severe power damage next turn only, if already Severely damaged treat as Critical damage next turn

Miss No power

Bad No power

VBad No power

**Fission & Fusion thrust unaffected*

| RC JR | 1 & 2 Hull | CD | L S C D | ARM +19 | DAB +23 |
|---|--------------|--------------------------|---|---------|---------|
| <input type="checkbox"/> <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |
| RC JR | Surface | | L S C D | ARM | |
| <input type="checkbox"/> <input type="checkbox"/> | Top/Front | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | +13/+19 | |
| <input type="checkbox"/> <input type="checkbox"/> | Bottom/Aft | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |
| <input type="checkbox"/> <input type="checkbox"/> | Left | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |
| <input type="checkbox"/> <input type="checkbox"/> | Right | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |
| <input type="checkbox"/> <input type="checkbox"/> | 3 Crew | <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | +19 | |
| <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | Frozen watch | | | | |
| <input type="checkbox"/> <input type="checkbox"/> | 4 Core | <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | +19 | |
| <input type="checkbox"/> <input type="checkbox"/> | 5 Power | <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | +19 | |
| <input type="checkbox"/> <input type="checkbox"/> | 6 Thrust | <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | +16 | |
| <input type="checkbox"/> <input type="checkbox"/> | Repair crew | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | |

**Missiles and sandcasters unaffected*

DataCard damage & repairs

A hit may damage up to three Surface locations aside from the Interior location, each get the same damage result but must be repaired individually.

Note where your Repair Crew is by checking the RC box of their current location. If that location takes damage next turn, so does the RC.

The JR boxes denote locations that have been repaired ie Jury Rugged, treat the damage as one level less. A Scratch or worse damage to a JR location removes the JR.

The CD boxes denote Continuing Damage,

Planets

Planets in Intercept affect combat in many ways. Their gravitational fields affects movement and let you orbit them while drifting. Planets also affect line of sight for most sensors and give long planetary shadows to hide in. Ships can take off and land on planets, if they have an atmosphere it can be used for aerobraking and finally, you can always crash into them.

Planets are either **Small planets** of less than 10 000 km diameter, a single square on the map, or **Large planets** of 10 000 km or more in diameter which are represented by a 3x3 cross. Examples of Small planets are Mars, Mercurius and Luna, Large planets are Earth and Venus. In the optional 100 000 km square 1 hour turn are used our Small planets are Uranus and Neptune and Large planets are Saturn and Jupiter, regular planets become large and small asteroids.

Gravity well

The area near a planet is called its gravity well and will affect movement by ships, missiles and asteroids, inhibit Scans by Mass sensors and incidentally also happens to denote the range limit for the planet line of sight, see the rules governing that for details. Small planets have a gravity well in the box of the planet only, large planets have their gravity well in the central box as well as the adjacent boxes. In reality gravity have no maximum range but outside of the gravity well the gravity is too weak to have an effect for the purposes of this game.

Gravity

Gravity from the present position affect the future drift

Small planet gravity covers the central box

Large planet gravity covers the central and adjacent boxes

Ships with present on the planet don't adjust their Drift from gravity

Mass sensors cannot Scan from or to a gravity well

The rules for gravity is a much simplified version of Newtonian gravity. Determine Drift pos as usual by repeating the ships last move and noting the square with an x, then check in what arc the ships *current* position is in and move the drift pos according to the arrow. This is the ships new drift position.

A ship staying in the post-gravity Drift square is considered *drifting*, in all other locations it is considered *thrusting*. A drifting ship is easier to hit than a thrusting ship, thrusting may also cause repair crew on the hull to fall off.

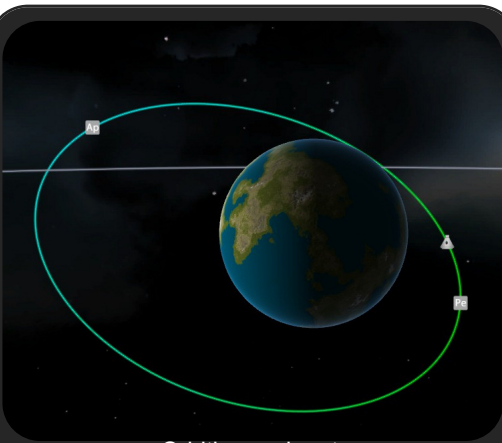
There are several different stable orbits possible for a drifting ship inside a planets gravity well; experiment to learn how the system works, it is easier than it looks. Don't worry if the ships vector crosses the planet, this is simply considered to be passing over or under the planet. Stable orbits that crosses the planet are possible and are called polar orbits. If a ship *ends on* the planet it either lands or crashes the next turn, if it *ends adjacent* to a planet with atmosphere it may choose to aerobrake the next turn.

Floater

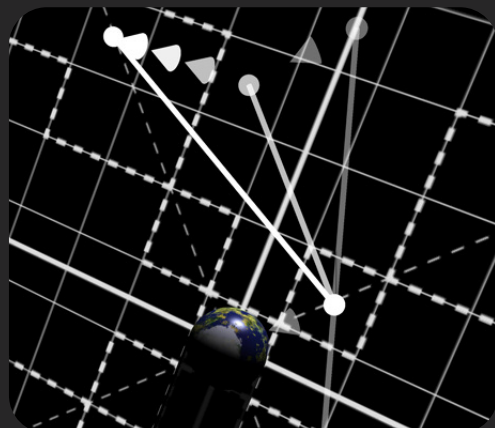
Floater is applied during Turn and thrust and may only negate gravity
Write F next to a ship that used Floater on the plotting map.

Ships with a 1G+ Floater or Impulse drive equipped ships that are willing to spare 0.5G of Thrust may elect to negate gravity during the Drift phase. This 'thrust' can be done regardless of ship facing and, is considered thrusting.

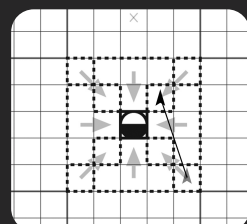
The 0.5G Impulse thrust rule comes from the assumption that all Impulse drives have a built in Floater mode that uses less 'thrust' and less power than running its regular Impulse mode. Impulse drives have just as high Mass(Thrust) Signature when used exclusively for floating.



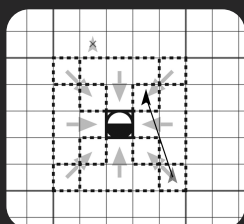
Orbiting a planet



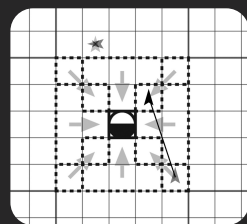
A ship uses gravity to swing past a planet



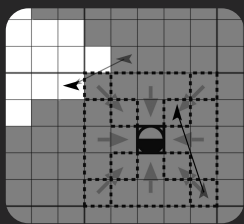
Drift before gravity



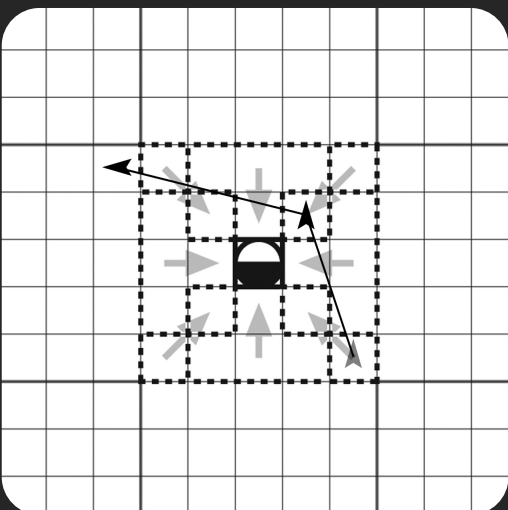
Drift after Gravity



Turning



Thrusting



Completed movement

Planet orbits

Ships can attain stable orbits around planets circling them forever without thrusting. There are many different orbits, especially for large planets with their huge gravity field. Trying a few out is a good way to learn the gravity rules. Note that there are more stable orbits than those shown in the figure at right, see if you can find some on your own.

Hitting planets

Ships ending their movement on a planet itself will hit it the next turn

Crossing the planet without ending on it will not hit the planet

Ships (and missiles) only hit a planet if they start their turn on one of the planet squares (meaning they ended on it in the previous turn). Reducing velocity to zero by aerobraking or thrusting should make a safe landing. Squares that are part of a planet have thick border around them (the large planet looks more like a plus sign than a sphere if you look at its planet squares). If a vector crosses a planet square without ending on one it is assumed that it flew above or below the planet, look at the polar orbit rules below for details.

Polar orbit

As noted under hitting the planet, merely having your vector crossing the planet does not mean you hit it. As a matter of fact, there is even the possibility of perpetually crossing the planet back and forth, assisted by gravity. This is called polar orbit and if you cross the planet center with a speed of at least two (four for large planets unless diagonal) you will swing back and forth forever.

Be careful at the endings as the ship will stand still from one turn to the next as gravity slows your outward speed from one to zero.

Landed or docked signatures and scans

Large planets have the top and bottom square as mandatory sunside or darkside zones, top being mandatory sunside and bottom being mandatory darkside. Landing on these with the ship rolled the wrong way will give +6 on landing damage, yeah, landing upside down can ruin your whole day. Landing on small planets, the three middle squares on large planets, asteroids or docking and your roll status will determine what side you land or dock on. If a ship is unrolled it is landed or docked in the sunside, treated as being in the Sun column, a rolled ship is in the darkside and treated as being in the Shadow column.

Visual and IR Signatures of landed or docked ships are affected by the size of a larger docked ship or any planet or asteroid landed on as per the table at right. Visual and IR signatures are further modified by the atmosphere of the planet and whether landed on the sunside or darkside.

Scans from sunside are prohibited in any kind of atmosphere, scans from darkside suffer modifiers from atmosphere, twice as much for IR scans.

Radar Signatures of landed or docked ships are affected by the size of a larger docked ship or any planet or asteroid landed on as per the table at right.

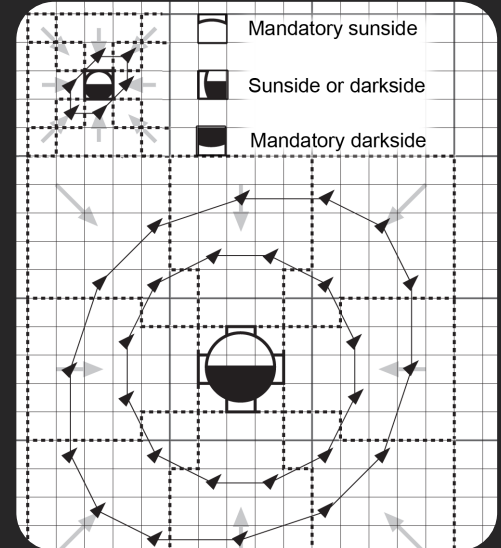
Scans are entirely unaffected of being docked or landed.

Neutrino Signatures are unaffected by being docked or landed.

Scans are unaffected but are always affected by Sunflare, it is as if the docked or landed object simply isn't there.

Mass Signatures are affected if you are docked to a larger ship or when landed on a small asteroid as per the table at right.

Scanning to or from large asteroids or any planet are prohibited, ignore all parts of a scan touching gravity and ignore the whole scan if from gravity.



Stable orbits and landing zones

Signatures landed or docked

All sensors except Neutrino modify signatures based on *what* we are landed or docked with. You cannot really land on a gasgiant so only use the Side and Atmosphere modifiers there

Landed or docked All except Neutrino

| | |
|---------------------------|----|
| Docked with a larger ship | -1 |
| Asteroid | -2 |
| Planet | -3 |

| Side | Visual | IR |
|----------------------|--------|--------|
| Sunside | +Sun | -Sun |
| Darkside | +0 | -Sun/2 |
| Atmosphere | Visual | IR |
| Trace | -1 | -2 |
| Very thin to thin | -2 | -4 |
| Standard+ & gasgiant | -3 | -6 |

Aerobrake Sigs

Aerobraking forces ships to Pop in so they'll lose any Tracked targets and missiles, Mass and Neutrino are unaffected.

Aerobrake Sigs

Visual(Hull)* = Size + Brake Gs

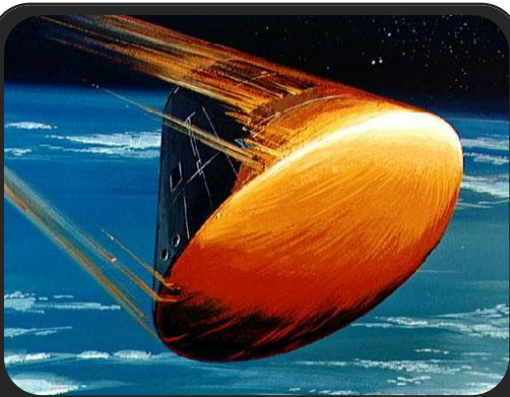
IR(Hull)* = Size + Brake Gs

*Ships taking off use the regular Signatures

Scans from inside atmosphere

Scans using Visual and IR from sunside are prohibited, from darkside they suffer these atmosphere modifiers.

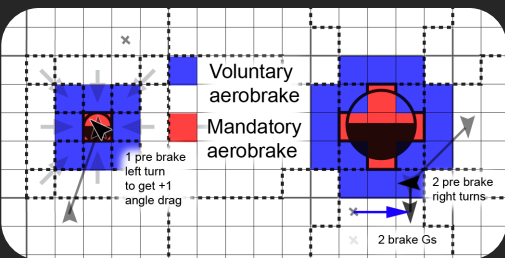
| Atmosphere | Visual | IR |
|------------------------|--------|----|
| Trace | -1 | -2 |
| Very thin to thin | -2 | -4 |
| Standard+ and gasgiant | -3 | -6 |
| Sunside | No | No |
| Darkside | OK | OK |



Max aerobrake Gs

Max number of squares a ship can change its vector by aerobrake depends on atmosphere thickness and wing area. Final speed can *never increase* from aerobanking. Mandatory aerobrades (those starting on a planet square) must reduce speed by at least **Atmos drag**, **Wing drag** however is always voluntary.

| Atmosphere | Atmos drag |
|------------------------|--------------|
| Vacuum | No aerobrake |
| Trace | 1 |
| Very thin to thin | 2 |
| Standard+ and gasgiant | 3 |
| Wings | Wing drag |
| 5% or more | +1 |
| 10% or more | +2 |
| 20% or more | +3 |
| Facing vs vector | Angle drag |
| 1+ facings off | +1 |



Example 1 - Small planet thin atmosphere. A thin atmosphere has an atmos drag of 2 but we have to kill 3 speed by aerobrake, any remainder will be handled by the ground! We decide to turn and face one step off from our vector to get +1 brake G from angle drag. Speed + brake Gs = 3 + 2 + 1 = 6 so we roll using the 4-6 column, you still roll landing damage even at speed 0, don't forget landing gear and port DMs.

Example 2 - Large planet with standard atmos. The atmosphere give 3 brake Gs, plus any from wings. We turn to face the drift to avoid lowering our streamlining. We then decide to aerobrake 2 Gs to the right, we then automatically adjust facing to face the new drift. After this we could do more turning at double cost or thrusting up to half rounded up. Roll damage using 3 + 2 = 5, 4-6 column.

Aerobrake (during Drift, reverse Initiative order)

Aerobanking is either using a planets atmosphere to reduce speed before landing, called *mandatory aerobanking*, or using a planets atmosphere to change direction and speed at will starting adjacent to the planet, called *voluntary aerobanking*, aerobrades may never increase speed. Make sure your ship face the same direction as your vector before the aerobrake or you will suffer considerably more damage, the facing will always end up along the new vector after the aerobrake. Ships with fission or fusion thrusters and fuelscoopes (those with airbreather noted) expend no fuel while aerobanking or taking off from a planet with atmosphere. The atmosphere itself work as remass for the rocket.

Voluntary aerobanking You must start *adjacent* to a planet with atmosphere with a a non-zero vector to voluntary aerobrake. Determine Max aerobrake Gs from the table at right, this is the maximum of how far you may move your Drift in any direction by aerobrake, you may however never increase speed through aerobanking. Roll aerobrake damage and change the facing of the ship to be done along its new vector. Any turning or thrusting after aerobrake must be done using the Turning after thrusting rules; turning after aerobrake cost double.

Mandatory aerobanking You must start *on* to a planet with atmosphere with a a non-zero vector to mandatory aerobrake. Determine Max aerobrake Gs from the table at right, this is how much the aerobrake will reduce your speed, any remaining speed will become Impact speed for crash damage so it might be better to angle your ship one off from your vector because reducing speed by aerobrake is always better than reducing speed by crashing into the ground! Roll aerobrake damage and change the facing of the ship to face along its old vector. Any turning or after aerobrake must be done using the Turning after thrusting rules; any turning cost double after the brake. Yes, if you somehow can turn around and retrothrust the last speed do it!

Max aerobrake Gs How much a ship can reduce speed or alter course by aerobanking depends on the atmosphere thickness, the amount of wings the hull has and you get an extra +1 if your ship isn't facing the direction it is travelling at a considerably higher risk of damage, consult the table at left.

Aerobrake and landing procedure

Follow these steps when performing an aerobrake, mandatory or voluntary:

Turn before aerobrake Turn to face the direction of your drift or suffer the consequences. One+ facings off give you +1 to Max aerobrake from angle drag but one or two+ facings off reduce your hull aerodynamics on or two steps severely increasing damage from aerobrades.

Aerobrake and adjust facing Move your drift up to Max aerobrake Gs in any direction as long as the new speed isn't higher than the old. Mandatory aerobrades simply reduce their speed by Max aerobrake. Turn your ship to face along your new vector, in the case of Mandatory aerobrades this is the same direction as your old vector.

Turning after aerobrake You may now turn your ship again if you like but each step now costs double, just as Turning after thrusting cost double.

Post aerobrake thrust You may finally thrust *half of your original thrust, rounding up* if you like. Yes, a ship may land with a speed remaining after aerobrake, turn around 180 degrees 2 x 4 = 8 steps to do so, and thrust brake the remaining speed, very hard but possible!

Aerobrake damage roll

Roll damage if modifiers are 0+ or higher, always use Hull column

Roll for Aerobrake damage if modifiers were 1+ from the table at left. If any speed remain after turning and thrusting and the aerobrake was mandatory you must roll damage again with crashlanding modifiers at left.

Dstr on the table destroys the entire ship, no ifs, no buts, no rolling needed.

If your Hull suffered Light+ damage from the aerobrake you must also roll to see if any other locations suffered the same damage as the Hull, see Damage roll at right.

Landing damage roll (after Combat, Initiative order)

Past position on planet is a landing/crash

If planet has atmosphere roll aerobrake damage first

Roll damage if modifiers are 0+ or higher, always use Hull column

Planet landings always brake remaining speed to zero

If you are on a planet and have nonzero speed during drift you must roll on the Crash damage table after movement but try to reduce speed before this if possible. Any leftover Speed after aerobrake and turning after thrusting will be the crashing Impact speed Speed on the table at right as long as DMs are 0+ you must still roll, using the Hull column.

If your Hull suffered Light+ damage from the landing you must also roll to see if any other locations suffered the same damage as the Hull, see Damage roll at right. After rolling Landing damage your ship is has zero velocity. If you can walk away from it the landing was OK.

Landing gear

Ships get damage modifiers from their landing gear as well as what type of port they land on, the better the starport the safer it is to land on. Landing gear modifiers range from 0 or -1 to -3, starports also have modifiers 0 or -1 to -3.

| | |
|---|----|
| No port, landing in the wild | -0 |
| Minimal port (E in Traveller) | -1 |
| Minor port (C and D in Traveller) | -2 |
| Major port (A and B ports in Traveller) | -3 |

Use both starport and landing gear modifiers when landing, landing gear and docking gear does not apply when landing upside down, obviously. See page 28 for docking and ramming.

Taking off (during Movement, reverse Initiative order)

Takeoff speed of 6- is safe for Airframe hulls

Takeoff speed of 3- is safe for Streamlined hulls

Takeoff is safe for any hull if the planet has no atmosphere

Past position must be on planet with zero vector

Use Speed + Atmos drag - 3 on aerobrake table

You must have zero velocity during Drift to takeoff of course, there's no touch-and-go here. After you have taken off roll for aerobrake damage based on the Speed + Atmos drag - 3. Note that there is no gravity on the takeoff as it is the past position that determines the gravity direction, past is still on the planet. Use the table at right for drag damage.

Gas giant skimming

Skimming fuel requires that your ship has Fuel scoops and fuel tankage (reaction mass, jumpfuel or special fuel tankage). A fuel purifier is optional but will reduce the risk of a misjump when applied to skimmed jumpfuel. Note the severe damage DMs for aerobraking using Large scale rules!

A ship will skim 10% of hull volume when stationary in a gasgiant atmosphere, you get another 10% per Speed + 10% per brake Gs, so skimming at speed 2 braking to zero net you 10+40%, and a 9+ damage roll if your ship has an Airframe.

Aerobrake

Speed is the speed before braking, Brake Gs are the number of aerobrake Gs used.

Dstr results destroy the ship without rolling

| Hull type* | Speed + Brake Gs | | | | |
|-------------|------------------|------|------|------|------|
| | 1-3 | 4-6 | 7-8 | 9 | 10+ |
| Open frame | +9 | Dstr | Dstr | Dstr | Dstr |
| Normal | +3 | +9 | Dstr | Dstr | Dstr |
| Streamlined | Safe | +3 | +9 | Dstr | Dstr |
| Airframe | Safe | Safe | +3 | +9 | Dstr |

Aerobraking/Landing use Speed + Brake Gs

Taking off use Speed + Atmos drag - 3

**1 facing off treat airframe as 1 row up*

** 2+ facings off treat airframe as 2 rows up*

All ships face in the direction of their new vector after aerobrake

Landing

Impact speed is the final speed after aerobraking and thrusting.

| Hull | Impact speed | | | | | |
|---------|--------------|----|-----|-----|-----|-----|
| | 0* | 1 | 2 | 3 | 4 | 5+ |
| Landing | +3 | +9 | +15 | +21 | +27 | +33 |

**Treat Impact speed 0 as 0.5 for FrameGs*

Damage roll

-Landing gear modifiers for landing dmg only

+1 if aerobrake Gs higher than FrameG

+1 per full aerobrake Gs above FrameG

Roll damage on Hull column if modifiers are 0+ if you suffered Light+ Hull damage you must also roll for all the other locations to see if they too suffer the same degree of damage.

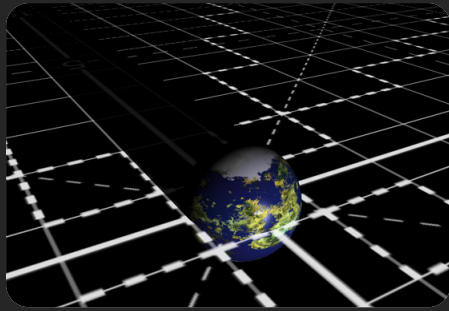
Roll 1D6 each for **Front/Top, Bottom, Left, Right, Crew, Core, Power and Thrust.**

Light suffer same degree on 6+

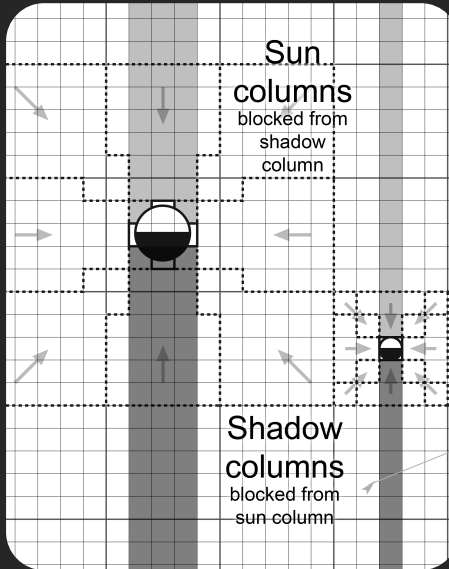
Severe suffer same degree on 4+

Critical suffer same degree on 2+

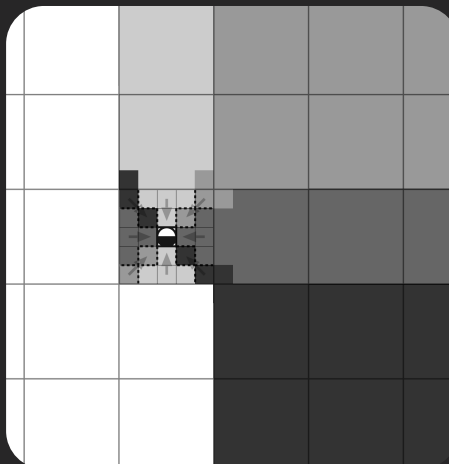
Destroyed destroys the ship, no need to roll



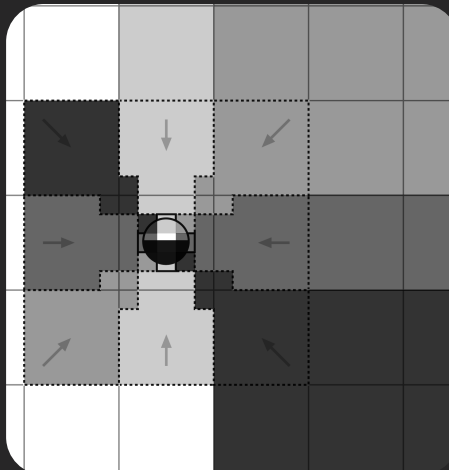
Shadow column and Sun column



Sun and shadow columns



Small planet Near and Far sectors



Large planet Near and Far sectors

Planet Line Of Sight (LOS)

Planets block line of sight, it's quite obvious; just look down at the ground at night and notice that you cannot see any stars.

Ships far from a planet cannot see targets on the opposite side of the planet if they are near the planet. Ships near a planet cannot see targets on the opposite side of the planet, regardless of how far they are. Ships in the shadow column cannot see ships in the sun column and vice versa. This last rule is there to stop ships from dodging the sun glare rule by scanning from the shadow column directly at the sun, you cannot both be in shadow and see the sun, right?

Sun and shadow columns and Planet LOS sectors

Sun and Shadow columns The column below a planet, 1 square wide for Small planets, 3 squares wide for Large planets is called the Shadow column and its opposite towards the sun is called the Sun column. Ships and missiles in planetary shadow reduce their Vis(Hull) signature by Sun (which is normally 6), no other signatures are affected by planetary shadow.

Planets also have something called near and far planet LOS sectors. The near sectors are simply one of the 8 sectors of the gravity well of a planet. The far sectors extend forever, orthogonal one are simply the horizontal or vertical boxes extending. The diagonal far sectors are simply one of the four quadrant minus the orthogonal rows and columns.

Look at the examples at left for Sun columns, Shadow columns as well as near and far sectors.

Procedure

Being 'near' a planet is in Intercept the same as being inside its gravity well, in one of its near sectors. Being 'far' from a planet is in Intercept the same as being inside one of its far sectors. Orthogonal sectors are simply the row or column of boxes extending from the arc, diagonal far sectors are simply the quadrant boxes excluding the row or column boxes. See the pictures at left.

So, how does this work in practice? The scanner has placed a Scan somewhere and it's up to you, the target, to make sure it is a legit Scan. This is done by asking the scanner a few simple questions and act upon the answers.

Does the Scan touch your ships Sunglare?

If yes subtract -6 (Sun) from the Scan strength.

This question must always be asked.

Does the Scan touch a blocked sun or shadow column?

If yes what column is blocked? Only ask this if the Scan actually touches a sun or shadow column.

Does the planet block parts of your Scan?

If yes what near or far arc is blocked? Only ask if there are planets on the map. If the scanner is in a near sector both the opposite near and far sectors are blocked, if the scanner is in the far sector only the opposite near sector is blocked. See figures at left.

In short, sun column block shadow column and vice versa, near sector blocks opposite near and far sectors, far sector blocks opposite near sector. Planet LOS is always symmetric, if you can't see them they can't see you. Note that a single Scan may have to take several planets into account.

Special sensors

The above rules on Sunglare, Sun column, Shadow column and the near and far planet LOS sectors all apply to the Visual and IR Scans, other sensors have certain restrictions.

Radar Ignores the Sunglare rules, all other planet LOS rules apply.

Neutrino Ignore all planet LOS rules and Sunglare apply even when in the Shadow column.

Mass Ignore all planet LOS rules as well as the Sunglare rules. Mass Scans are illegal to or from gravity wells. If the Scan was from a gravity well the entire Scan is ignored, if it touches a gravity well only the parts touching the gravity well are ignored.

Planetary LOS examples

The scanner simply places his Scan somewhere calculates its strength based on Sensor + Scan modifiers. The target of the Scan then ask a series of questions which may lower the Scan or make certain parts of it ignored. Scans are done in reverse Initiative order.

Scan 1

A has his ship located in 1 and decides to do a 1 box Scan in box B4. His Sensor is +2 and the scan modifier for a 1 box scan is -1.

Player A "I have a visual scan, strength +1, one box large, in box B4."

Player B "Does your Scan touch your ships Sunglare column?"

Player A "Yes, my Scan touches my sunglare, dammit!"

Player B "Is your scan from or does it touch a gravity well?"

Player A "No, it's not from gravity and you can see it doesn't touch it"

There could have been up to three more questions but none of them apply.

The scanner grudgingly admits that the Scan does touch his Sunglare column so the target reduce his Scan strength by -6 to an abysmal -5. If the target had ships or missiles inside the entire Scan he would have added -5 to their Visual(Hull) and Visual(Thrust) signatures and if the sum came up 0+ he would have said something was there, 3+ and he'd give the position a nd Signature, a sensor task roll would tell what Signal needed for Tracking (12+ always give you Tracking). The target player now also knows that the scanner's ship is somewhere below the box.

I have colored the entire Scan 1 orange because of the Sunglare strength reduction, the Scan is still valid but very weak. Don't stare into the sun.

Scan 2

Player A has moved his ship into position 2 and decide to do a huge 3x3 box scan centered around E1. The scan modifier for a 3x3 scan is -3 so his Scan strength is -1.

Player A "I have a Visual Scan strength -1 three by three boxes in box E1."

Player B "Does your Scan touch your ships Sunglare column?"

Player A "No it doesn't. I have learned my lesson"

Player B "Is your scan from or does it touch a gravity well?"

Player A "Eh, yes it is"

Player B "OK does the planet block any of your scan, what sectors if so?"

Player A "The northeast near and far sector"

Player B "Your scan touches the sun column, are you in the shadow column?"

Player A "No"

The northeast near and far sector is colored gray in the pictures. If player B had any ships or missiles inside the parts of the scan inside northeast near and far those targets would have been ignored. The near is simply the gravity sector and far extends from that forever. The Scan touches the Sun column but as player A wasn't scanning from the Shadow column this had no effect.

I have colored the parts of the scan that should be ignored in red.

Scan 3

Player A has drifted into position 3 with the help of gravity. He decides to do a 3x3 box Scan in E4. He figures the Shadow column will protects him from Sunglare. The Scan strength is -1.

Player A "Visual Scan strength -1 three by three boxes in E4."

Player B "Does your Scan touch your ships Sunglare column?"

Player A "No"

Player B "Is your scan from or does it touch a gravity well?"

Player A "Not from within, but it touches"

Player B "OK does the planet block any of your scan, what near sector if so?"

Player A "Near north"

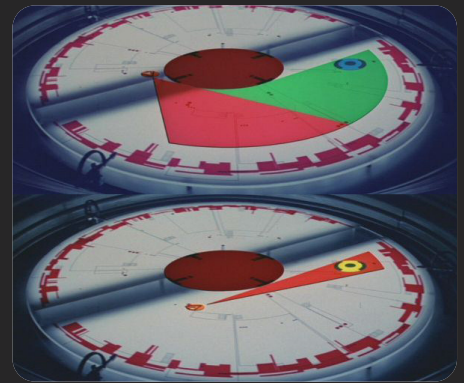
Player B "Your scan also touches both sun and shadow column"

Player A "Yes, I am in the shadow column"

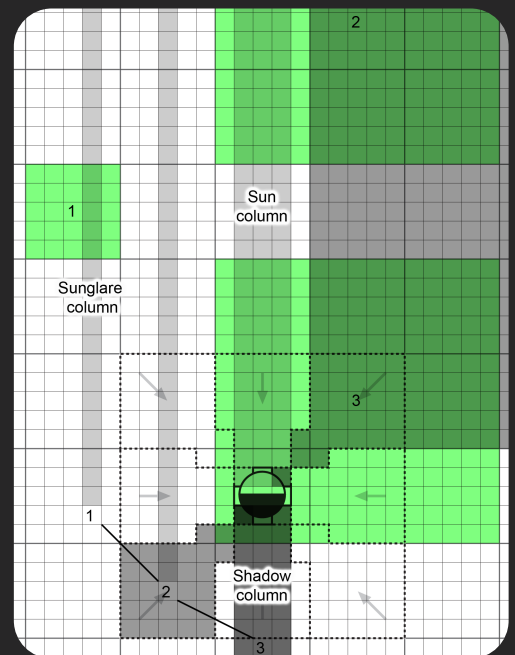
Player B "OK, so the sun column is blocked then"

The Sun column as well as the near north sector will be ignored but most of the Scan is still valid as you can see. Had his scanning ship been 3 squares to the right none of the Scan would be blocked but he would suffer Sunglare.

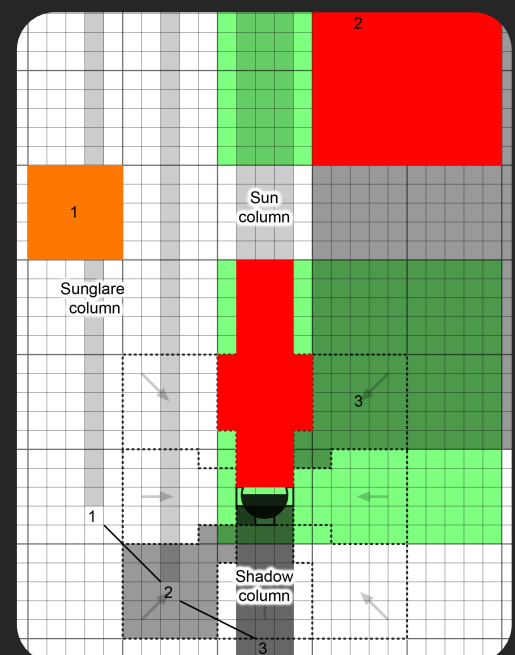
I have colored the Sun column and north near sector of the Scan in red.



Star Wars planet LOS



Planet LOS Scan examples



Planet LOS result
Orange suffer Sunglare
Red is ignored

Asteroids are too small to hit when entering their square just as ships, they move and are landed on as planets but landing is completely voluntary. Asteroids are 1 km or larger, smaller than that and they are simply rocks, design as unpowered ships with just a hull.

| Feature | Small | Large |
|---------------|----------|-------------|
| Size | <100 km | <1000 km |
| Sun column | Infinite | Infinite |
| Shadow column | 1 square | 5 squares |
| Gravity | No | Same square |
| Mass Scans | Yes | No |

Signatures

| Landed | All except Neutrino |
|----------|---------------------|
| Asteroid | -2 |

| Landed side | Visual | IR |
|-------------|--------|--------|
| Sunside | +Sun | -Sun |
| Darkside | +0 | -Sun/2 |

Questions to Scanner

After a Scan is declared the target should ask the scanner a bunch of questions.

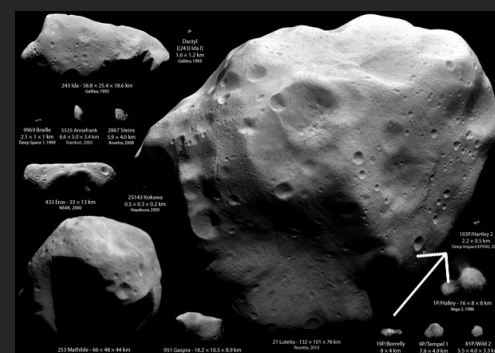
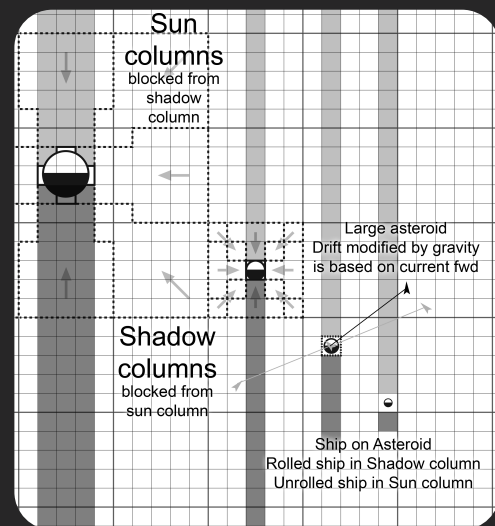
Does the Scan touch your ships Sunglare

If yes subtract -6 (Sun) from the Scan strength

Does the Scan touch a sun or shadow colum

Are you in the opposite column of any of the touched? If yes ignore any targets in that column.

Note that asteroid sun and shadow columns are finite in length, 1 for small and 5 for large asteroids.



Asteroids

Asteroids are smaller than 1000 km and at least 1 km in diameter, any rocks smaller than that should be designed using the design system with just a hull, landing on them uses docking rules. **Large asteroids**, over 100 km in diameter have an infinite Sun column, 5 squares Shadow column and a small gravity field in the square they reside. **Small asteroids**, less than 100 km in diameter also have an infinite Sun column but their Shadow column is only 1 square long, their gravity is too weak to have any effect in this game.

Asteroids move like drifting ships and can be affected by a planets gravity just as ships do.

Asteroid movement and gravity

You cannot accidentally crash into asteroids, small or large, asteroids cannot crash into other asteroids either. Asteroids *can* crash into planets but as players cannot alter the vectors of asteroids their course was predetermined from the start of the scenario.

Asteroids move as drifting ships, calculate Drift just as normal and ships landed on them follow along. They are also affected by gravity in the same way as ships do, to model Phobos or Deimos of Mars, just have two small asteroids in orbit around a Small planet.

Large asteroids have a small gravity field affecting your Drift when your present is on the asteroid itself, gravity will push in the nose direction. Moving ass first onto a Large asteroid will let you land entirely without thrusting as gravity will negate the speed, (landed ships are never affected by gravity except being forbidden to Mass Scan). A ship is unpiloted if it has a Hull damage of Critical+, a Crew damage of Critical+ or a Thrust damage of Critical+.

Landing on asteroids work the same as for small planets; chose whether landing in the Darkside or Sunside by being rolled or not, see the Landed or Docked signatures and Scans on page 21.

Asteroid LOS

Unrolled ships in an asteroid square are in the Sun column

Rolled ships in an asteroid square are in the Shadow column

Asteroid LOS procedure is simpler than for planets.

Does the Scan touch your ships Sunglare

If yes subtract -6 (Sun) from the Scan strength.

Does the Scan touch a sun or shadow colum

Are you in the opposite column of any of the touched? If yes ignore any targets in that column. Note that the sun and shadow columns of asteroids have finite lengths, 1 for small asteroids and 5 for large.

Special sensors

The above rules on Sunglare, Sun column, Shadow column all apply to the Visual and IR Scans, other sensors have certain restrictions.

Radar Ignores the Sun glare rules, all other above rules apply.

Neutrino Ignores all asteroid LOS rules except Sunglare.

Mass Ignore all asteroid LOS rules as well as the Sun glare rules. Mass Scans are illegal to or from Large asteroids. Yes, ask if a Mass Scan was to or from a Large asteroid, Small asteroids don't affect Mass Scans at all.

OPTIONAL-RULES

Below follows a mixed bag of optional rules that can be mixed any way you like. There are no guarantee that any combination of these rules retain balance, fun or sanity - you have been warned.

Nuclear missiles (optional)

Nuclear missiles changes the game considerably as they are so deadly. Make sure you have built your ships with lots of lasers or nuclear dampers so those ship killing nukes won't get through. Nuke missiles can be proximity or impact detonated just as regular missiles, PEN and DAM are unaffected by impact velocity, they give extra damage to Crew and Repair crew and they give secondary blast effects that affect nearby ships.

Missile nuke option

Nukes option adds +12 on PEN & DAM, unaffected by relative velocity

Large nuke missile TL 6+

Medium nuke missile TL 7+

Small nuke missile TL 8+

Nuke option reduce thrust with -2G and have a price multiplier of x10. PEN & DAM +12 when directly impacting a target but they can also be proximity detonated for +3 DM to hit and PEN & DAM -6, proximity detonation is not a design option but a choice the missile operator can do when attacking.

Nuke attacks and defense

Attacker decide if the attack will be Proximity detonated or not

Defender defends with one battery of lasers and one battery of dampers

Missile attacks from aft centerline are at -3 DM

Nuke attacks work the same as for normal missiles but the target may defend using one laser battery and one nuclear damper battery. Ships with a functional Neutrino detector will know if a missile is a nuke or not, all others must guess. Firing a nuclear damper on non-nuke missiles has no effect, of course.

Proximity detonation

The nuke missile operator may elect to detonate the nuke some way off the target for a +3 DM and PEN & DAM -6. Damage from proximity detonations *must* use the Spray fire rules were the degrees of success give more hits rather than more damage, table at right.

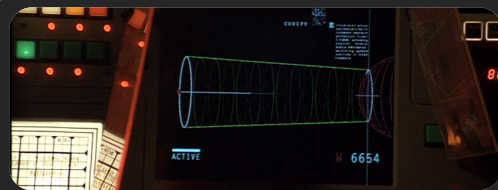
Nukes radiation damage

Scratch+ hits on Crew or Repair crew are 1 lvl worse

All hits from nuclear missiles (as well as hits from Meson and Particle beams) inflict one level more damage to Crew location and Repair crew, as long as the original hit was Scratch or worse.

Nuke secondary effects

The X-Ray, neutrino and gravity burst from the detonation interfere with the sensors of the hit ship and any nearby ships. All launched missiles are lost and all tracked ships regardless of sensor type. Max range for this effect depend on the size of the missile in the table at right.



Nuke missiles from the Fifth Element

Nuclear missile option

Adding the nuke option to a missile make them much more expensive but also much deadlier. All hits on Crew or Repair Crew are considered 1 Lvl higher from radiation as long as the hit was at least a Scratch.

(-2G, PEN & DAM +12, Price x10)

Proximity detonation

Nuclear missiles (just as normal non-nukes) may be Proximity detonated. This gives the attack a +3 DM but PEN & DAM -6. Hits and damage should use the Spray fire rules which give more hits instead of larger damage rolls.

| Hit result | Sprayfire |
|------------|-------------------------------|
| Very Good | 3 Fair: 1 picked, 2 adjacent* |
| Good | 2 Fair: 1 random, 1 below* |
| Fair | 1 Fair: 1 random |

*Locations outside 1-6 miss

Nuke secondary effects

Nuke detonations affect the hit ship and any nearby ships sensors depending on how large the missile is, this effect affect friend and foe alike. Tracks are lost regardless of sensor type and all launched missiles are lost.

| | |
|----------------|-----------|
| Small missile | 1 square |
| Medium missile | 3 squares |
| Large missile | 5 squares |

Large scale

Gravity

Large gas giants behave like Large planets
Small gas giants behave like Small planets
Planets behave like asteroids in this scale.

Scan modifier table

The size of your search area affects your scan according to the table below.

| Vis, IR, Neutrino | | | Max range |
|-------------------|------|-------|-----------|
| Radius | Mass | Radar | |
| Pinpoint 1x1 | -1 | -4 | 1 box |
| Pinpoint 2x2 | -2 | -6 | 2 boxes |
| Pinpoint 3x3 | -3 | -8 | 3 boxes |
| Box 1x1 | -4 | -10 | 5 boxes |
| Box 2x2 | -5 | -12 | 5 boxes |
| Box 3x3 | -6 | -14 | 15 boxes |
| Box 5x5 | -8 | -18 | 25 boxes |

Beam to hit table

| Range | To hit | Determ. |
|-------|--------|---------|
| 0* | 13+ | -5 |
| 1 | 15+ | -8 |
| 2-3 | 18+ | -11 |
| 4-10 | 21+ | -14 |
| 11-30 | 24+ | -17 |

*Req same vector, se the Same square attack arc rules

| Impact vector | DM | PEN* | DAM* |
|-------------------|----|------|------|
| Impact vector 0 | +4 | -12 | -12 |
| Impact vector 1 | - | - | - |
| Impact vector 2-4 | -2 | +6 | +6 |
| Impact vector 5+ | -4 | +12 | +12 |

*Missile only, nukes ignore PEN & DAM mods

Repairs and Power up

Repairs, Powering up and the optional Repair Crew mobility are all affected by scale.

| | |
|-----------------------|-------|
| Situation | DM |
| Repair attempt | +3 |
| Powering up | +3 |
| Locomotion (optional) | +1 MP |

Aerobrake

| Atmosphere | | Aerobrake | | | |
|------------------|------|---------------|------|------|------|
| Atmos drag | | x1/2 round up | | | |
| Wing drag | | x1/2 round up | | | |
| Speed + Brake Gs | | | | | |
| Hull type* | 1 | 2 | 3 | 4 | 5+ |
| Open frame | +9 | Dstr | Dstr | Dstr | Dstr |
| Normal | +3 | +9 | Dstr | Dstr | Dstr |
| Streamlined | Safe | +3 | +9 | Dstr | Dstr |
| Airframe | Safe | Safe | +3 | +9 | Dstr |

Aerobraking/Landing use Speed + Brake Gs

Taking off use min of Speed & Atmos drag

*1 facing off treat airframe as 1 row up

*2+ facings off treat airframe as 2 rows up

All ships face in the direction of their new vector after aerobrake

Large scale (optional)

Intercept's default scale uses 15 minute turns and one square equals 10 000 km but for large ships this may not be appropriate. The following text will add two new scales and rules on how use them and switch between them mid-game.

Normal scale uses 15 minute turns and 10 000 km squares.

Large scale uses 1 hour turns and 100 000 km squares.

1 G of acceleration is always represented by 1 square per turn at all scales.

Large scale

100 000 km squares, 60 min turns

Use this scale for capital warships and situations where gas giants need to be on the map. In Traveller this is also the scale that covers the entire trip from planet and out to '100 diameter' safe jump distance.

Movement

Pilot tasks are rolled with Size-3

Power up tasks are rolled with Size-3

Ships with limited thrust fuel lose four G-turn for every G-turn in Large scale so these inefficient drives require careful planning and lots of drifting in Large scale.

Sensors

Vis, IR, Neutrino, Mass -4, radar -8 , already built into the tables at left.

Combat

The range is x10 but weapons fire x4 more shots.

Ranged combat uses the table at the left.

Missile combat uses impact vectors from the table at left.

15min endurance Cannot be used at this scale.

30min endurance Divide thrust by 2.

60min endurance Use as normal 1 turn missiles.

Repairs

Use the repair rolls from the table at left.

Nuclear secondary effects

Nuke detonations affect nearby ships sensors depending on how large the missile is, this effect affect fiend or foe alike. All tracks are lost as are all launched missiles.

| | |
|----------------|-------------|
| Small missile | Same square |
| Medium missile | Same square |
| Large missile | 1 square |

Switching scales

Normal -> Large

Determine for each ship and missile volley what their current position in the new scale is; -5 to 5 is 0, 6-15 is 1, -6 - -15 is -2 and so forth. Keep the same facing. Now measure the vector from current to past for each and divide by 3; this is the ships vector in the new scale.

Large -> Normal

Determine for each ship and missile volley what their current position in the new scale is; 0 is 0, 1 is 10, 2 is 20, -1 is -10 and so forth. Keep the same facing. Now measure the vector from current to past for each and multiply by 3; this is the ships vector in the new scale.

G-Loc & Fatigue (optional)

Acceleration induced loss of consciousness or G-Loc occurs when the acceleration stress become too much to handle, pushed further one can take damage or even die from the acceleration.

These rules are great fun and sort of assumed to be used by the Intercept design system. Note that G-Load for Repair Crew is the same as the DM from acceleration under the repair rules.

G-Load

At the end of each ships's movement phase calculate the G-Load and if 1+ roll for G-Loc and damage, calculate and roll separately for Crew and Repair Crew. Sum up all Gs the ship is subjected to, basically the number of squares from the Drift after gravity position. Subtract 1 if the ship neither turned nor rolled, it is far easier to take a linear acceleration than the bucking-bronco variety. G-Load is then reduced by crew stations and floorfield if applicable. We need to do separate calculations for Crew and Repair Crew as the Repair Crew don't have stations and sometimes don't even have a floorfield to protect them (when doing repairs on the outside).

G-Loc & damage roll

Roll for G-Loc and damage if G-Load is 1+

Roll separately for Crew and Repair Crew

Treat thrust as 1 G less if the ship neither turned nor rolled

If the modified G-Load is 1+ for Crew or Repair Crew roll 1D6 + G-Load on the table at right. A result of 3+ results in G-Loc, higher results also result in damage or even death.

Crew suffering G-Loc cannot perform Scans, attacks, defense or control missiles. All launched missiles are lost as are all Tracks. Repair Crew cannot move from their current location, perform repairs or power up powerplants. Note that Repair Crew on Hull or Surface suffer one level worse damage if the result was 7+, from falling off the hull under thrust.

Fatigue

Action duration beyond Action endurance give -1 DM on all tasks

Action duration beyond x3 Action endurance give -3 DM

Mission duration beyond Mission endurance give -1 DM on all tasks

Mission duration beyond x3 Mission endurance give -3 DM

Action starts when a side is attacked, takes damage or roll G-Loc

Long missions in cramped living quarters or drawn out space battles may cause fatigue, when Crew or Repair Crew are fatigued they suffer negative DMs on all their task rolls.

Mission endurance Life support and Living space limit the total mission time before the Crew or RC become fatigued. Limited life support cap the mission time to 24 hours and Living space per crewmember give the maximum mission time before fatigue sets in, consult the Crew rules in the Design system part for details. The living space mission endurance is automatically calculated by Ship.xls.

Action endurance Space combat action is much more tiring than normal mission time and is counted for when the action starts ie when you are attacked, take damage or roll for G-Loc. Action endurance depends on what work stations your ship has. Repair Crew, being built from extra sturdy stuff, have the same action endurance as Crew despite having no work stations themselves. Use the table at right for action endurance.



G-Load

G-Load is the acceleration felt by the crew minus the compensators in effect.

**G-load = number of squares from Drift
-1 if neither turning nor rolling
Crew**

-2 for Limited, Full or Bridge station

-5 for Limited tank station

-Number of Floorfield Gs

Repair Crew

-Number of Floorfield Gs if indoor*

**Crew, Power and Thrust are indoor. Core benefit from floorfield only if the Floorfield cover both Crew and Cargo. Hull and Surface areas never benefit from floorfield.*

G-Loc

Roll on the table below if G-Loc is 1+

| 1D6 + G-Loc | Damage |
|-------------|---------------------|
| 15+ | Destroyed & G-Loc** |
| 12-14 | Critical & G-Loc** |
| 9-11 | Severe & G-Loc** |
| 6-8 | Light & G-Loc** |
| 3-5 | G-Loc** |
| 2- | No effect |

**Roll highest of 2 D6 if Fatigued.*

**Bracing roll lowest of 2 D6, 1D6 if Fatigued*

***Repair Crew on Hull or Surface suffer one level damage from falling off the ship*

Fatigue

Use the worst Endurance applicable, work stations measure time from when action started, life support and living space from mission start.

| Station | Action endurance |
|-----------------|----------------------------|
| Limited station | 4h |
| Limited tank | 4h |
| Full station | 8h |
| Bridge station | 12h |
| Repair Crew | Use Crew station endurance |

| Result | Task DM* |
|--------------------------------------|----------|
| Action time > Action endurance | -1 |
| Action time > 3 x Action endurance | -3 |
| Mission time > Mission endurance | -1 |
| Mission time > 3 x Mission endurance | -3 |

**Pilot, Sensor, Gunnery, Repair tasks*

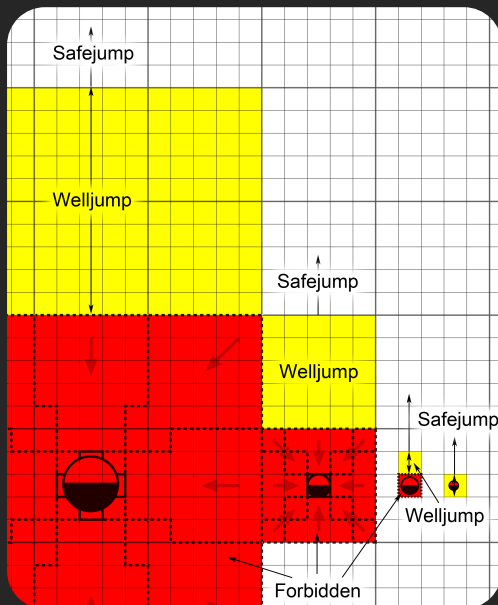
Jump distances

Forbidden, welljump and safejump ranges differ depending on the object size.

Large scale treat planets as asteroids and gasgiants as planets, this table work for that too.

| Object | Forbidden | Well | Safe |
|----------------|--------------|----------|---------|
| Ship | Docked | - | Same sq |
| Small asteroid | Landed | Same sq | 1+ sq |
| Large asteroid | Same sq. | 1 sq | 2+ sq |
| Small planet | Gravity well | 1 box* | 2+ box* |
| Large planet | Gravity well | 1-2 box* | 3+ box* |

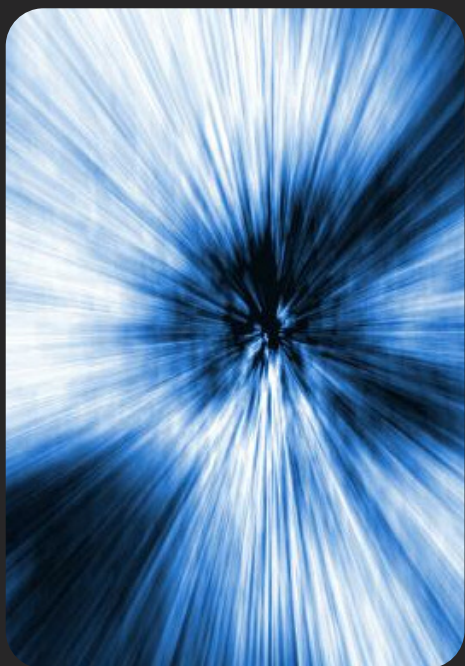
*Boxes from the end of the gravity well.



Jump prep time

Ships need power when expanding the jump-fuel to enter hyperspace, how much depends on the jumpdrive and jump length, 30 minutes to 2 hours, half this numbers if jumping half or less of your jumpdrives rating.

| | |
|-------------------|---------|
| Underpower Thrust | 2 turns |
| Underpower Drift | All |
| Jump prep 2 hours | All |



Hyperspace (optional)

Jump ranges

In the official Traveller rules ships must travel 100 planetary diameters out to jump safely, closer in is more dangerous but the absolute minimum distance is 10 diameters. Space must be flat enough for jump drives to work apparently. For Earth 100 diameters is about a million km, three times the distance to the moon. This is awfully far, way too far to fit on an Intercept map.

In Intercept I've shrunk this down to a tenth, safe, well jump and prohibited ranges are listed on the table at left. Feel free to use the original Traveller distances instead if you prefer. You'll lose the ability to easily play out situations like blasting your way out of Mos Eisley or stalking merchants traveling from jump exit to landing but the rest of these hyperspace rules will still work regardless of what ranges you prefer.

My Intercept version of hyperspace rules also disallow any jumps to or from deep empty space, all jumps are from and to an asteroid, planet or gasgiant, a significant mass, even misjumps always end at something, not where you wanted to go but always at something. This means that there are no misjumps to empty space hexes, things that happened occasionally by the official Traveller rules and would often kill the entire crew, forcing the referee to handwave some miraculous lucky encounter every time it occurred. In Intercept you'll end up near an asteroid, planet or gasgiant every time you jump. Luckily there are huge numbers of free floating planets and asteroids, more than there are around stars according to modern astrophysics.

Jump prep, power and fuel

Ships cannot thrust during jump prep, must be popped in on jump turn

Ships may never be inside a gravity well during jump prep

Jump prep takes 30 minutes to 2 hours, 1/2 if range is 1/2 or less

Jump fuel needed is 10% per Jn or 5% if a J0, smaller ship use more

Before jumping the ship must inject fuel into its jump bubble, a layer of ionized hydrogen surrounding the ship, thicker the further you jump, all sensors and weapons and must be inside the bubble when you jump so the ship must be popped in during the actual jump turn, and yes, that means you will be blind during the entire actual jump turn.

Jump prep time Jump prep takes from 30 minutes to 2 hours and is already calculated by the design system. If ships cannot even run basic stuff like floor field during jump prep it is called jump dimming, from an old Terran tradition of dimming the lights when preparing a jump.

Jump fuel Jumps require 10% of hull volume per parsec to create the jump bubble, more so on ships smaller than 500 m3 (100 dTon). All jump fuel is consumed before the actual jump entry so aborting a jump prep halfway will have used up half the jump fuel. This also mean that ships can be fed jumpfuel from external sources prior to jump, from drop tanks as mentioned in Journal #3 and first edition of GDWs High guard.

J0 jumps Short insystem jumps, J0 jumps, up to about 20 000 AU in length are possible, consuming 1/2 of what a J1 does. J0 drives are the only ones possible at TL 9. Traveling one parsec using J0 drives would require 10 jumps in a row taking 10 months if three weeks are spent wilderness refueling from asteroids or rogue planets for every week in hyperspace.

Alternative fuel surces Jump fuel is typically bought at a starport but can also be created from water, ammonia or methane using appropriate converters. Fuel can also be scooped directly from gasgiant atmospheres if the ship is streamlined and has scoopes, see page 17 for skimming gasgiants. Ships are highly vulnerable when skimming so military ships rely on fuel shuttles or launch fighters to stand guard, this is called high guard for being higher up in the gravity well. See page 26 for details on alternative fuel sources.

Jump Game procedure

At the very start of a turn, before movement, tell your opponent that you have started jump prepping. Don't tell him where, how far, prep time or anything, write down the box and square, how many Parsec (J0, J1 etc) and what turn the jump prep will end and the jump will be performed. Write these facts down on a piece of paper, and put the piece of paper face down on the table somewhere so your opponent can see the paper, but not what was written.

At the end of the turn where jump prep ends and you will attempt the jump and you have to reveal what was written and roll an Astrogation task. All eligible jump attempts have the ship disappearing into hyperspace for a week, effectively out of the game.

Jump declaration

The things you write down on the piece of paper for your jump is your jump declaration. A jump declaration must contain the following:

Jump position The square you intend to jump at. Write down the box coordinates (a number and a letter) and the square inside the box (horizontal 1-5, vertical 1-5)

Prep time How long the jump prep is, including 1/2 time for half or less jump range, ie the actual final total jump prep which will be 15 minutes to 2 hours.

Jump turn What turn number the jump will happen. Jumping is done at the end of the turn, after repairs by rolling the Astrogation task end then the ship will enter hyperspace.

Relative jump vector

Your ship must be **drifting during the entire jump prep**, if any part of jump prep was inside gravity the jump will fail. Most jumps are stationary but if you jump with a vector the vector will be retained on exit. The jump requires a mass origin and mass destination and the jump will be at rest to those, by way of the Machian principle if you must ask.

Astrogation task

The astrogator roll the task at right at the end of jump prep and at the end of the turn, after the Repairs phase. The ship jump and dissappear from our universe for at least a week, and is effectively out of the game. Consult the Astrogation results at right to know where the ship ended up.

Dice pool and astrogation Astrogation cost 1D6 per Jn, 1 D6 for J0 when the astrogation task is rolled. Any remaining D6 can be used to improve the roll as per usual dice pool usage. If not enough dice pool remain for the jump the jump is aborted and no astrogation task is rolled.

Equivalent distance Equivalent distance in the results mean that if the ship jumped a welljump it will end at welljump distance to the target or if the ship jumped a safejump it will end up at the closest safejump box/square of the target. Note that with this rules a ship will always exit hyperspace near a massive object.

Misjumps

A jump always takes 144 hours or six days, plus extra time for misjump

As long as the jump prep wasn't aborted the ship leaves this universe and enters hyperspace for about a week, slightly longer if the jump went badly. For roleplaying purposes as well as in scenarios when forces jump in we need to determine where they enter. Look at the astrogation results table to determine the exact location the ship exits, ships facing, roll and any vector from entering will be the same when exiting jump, relative Sun direction. Jump duration is 144 hours or 6 days to be exact (laws of nature can be convenient when gamemasters pull them out of a hat), with an extra duration if the Astrogation task was Fair or worse.

Astrogation task

When the prep time is finished you may roll the astrogation task, or abort but the jump fuel is still spent if you do. Jumps require 1D6 per Jn from the dice pool, 1D6 for J0 jumps.

Roll 4+ for Safejump

Roll 7+ for Welljump*

| Situation | DM |
|-----------------------------|---------|
| Crew damage Light /Severe | -1 / -3 |
| Thrust damage Light /Severe | -1 / -3 |
| Intentional deepspace jump | -3 |
| Unrefined** jump fuel | -1 |
| Per square from jump pos | -1/sq |
| Per speed when jumping*** | -1/sq |

*If any part of prep time was inside welljump.

**Wilderness or skimmed fuel that hasn't gone through a Fuel purifier.

***Your ship will retain whatever vector it had when exiting hyperspace (by the Machian principle if you must ask)

Astrogation result

VGood Your jump exit is at the exact square you intended relative the target.

Good Your jump exit at a random point centered around your intended destination point.

Fair Your jump exit at a random point centered around the gasgiant, planet or asteroid.

Miss At a random body in the target system, at a random point centered around the gasgiant, planet or asteroid.

Bad At a random hex 1 Parsec from the target system, at a random body and a random point around it

VBad At a random hex 1-6 Parsec from the starting system, at a random body and a random point around it.

All jump exits start at an equivalent distance ie well jumps to well jumps, safe jumps to safe jumps.

Jump duration

A jump takes at least 144 hours or six days, add the following on a Miss or worse.

Good+ No extra time above the 6 days / 144 h

Fair or Miss 6 days + 1D6 x 15 min

Bad or VBad 6 days + 1D6 x 1D6 x 15 min

Random exit location

Roll 2D6-7 twice, for horizontal and vertical. These are your jump exit offsets, multiplied by the values below. Reroll if ending up inside the gravity well or planet/asteroid itself.

| Mass center | Miss per point |
|----------------|---------------------|
| Large planet | 5 squares per point |
| Small planet | 3 squares per point |
| Large asteroid | 2 square per point |
| Small asteroid | 1 square per point |

Random body 1D6*

6 Large gas giant

5 Small gasgiant

4 Large planet

3 Small planet

2 Large asteroid or comet

1 Small asteroid or comet

*Roll 2 D6 and use lowest for empty hex misjump destinations



DOCK & RAM SIZE+

Docking and ramming use the same basic task but for a docking to succeed both ships must also have the same facing and the task must be Good or VGood, Fair results in collisions.

Roll vs Size +Pilot

+2/+2 if you / target drifted & no turn or roll

+DM from Impact speed table, ramming only

Task result

VGood - Docking success

Pick target hitlocation, Pick your hitlocation
Target damage use 2 D6 choose high or low
Your damage use 2 D6 use lowest

Good - Docking success

Random target hitlocation, may pick adjacent
Pick your hitlocation
Target damage use 1D6
Your damage use 1D6

Fair - Docking failure

Random hitlocation on you and target
Target damage use 1D6
Your damage use 2D6 use highest

Miss or worse - Docking failure

Larger Size target treat Miss or worse as Fair hit if your Missmargin was no more than the difference in Size

Damage roll

Use docking gear of participating vessels, but only if docking was a success; **Good** or **VGood**

Docking gear DMs (0 to -6)

- +1 speed* higher than FrameG
- +1 per full speed* above FrameG
- +1 if ARM** is lower
- 1 if ARM** is higher
- +1 if DAB is lower
- 1 per DAB is higher, no limit

| | Impact speed | | | | | |
|--------|--------------|----|-----|-----|-----|-----|
| | 0* | 1 | 2 | 3 | 4 | 5+ |
| DM | +4 | +2 | +1 | - | -1 | -2 |
| Damage | +3 | +9 | +15 | +21 | +27 | +33 |

*Treat Impact speed 0 as 0.5 for FrameGs

**Use the ARM of the hitlocations

Docking or ramming (optional)

Docking or ramming are always intentional as the likelihood of two ship accidentally hitting each other minuscule. Docking is done at the end of movement while ramming is done at the end of the combat phase. Yes, you may ram a target on one turn and then dock in the next, the ships should be co-vector from the ram, this is called aggressive docking and is very dangerous, and thus cool.

Roll a Pilot task and apply the modifiers. The task result determine what hitlocation will be hit on you and the target. Roll damage if the Crash modifiers become 1+, note that different locations may have different ARM or DAB. Laser defence should be done before the docking or ramming attempt is made, roll normally but treat the result as Spray fire instead of reduction in degree of success, apply that damage immediately and if the ship became uncontrollable (Critical+ Crew or Hull) ramming or docking cannot be attempted.

Missmargin and Size difference

Missing a docking or ramming attempt does not necessarily mean nothing happened, you may still hit the target is larger than your ship. If the Missmargin (the number of points you missed your roll) no more than how many points larger the target Size is the result is treated as a Fair hit.

Example: If you attempt to dock or ram a ship 2 points larger a failed rolls of 1 or 2 are still considered Fair hits while misses of 3 or more are misses.

Same square attack arc

When two ships or a missile and its target enter the same square you must still determine attack direction for weapons that bear, defenses that bear and how hitlocation is determined, it is also used in ramming attacks.

Look at the separation between the target and attacker on the previous turn (or the launching ship if the missile was launched this turn). This separation is used to determine from where the attack was coming, for arc determination and hitlocation, the range is still 0 squares.

If the attacker and target shared the same position the last turn too (which means their relative vector is 0) the attacker determine what adjacent square he is in, for arc determination and hitlocation, the range of course is still 0 squares.

Vector after ramming

If the ramming vessels actually hit and with different vectors the smallest Size gets the vector of the larger Size and if both Size values are equal both ships will get the vector of the rammer. Yes, you can tackle enemies into planets but you'll go with them if you do.

Docking (after movement, Initiative order)

Past and present must be on target and with same Facing

Good or VGood to succeed, Fair result is just a collision

Larger target and Miss or worse may still hit if Missmargin is Size diff or less

Roll damage if modifiers are -6 or higher

Use both ships docking gear DAM modifiers but only if dock is Fair+

Ramming (after Combat, Initiative order)

Position after movement must be on target, just like a missile attack

Larger target and Miss or worse may still hit if Missmargin is Size diff or less

Roll damage if modifiers are -6 or higher

Docking gear

Ships get damage modifiers from their and their own and the targets docking gear, but only if the dock was Good or VGood and only if the target is participating in the dock. Docking gear never apply to ramming.

Boarding (optional)

Boarding another ship to take it over is done at the start of the Repairs phase and neither side may use their Repair Crew for repairs or powerplant startups during boarding. Boarding combat consist of damage rolled on each side every turn, until the ships are no longer boarded or one side has a Critical damage on its Crew.

Boarding DM

Regular crew and repair crew count as 1 each

Marines count as 5 each

Ignore sensor ops or gunners in parenthesis

Ignore passengers

Ignore frozen watch or low passage

Both ships participating in the boarding must calculate its Boarding DM by summing up all eligible crewmembers, marines are worth 5 each, and consult the table at right. This is the basic Boarding strength to use on the subsequent boarding rolls. Boarding DM is then modified by the *lowest* damage of Crew and Repair Crew, any changes to these take place directly (as does all other damage too in Intercept).

Boarding resolution

Defender roll damage then attacker at start of Repairs phase

Modify Boarding DM by min Crew & RC damage -1/-3 for Light/Severe Critical+ or a Boarding DM of 0- and the boarding is over

No repairs or powering up may occur during boarding

Recurring damage in Crew location increase damage on both sides

The actual boarding action consist of first the defender then the attacker rolling damage on each other during the Repairs phase of each turn until either side wins. Neither side can make any repairs or powerups during the turn and if the Crew location of the boarded ship suffers Continuing Damage (CD) both side get one level increased damage, which may very well end the battle. Boarding is over when one side suffers Critical or worse damage.

Skeleton Crew

The original and the skeleton crew(s) gets an extra -1 on all tasks

The winning crew can decide to put a skeleton crew on the other vessel which may of course be the boarders vessel if the boarders lost the boarding action. That ship as well as the originating ship suffer an extra -1 on all task. A ship can have any number of ships controlled by skeleton crews, they will still suffer only -1 on the commandeered ships as well as the originating one - give them a break, they have rolled damage for every ship taken!

Boarding DM

Sum up all crew and repair crew, marine count as 5 each, ignore gunners or sensor ops in parenthesis and ignore any passengers, low passage or frozen watch.

Use *lowest* damage of Crew and Repair crew

Light damage -1 on Boarding DM

Severe damage -3 Boarding DM

Critical+ damage Boarding is over

Modified DM of 0- Boarding is over

| Crew | Boarding DM | Crew | Boarding DM |
|------|-------------|------|-------------|
| 1 | +1 | 30 | +7 |
| 2 | +2 | 60 | +8 |
| 3 | +3 | 90 | +9 |
| 6 | +4 | 300 | +10 |
| 9 | +5 | 600 | +11 etc |

Damage table

Roll damage on the attackers and then the defenders, in the Repairs phase. Critical+ damage on one side ends the boarding action immediately with no further damage rolls.

4 + 1D6 + AttackDM - DefenseDM

| Roll | Damage |
|-------|-----------|
| 16-18 | Destroyed |
| 13-15 | Critical |
| 10-12 | Severe |
| 7-9 | Light |
| 4-6 | (Scratch) |
| 3- | No effect |

Signatures docked

All sensors except Neutrino modify signatures based on what we are docked onto.

Landed or docked **All except Neutrino**

Docked with a larger ship -1

Damage effects

Crew or Repair Crew damage may cause skill losses based on the severity of damage. Roll once for each Skill category the Crew possess.

| Damage level | Roll 1D6 to avoid |
|-----------------|------------------------|
| Scratch or less | No skill loss possible |
| Light | Roll 2+ |
| Severe | Roll 4+ |
| Critical | Roll 6+ |
| Destroyed | Skill loss guaranteed |

Pilot

The ship must have at least once during the scenario have; landed, aerobraked, taken off, docked, rammed or won initiative.

Sensors

The ship must have gotten a tracked result on a previously unknown enemy ship during the scenario.

Gunnery

The ship must have gotten a Fair+ attack past defenses or stopped a Fair+ attack by defenses at least once during combat, actual damage is not required.

Repairs

The Repair Crew must have repaired something, restarted a powerplant from Silent running or successfully Redlined a thruster.

Ship tactics

The ship must have attacked a non drifting enemy from its aft centerline, it does not have to hit or cause damage, just attack from enemy aft is enough.

Fleet tactics

Two or more ships ship must have attacked a non drifting enemy from its aft centerline in the same turn, they do not have to hit or cause damage, just attack from enemy aft is enough.

Campaign

If you want to play a series of scenarios using Intercept where players gets to improve their crew but also see crew perish in space from enemy attacks or risky maneuvers these rules are for you. These rules only briefly touch the subject, you yourself must still come up with scenarios to play and any campaign rules you find missing.

Skill improvement

Skill improvement is done *before* rolling skill losses from damage

Any player that participated in a scenario stand to gain a skill point, two if the player also managed to win the scenario, what constitutes winning should be agreed upon before and is entirely up to you. Some scenarios may even have specific skills as rewards; rescue a +2 Ship tactician, pick up a +3 Repair Crew.

Ship or global skill

You decide whether to give a skill improvement to a ship or globally to your fleet. You give out skills before rolling for skill loss, don't give skill improvements to ships that has suffered Crew or Repair Crew damage, if you can avoid it. If all your ships was destroyed in the battle, all skills, ship crew and global, will be lost, except if you had a previous ship crew you decided beforehand would not participate in the battle.

Ship tactics and Fleet tactics can only be given to individual ship crews and never globally,

Crew and Repair Crew damage

Skill improvement is done *before* rolling skill losses from damage

After the scenario is over, the winner is determined and skills have been handed out, it's time to see if Crew or Repair Crew damage caused any skill losses. Roll using the table at left, once for each skill you have gained. All skills roll based on Crew damage except Repair Crew which roll vs Repair Crew damage.

Ship skills roll against the actual ship holding the skill(s) while global skills roll against the damage of Crew or Repair Crew damage of the highest Size ship, if more than one ship has the same Size use the worst damage.

Scenario outlines

Scout graduation exercise

All players have Scout courier, start on the edge with a Drift of one, on *Maptemplate.pdf* with no planets or asteroids. The first player to score a Scratch+ damage on another ship wins. These are simulated weapons so any Crew or Repair Crew damage are ignored. A good way to learn vector movement and sensors without the added complexities of planets.

Colony race

Colonial administration has determined that whoever is first in setting up a colony on this particular planet will win the provincial governorship over it. Use *Maptemplate large planet.pdf* and its player secretly start anywhere on the outer edge around the planet with a Drift of one. The first to land a loaded trader, stay one turn to offload, take off from the planet using the Unloaded stats and leave the map, is the winner. Choose between *Freetrader* or a *Subsidized merchant/Launch* combo. You must land with the larger ship to win, there isn't enough cargo for a colony in the Launch.

Moon race celebration

To commemorate the human landing on the moon each year there is a race where traders start from Earth, land on the moon, and fly back again. This has become such a prestige event that traders are known to fire at each others to win. Use *Maptemplate earth and moon.pdf* and chose between *Free trader*, or *Subsidized merchant* with *Launch*. All ships are Unloaded and may start at any square on the Large planet. First turn is blind as all ships must be popped in when taking off from a planet. First to land on Earth again after landing on the moon win. Fly off the map and you are ou

Traveller integration (optional)

Intercept bears some resemblance to the Traveller role playing game, in the Tech level progression, Jump drives and its concept of Computer Models. As there are many different Traveller rulesets I will concentrate on just one, namely the Moongoose Traveller rules, as they are the most similar to the original GDW Traveller rules.

Skills My homebrew Traveller rules have a normal skill level at +0 up to the master level at +6. Simply subtract 1 from your Mongoose skill levels to get the skill DM for use in Intercept.

Tasks Intercept task system either roll against ship Size or roll one of the standardized task difficulties

Easy(3+), Normal(6+), Hard(9+) etc.

Simply roll against the given number adding your Skill level-1.

Effect It is strongly suggested that you use Intercept Effect levels instead of the Mongoose ones as my system relies on Effect levels and Task difficulty levels are equal in span. A -3 DM is exactly the same as one level worse result.

Degrees of result from Effect

Succeed by 6+ Very good result

Succeed by 3-5 Good result

Succeed by 0-2 Fair result

Fail by 1-3 Miss result

Fail by 4-6 Bad result

Fail by 7+ Very bad result

Crew damage You will have to come up with your own rules on how Intercept Crew and Repair Crew damage translates to player character damage but here's a suggestion: Light damage is 1D6 inflicted, Severe damage is 3D6 of damage inflicted, Critical damage is 5D6 of damage inflicted and Destroyed damage means all Crew or Repair Crew is dead, a kind referee may allow some save rolls to this fate.

Tasks

When the rules ask for a task roll you roll the Target Number on 2D6 +Skill +Modifiers. The amount you beat or missed the target nbr determines the result.

| Result | Result | Steps | Contact | Track |
|---------------|--------|-------|---------|-------|
| Hitmargin 6+ | VGood | 8 | 1+ | 2+ |
| Hitmargin 3-5 | Good | 6 | 2+ | 4+ |
| Hitmargin 0-2 | Fair | 4 | 3+ | 6+ |
| Fail by 1-3 | Miss | 3 | 6+ | 12+ |
| Fail by 4-6 | Bad | 2 | 6+ | 12+ |
| Fail by 7+ | VBad | 1 | 6+ | 12+ |

Failed results are shown in italic

Computer dice pool

One D6 per Model # is used as a dice pool, replenished every turn. Add dice to any tasks *before* rolling and pick the two best D6 as your result.

Deterministic Pilot roll

Cross reference the ships Size to get the number of steps per phase. They are used to determine movement order and remaining steps are used to determine combat order. Turning *after* thrusting cost, you may turn before *and* after thrust and the turns before thrust cost is normal.

| Size* | dTons | m3 | Steps | Lightlag |
|-------|-------|-------|-------|----------|
| +0 | Human | Human | 8888 | 0 |
| +1 | 0.1 | 0.5 | 8888 | 1 |
| +2 | 0.3 | 1.5 | 8686 | 1 |
| +3 | 1 | 5 | 8666 | 1 |
| +4 | 3 | 15 | 6666 | 3 |
| +5 | 10 | 50 | 6464 | 3 |
| +6 | 30 | 150 | 6444 | 3 |
| +7 | 100 | 500 | 4444 | 10 |
| +8 | 300 | 1500 | 4343 | 10 |
| +9 | 1 K | 5000 | 4333 | 10 |
| +10 | 3 K | 15 K | 3333 | 30 |
| +11 | 10 K | 50 K | 3232 | 30 |
| +12 | 30 K | 150 K | 3222 | 30 |
| +13 | 100 K | 500 K | 2222 | 100 |
| +14 | 300 K | 1.5 M | 2121 | 100 |
| +15 | 1 M | 5 M | 2111 | 100 |
| +16 | 3 M | 15 M | 1111 | 300 |

*Size is adjusted for Crew and Hull damage

Crew damage +1 or +3

Hull damage +1 or +3

Deterministic preparation

Prepare can be done on Pilot rolls and Repairs and simply add the modifier to the Hitmargin

| Preparation | 15 min | 1 hour |
|-------------|--------|--------|
| 1 turn | +1 | +1 |
| 2 turns | +2 | +2 |
| 3 turns | +3 | +3 |
| 7 turns | +4 | - |
| 11 turns | +5 | - |
| 15 turns | +6 | - |
| 31 turns | - | - |
| 47 turns | - | - |
| 63 turns | - | - |

Note that Pilot tasks and Repair tasks are modified by scale, +3 easier at 1 hour scale

Deterministic range table

Lasers, particle accelerators and mesonguns all use this table to determine what Effective size they automatically hit

| Range | Hitmargin |
|-------|-----------|
| 0* | Size - 2 |
| 1 | Size - 5 |
| 2-3 | Size - 8 |
| 4-10 | Size - 11 |
| 11-30 | Size - 14 |

*Requires same vector too, otherwise range 1

Deterministic hitlocation

| Facing | Fair | Good | VGood |
|--------|-----------|-------------|------------|
| Front | Hull | Hull* | Attk. pick |
| Side | Def. pick | Def. pick** | Attk. pick |
| Rear | Thrust | Thrust* | Attk. pick |

*As stated or +1 decided by attacker

**Defender pick but attacker add one

Deterministic combat (optional)

In order to capture the feel of submarine warfare as a contest of wits between two veteran commander fighting it out like a game of chess I have added a variant of the rules where no luck is involved at all. Movement, initiative, sensors, to hit and damage are all governed by deterministic rules. The rules remain basically the same with changes where dice are rolled.

Some of the rules below are optional and which of them to use should be agreed upon by the players. Want only the deterministic hitlocation? Fine! Want the whole deterministic shebang but keep the rolled penetration and damage? Fine! Pick a mix that fits your preferences.

Hitmargin

Hitmargins higher than +6 are treated as +6

Each Deterministic task (such as firing beams performing repairs etc) has its own way of determining Hitmargin which in turn determines the result of the task. negative Hitmargin means the task failed and higher Hitmargin means better result. The basic rule is that Hitmargin = DMs.

Hitmargin is used directly to determine penetration and damage but other tasks such as Screen and repair use regular degrees of success using this table:

| Hitmargin | Degree of success |
|---------------|-------------------|
| Hitmargin 6+ | VGood |
| Hitmargin 3-5 | Good |
| Hitmargin 0-2 | Fair |
| Hitmargin -1- | Miss |

Sometime you need to change the degree of success a number of steps (Sandcasters vs laser fire for instance) simply reduce hitmargin by 3 for every step. A Hitmargin of 4 (which is Good according to the table) is to be reduced one level by Sandcasters. The new Hitmargin = 4 - 3 = 1 (which is Fair by the table).

Computer dice pool

Computer dice pool are simply added to Hitmargin on a one to one basis, no more than 3 dice may be added per Task however.

Size and steps

Each ship has a certain number of steps of turning each turn. The table on the left gives the number of turn steps for each of the four turns in an hour. A 1500 m3 / 300dTons ships has 4343 in steps. This means that it has 4 steps in turn 1, 3 in turn 2, 4 in turn 3 and 3 in turn 4. There are boxes to write this down on the Datcard and be careful to note any changes from damage to Crew or Hull as these effectively increase the ship Size for steps of turn determination.

Initiative

Ships commit to how many steps of turning they will 'skip' during movement and as we already know how many steps each ship is allowed (from the deterministic Pilot roll table at left) they can never promise more than they have. Lowest number of 'skipped' steps goes first. Ties are broken as usual.

Initiative is determined as follows (in order of priority):

1 Untracked ships have higher Initiative (ignore 2-5 if Untracked)

2a Higher 'skipped' steps of turn have higher Initiative

2b Higher steps of turn have higher Initiative

3 Higher Ship tactics have higher Initiative

4 Higher crew station have higher Initiative (Bridge > Full > Limited)

5 Break ties with player A wins on even, B on odd turns, note on DataCard.

Two 500 3 ships (with 4444 steps of turn) in turn 1. Ship A skips 2 turns and ship B skips 3. Ship B moves last and shoots first but can only use 1 step of turn. Ship A moves first and shoots last but can use 2 steps of turns. Ties are broken by highest remaining steps of turn.

Deterministic sequence of play

Deterministic play uses the same sequence of play and each of the optional deterministic rules will be explained under each place in the sequence below.

Drift & gravity Drift and gravity works exactly the same.

Launch missiles Missile launch works exactly the same.

Thrust and turn Turn and thrust works exactly as normal except for Initiative which was detailed on the previous page.

Attacks Attacks are done in initiative order; first beams then missiles.

Beam attacks Hitmargin = Target Size + DMs + Range DM

Missile attacks Hitmargin = Target Size + DMs - 7

Screens Hitmargin = DMs

Hitlocation

Hitlocation is determined based on the table on the previous page.

Spray fire locations replace random with Defender pick, otherwise as normal

Penetration

Works as normal, compare PEN and ARM and adjust accordingly.

Damage

Simply use the Hitmargin+DAM-DAB instead and use the table. Treat a Hitmargin larger than +6 as 6. Note that if an attacks Degree of success has been reduced by screens simply reduce the Hitmargin by 3 for every degree reduction.

Repairs

Hitmargin = DMs (including cumulative time bonus)

Use the Deterministic preparation table to get your cumulative bonuses for difficult repairs. Typical repair times are 1 phase for Light, 4 phases for Severe and 4 hours (or sixteen phases) for Critical damage.

Sensors

Deterministic sensor rules work exactly as in the regular rules but there is no skill roll. Odd turns player A performs sensors first and even turns player B does the sensing first.

Morale(optional)

Don't use the morale rules for deterministic as they should by the very nature of psychology be random and unpredictable.

Penetration table

| PEN-ARM | Penetration | DAM |
|---------|-------------|------|
| 4+ | Full | - |
| 1-3 | Partial | -3 |
| 0- | None | None |

Damage table

Use Hitmargin as the damage roll ie Hitmargin + DAM-DAB on the table below.

Hitmargin +

| DAM-DAB | Damage |
|---------|-----------|
| 16+ | Destroyed |
| 13-15 | Critical |
| 10-12 | Severe |
| 7-9 | Light |
| 4-6 | (Scratch) |
| 3- | No effect |

Damage control

Modify 7 by the modifiers below and subtract the target number from the table below..

| Modifier | DM |
|-----------------------------|------|
| Repair crew Light damage | -1 |
| Repair crew Severe damage | -2 |
| Repair crew Critical damage | -3 |
| Number of thrust Gs* | -1/G |
| Second repair attempt | +1 |
| Third repair attempt | +2 |
| Fourth repair attempt | +3 |
| Second hour | +4 |
| Third hour | +5 |
| Fourth hour+ | +6 |

**Ignore Gs compensated by floorfield unless repairing Surface hits.*

| Hitmargin | Degree of success |
|---------------|-------------------|
| Hitmargin 6+ | VGood |
| Hitmargin 3-5 | Good |
| Hitmargin 0-2 | Fair |
| Hitmargin -1- | Miss |

| Result | Light | Severe | Critical |
|--------|-------|--------|----------|
| VGood | Yes | Yes | Yes |
| Good | Yes | Yes | No |
| Fair | Yes | No | No |
| Miss | No | No | No |
| Bad | No | No | No |
| VBad | No | No | No |



A young Ship tactician plots the ships movement for the next four turns

REDLINING 6+ / 9+

Multiply actual thrust by 1.5 or 2 and consult the fractional thrust table. Fuel consumption is based on actual thrust so any velocity change still cost the same.

150% Thrust 6+ +Repair skill

200% Thrust 9+ +Repair skill

| Result | Redline effects |
|--------------|--|
| VGood | Redline success, RC continue |
| Good | Redline success, RC stop* |
| Fair | Redline success, RC stop* Continuing Damage in Thrust loc |
| Miss | Redline fail, RC stop* Continuing Damage in Thrust loc |
| Bad | Redline fail, RC stop* Light dmg and CD in Thrust loc |
| VBad | Redline fail, RC stop* Severe dmg and CD in Thrust loc |

*RC must stop and cannot perform repairs or powering up during Repairs phase this turn.

Preparation

Repairs, Powering up, Docking may all get extra DMs by preparing (ie doing nothing).

| Prepare time | DM |
|--------------------------|-----------|
| Per 15 min turn up to +3 | +1 / turn |
| Per full hour up to +3 | +1 / hour |

Detailed beam to hit table

| Range | To hit |
|-------|---------|
| 0* | 10+ |
| 1 | 12+ |
| 2 | 14+ |
| 3 | 15+ |
| 5 | 16+ |
| 7 | 17+ |
| 10 | 18+ |
| 15 | 19+ |
| 20 | 20+ etc |

*Must be co-vector, high initiative aft centerline

Tech relative screens

| Screen to hit modifiers | DM |
|-------------------------|--------------|
| PEN > ARM | -1 per point |

Minor optional rules

Four moves one Scan (optional)

Some scenarios can take long before anyone gets a Contact or Tracked results, these rules let you speed up the process. Both sides plot 4 turns in a row before the Sensor phase. Multiple Contacts on the same target give cumulative +1 per Contact up to +3. Roll a Sensor task for each Contact using the best signature of all 4 turns. As soon as one side has gotten at least a Contact result you should go back to regular turns. If, however unlikely, both sides have no Contacts nor Tracks at the end of a turn divisible by four, you can go back to Four moves one Scan again, if both sides agree to do so.

Redlining

Whenever you need some extra thrust you may, at the risk of damaging the drive, pull the safeties, push past red, stoke the afterburners or whatever one does to get extra thrust out of a drive, this is done prior to movement. Select whether to go for 150% or 200%, roll the task at right, Repair Crew is in the Thrust location and unless a VGood result was achieved they must remain there and cannot do repairs or powering up in the Repairs phase.

Fair or worse result give a Continuing damage result in the Thrust section that may also damage the RC if it increases the damage level during Repairs phase.

Calculate the new Thrust based on fractional thrust and consult Fractional thrust table on page 4, fuel use is based on actual thrust so the drive will not get better fuel economy by redlining.

Brace for impact (optional)

Bracing reduce the severity of G-loc and damage rolls on Crew & RC

VGood roll 1D6, Good roll lowest of 2 D6 and Fair roll lowest of 3 D6.

Every submarine movie has the captain yelling 'brace for impact' and now you can too in Intercept! At the end of movement, right before rolling for G-Loc you may opt to have the Crew and Repair Crew brace themselves. Bracing means they cannot Scan, attack or defend and they cannot perform repairs or power up powerplants.

Bracing for impact ends at the end of the turn so you can thrust and turn or aerobreak while bracing for impact any number of times in a row.

Preparation

Preparation can be used on Docking, Repairs and Powering up only

Repeated failed attempts are *not* considered preparation

Preparation means spending time before attempting certain tasks to get a favourable DM. The maximum preparation DM is +6 for a full three hour preparation.

Detailed beam to hit ranges (optional)

Some may want a more detailed range falloff when rolling to hit for beam attacks. The range progression continues with +1 per row with the following range progression (these rarely used rows were left out to fit the table here):

30, 50, 70, 100, 150, 200, 300 and so forth, with +1 for each new value.

Tech relative screens

It is reasonable to assume there is an arms race between beam technology and the screens that stop them. This optional rule use abstract 'PEN' and 'ARM' values for sandcasters vs lasers and meson screens vs meson guns. There is an extra -1 per beam PEN value higher than screen ARM. This DM rarely occur except in situation when high tech forces face faces considerably lower tech.

Intercept uses two Excel spreadsheets to design ships, Ship.xls and Data.xls. Data.xls holds all the tables used by the design and Ship.xls which is where you enter your design choices and the save it to whatever the name of your design. You must always open the Data.xls document before opening any designs as the design documents needs to read data from it. Always keep the original Ships.xls as a 'template' to start with.

Design process

Designing a spaceship is a complicated task and there are many ways to go about doing it but this is an example on how I design ships. First, decide on what the ships mission is; what is its purpose. how long should it be able to cruise away from port, what weapons must it be able to survive, how hard should it be to detect etc, finally decide on a ballpark budget figure.

Hull

The most important factor in determining the capabilities and performace of a ship is its hull. Larger hulls can take more damage, holds more weapons and can have more power but are clumsier to maneuver and cost more. Larger hulls also can take less Gs for the same amount of hull framing.

Surface area

Streamlining reduces the amount of available surface area as does stealth masking. Choose open frame hulls if you want more surface area but then your radar signature and your acarobraking capability will suffer and your armor will be heavier.

Power

All beam weapons require power but this does not mean that the weapons actually fire continuous 'beams' for damage. Instead, they charge up the power and release it in pulses and if a weapon is underpowered it takes longer to charge up so the number of attack turns in a row become limited. The only weapons not requiring power is missiles - they rely on reloads and when they run out you simply cannot fire anymore. Another big draw on your powerplant is the impulse drive if high enough Tech Level (TL). Lower TLs use fission or fusion drives that don't require any external power but have limited fuel and huge signatures.

Armor

A ship gets its basic armor from size and Tech level but you may increase it to up to +10 at considerable cost and mass. Armor values are logarithmic so a +6 increase in ARM means x10 thicker.

Tech levels

This system owes much to Traveller and uses a similar but not the same tech progression.

TL 6 1940-1969 Fission power, electricity

Fission thrust, Radar & Visual sensors

TL 7 1970-1999 Electronics, Computer-0

Fission missiles

TL 8 2000-2029 Cyberpunk

Fusion thrust, Robot repair crew with handlers, IR lasers weapons

TL 9 Jump-0, Fusion power

Particle weapons

TL 10 Jump-1

Floater, Fusion missiles, Visible laser weapons

TL 11 Jump-2

Floorfield , Gravthrust, Neutrino sensor

TL 12 Jump-3

Impulse drives, Neutrino masking, UV lasers, Meson guns & screens

TL 13 Jump-4

Mass detectors

TL 14 Jump-5

Mass masking, 100% Robot repair crew, Extreme UV lasers

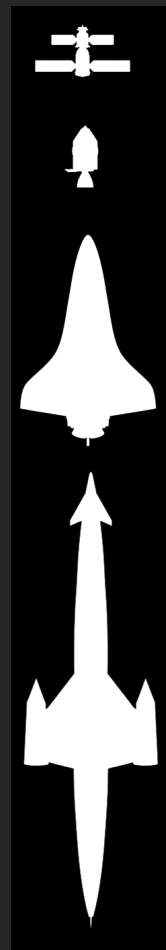
TL 15 Jump-6,

TL 16 Soft X-ray lasers



Streamlining

The pictures show examples of the streamlining categories from available for your ship.



Open frame

Safe speed in normal atmosphere is 200 km/h. Think the International Space Station.

Normal

Safe speed in normal atmosphere is 500 km/h. Think a car or a propeller airplane.

Streamlined

Safe speed in normal atmosphere is 1000 km/h or 1 square / turn when aerobraking. Think supersonic jetfighter

Airframe

Safe speed in normal atmosphere is 3000 km/h or 3 squares / turn when aerobraking. Think SR-71 or other hypersonic designs.

Wings

A ship cannot increase speed when aerobraking but may change course or slow down. Larger wings increase the maximum allowed aerobake Gs. See page 20 for details.

| Wings | Wing drag |
|-------------|-----------|
| 5% or more | +1 |
| 10% or more | +2 |
| 20% or more | +3 |

Fuel scoops

Fuel scoops are used for skimming hydrogen from gas-giants and they are also used to reduce fuel consumption when thrusting in an atmosphere, this will be noted as 'airbreather'. Taking off in an atmosphere or aerobraking costs no fuel expenditure.

Landing & docking gear

A ship must have Skids/feet or wheels to land of planet, there are no further differences. Ships relying on Wings to land must have wheels to land on planets. Landing gear give a negative DM on landing damage rolls.

All ships have at least an airlock but better docking gear give better DM on docking damage rolls, this damage reduction is only allowed if the docking is between Crew or Core on both ships. Reducing damage is of course entirely voluntary, rammers don't need to use the DM even when ramming Crew or Core.

| dTon = 5 m3 | Edit | Edit | Edit |
|------------------------|------|------------------|-----------------------|
| Hullvolume(m3) | 100 | Hull TL (6-16) | TL-10 |
| Streamlining(0-3) | | Mtrl type(0-3) | AddedArmor (1-10) |
| VisualMasking(0-3) | | IRMasking(0-3) | Frame Gs |
| NeutrinoMasking(0-3) | | MassMasking(0-3) | RadarMasking(0-2) |
| None/Skids/Wheels(0-2) | | | Fuel scoops TL (7-16) |
| | | | Wings (0-100%) |
| | | | 1,0 Gs |

Hull

Decide how large your ship should be, larger ships can hold more stuff and are tougher to damage, but they also cost more and are harder to maneuver. You can always change the size of your ship later in the design process but it is never as simple as "I need 350 m3 more so I add 350 m3 to my hull size". As some components scale with the ship one generally has to fiddle around back and forth with hull size and other values to get your ship just the way you want it.

m3 or dTons

Intercept is geared towards smaller scaled ships and power plants compared to Traveller. When I realized that by treating each deck plan square as 1 x 1 x 2.5 m instead of 1.5 x 1.5 x 3 m, one displacement ton (two squares) would become 5 m3 instead of the 14 or so m3 of original Traveller. As most deck plans were already drawn with 1 square chairs and 2 square beds, my scale seemed to fit the plans better. Striker noted that each High guard EP was 250 MW but I felt that this was too much as well, my system uses 25 MW instead. The end result is that my Intercept designs are smaller, more vulnerable and with less power but I can still use most of the old deck plans.

If you want your old Traveller scale simply write 14 in the field under the 5 m3 cell. All volumes will be input in dTons and power will be in EP at 250 MW instead, price and combat stats will remain the same.

Streamlining

Airframe describes the shape of the craft and its capabilities at aerobraking and operating in an atmosphere. Better airframe means less area to put weapons and sensors.

Open frame hulls have lots of area for sensors and weaponry but they also require more mass to armor. Landing in an atmosphere or aerobraking is out of the question for open frame hulls as they'd probably burn up if they tried.

Normal hulls have some streamlining but they still fall short of a proper atmospheric spaceship. They can survive a landing in an atmosphere or aerobraking but will take some damage if they try.

Streamlined is the first proper atmospheric hull which can do atmospheric landings and aerobraking if the pilot is careful.

Airframe is the best hulltype available, designed for extreme speeds and heat loads. Atmospheric landings and aerobrakes can be performed at high speed.

Landing & docking gear

A ship with Skids must be able to land vertically by using a 1G+ Floater or using 0.5G from Impulse drive to float. Ships with wings can always land if the atmosphere is at least Thin. Both landing and docking gear reduce damage when landing or docking respectively.

Fuel scoops

Fuel scoops are required for a ship to skim gas off gas giants. Fuel scoops also make fission and fusion thrusters more fuel efficient and much less environmentally dangerous when operated in an atmosphere. Fission or fusion ships with scoops pay no fuel costs when taking off or aerobraking in atmospheres.

Wings

Enter the percentage of the hull that are wings. Wings increase surface area to allow more mounts, yes Open frame hulls with wings *are* legal. 5% Wings or more give extra aerobake Gs, see table at left.

Frame

Input the number of Gs the hull must be able to withstand. Note that Hull damage will reduce frame Gs and that aerobraking may expose your ship to more Gs than what your drive can.

If your ship is intended to do any high speed aerobrakes make sure to give it a frame that can at least withstand as many Gs as your intended aerobrakes 1G for Streamlined ships, 3Gs for Airframe ships typically.

If your ship is intended for lots of dockings (and what ships aren't) give it a Frame G of more than 0.5 for that extra -1 in same speed docking damage.

Material quality

Input the material quality used, this will reduce the mass of many components and greatly increase their price. Material quality has no effect on the volume of any component so changing Material quality will affect actual thrust Gs and nothing else, oh, and price of course.

Armor

Armor is optional and simply adds to the armor given by your basic hull and frame. Armor masses a lot so heavily armored ships should consider using higher Material quality, if you can afford the extra cost. Open frame hulls need considerably more armor for a given protection and streamlined or airframe hulls need less.

If the enemy PEN is 4+ higher than your ARM the armor is ignored, if PEN is 1-3 higher than ARM the damage is reduced by 3 but the hit still penetrates and if PEN is equal or lower than ARM the hit is completely stopped. Meson attacks completely ignore armor, use Meson screens to defend against those.

Stealth

Stealth is the collective term for the various ways a ship can be harder to detect. For each kind of sensor Scan there is a particular stealth technology and each of them come in three three quality levels; Basic, Advanced and Extreme. Higher stealth quality lowers the signature but it also costs more and eat up more of your precious surface area.

Visual(Hull)

Basic TL 7+, Advanced TL 9+. Extreme TL 11+

Visual stealth is basically trying to make the ship blacker with paint and surface material choices. Don't forget to use planet shadow column to lower your actual reflected signature.

Infrared(Power) and Infrared(Hull)

Basic TL 7+, Advanced TL 9+. Extreme TL 11+

Infrared stealth consists of spreading out radiators over larger areas of the ship to lower the temperature. Don't forget to Silent running for a radical lowering of your Infrared Signature.

Radar(Hull)

Basic TL 7+, Advanced TL 9+. Extreme TL 11+

Radar stealth consists of covering the hull in radar absorbing material as well as removing sharp corners and obtrusions to make the ship bounce back radar as evenly as possible. Open frame hulls have significantly higher Radar signature and don't forget to pop down your sensors and weapons to lower your Radar signature, this has no effect on Open frame hulls.

Neutrino(Power)

Basic TL 11+, Advanced TL 13+. Extreme TL 15+

Neutrino stealth absorbs neutrinos from fission or fusion powerplants, it does not affect the signature from fission and fusion thrusters. When portable Neutrino sensors appear at TL 10+ the stealth tech is not far off. Don't forget to use Silent running to become truly undetectable by Neutrino Scans.

Mass(Hull) and Mass(Thrust)

Basic TL 13+, Advanced TL 15+, Extreme TL 17+

Mass stealth come as an offshoot of Impulse drives first appearing at TL 12. A ship equipped with floorfield has a much higher Mass(Hull) signature, reduced back to normal when Silent running, silent running has no effect on Mass(Hull) for ships lacking floorfield.

Hull size table

| Vol(m3) | Size | DAB | Lightlag | SA* | Frame** |
|---------|------|-----|----------|-------------------|---------|
| 15 | +4 | 12 | 7 | 0.03 | 0.3% |
| 20 | +4 | 13 | 7 | 0.05 | 0.3% |
| 30 | +4 | 14 | 7 | 0.07 | 0.3% |
| 50 | +5 | 15 | 10 | 0.10 ¹ | 0.5% |
| 70 | +5 | 16 | 10 | 0.15 | 0.5% |
| 100 | +5 | 17 | 10 | 0.2 | 0.5% |
| 150 | +6 | 18 | 10 | 0.3 | 0.7% |
| 200 | +6 | 19 | 10 | 0.5 | 0.7% |
| 300 | +6 | 20 | 10 | 0.7 | 0.7% |
| 500 | +7 | 21 | 15 | 1.0 ² | 1% |
| 700 | +7 | 22 | 15 | 1.5 | 1% |
| 1000 | +7 | 23 | 15 | 2 | 1% |
| 1500 | +8 | 24 | 15 | 3 | 1.5% |
| 2000 | +8 | 25 | 15 | 5 | 1.5% |
| 3000 | +8 | 26 | 15 | 7 | 1.5% |
| 5000 | +9 | 27 | 20 | 10 ³ | 2% |
| 7000 | +9 | 28 | 20 | 15 | 2% |
| 10 K | +9 | 29 | 20 | 20 ⁴ | 2% |
| 15 K | +10 | 30 | 20 | 30 | 3% |
| 20 K | +10 | 31 | 20 | 50 | 3% |
| 30 K | +10 | 32 | 20 | 70 | 3% |
| 50 K | +11 | 33 | 30 | 100 | 5% |
| 70 K | +11 | 34 | 30 | 150 | 5% |
| 100 K | +11 | 35 | 30 | 200 | 5% |
| 150 K | +12 | 36 | 30 | 300 | 7% |
| 200 K | +12 | 37 | 30 | 500 | 7% |
| 300 K | +12 | 38 | 30 | 700 | 7% |
| 500 K | +13 | 39 | 50 | 1000 | 10% |
| 700 K | +13 | 40 | 50 | 1500 | 10% |
| 1 M | +13 | 41 | 50 | 2 K | 10% |

*Open frame reads SA two rows down

*Airframe reads SA one row up

**Multiply by thrust G, x2 for landing gear

Material quality

| Type | Density | Price |
|----------|---------|-------|
| Basic | x1 | x1 |
| Advanced | x0.7 | x2 |
| Super | x0.5 | x4 |
| Hyper | x0.2 | x25 |
| Ultra | x0.1 | x100 |

Armour tables

All ship come with basic armour that depends on hullsize and tech level. Additional armor can be bought as a percentage of ships hull.

Basic ARM = Size + TL

-2 if OpenFrame hull

-1 if Airframe hull

| Additional armour | Hull* |
|-------------------|-------|
| ARM+1 | 2% |
| ARM+2 | 3% |
| ARM+3 | 5% |
| ARM+4 | 7% |
| ARM+5 | 10% |
| ARM+6 | 15% |
| ARM+7 | 20% |
| ARM+8 | 30% |
| ARM+9 | 50% |
| ARM+10 | 70% |

*Armour costs and masses the same as the frame material from above.

High reaction mass multiplier

For high percentages of reaction mass the delta-V goes up faster than linear, below are some examples but the actual design spreadsheet covers this in much more detail.

| Reaction mass | Multiplier |
|---------------|------------|
| 25% | x1.2 |
| 50% | x1.4 |
| 75% | x1.85 |
| 90% | x2.6 |
| 99% | x4.7 |
| 99.9% | x6.9 |

Jump prep time

Ships need power when expanding the jump-fuel to enter hyperspace, how much depends on the the ships volume and time spent jump prepping, the time to enter jump is no less than 30 minutes and no more than 2 hours.

2 hours 2.5 MW per 100 m3 ship

1 hour 5 MW per 100 m3 ship

30 min 10 MW per 100 m3 ship

2 hours 0.5 EP per 100 dTon ship

1 hour 1 EP per 100 dTon ship

30 min 2 EP per 100 dTon ship

Prep time can never be lower than 30 min or more than 2 hours.

Hydrogen sources

The alternative hydrogen sources can be stored in special tankage but only one type at a time. Skimmed hydrogen go directly into remass or jumpfuel tanks and a Purifier can work directly on those tanks.

Liquid hydrogen

LHyd is the only form useable by jumpdrives or reaction engines, all other forms must be converted into LHyd before use. Jumpdrives are very sensitive to impurities in the fuel so a ship using wilderness fuel can add a fuel purifier to filter out Deuterium, Tritium, Helium and other impurities from the jumpfuel. There is no need to purify reaction mass.

Water

H2O holds 50% more hydrogen than LHyd but is ten times as dense. Water must be processed by a water cracker before it can be used as jumpfuel or reaction mass.

Ammonia

NH3 holds twice as much hydrogen as LHyd and has the same density as water. Ammonia must be processed by an ammonia converter before it can be used as jumpfuel or reaction mass.

Methane

CH4 holds three times as much hydrogen as LHyd and has the same density as water. Methane must be processed by a methane converter before it can be used as jumpfuel or reaction mass.

Thrust

Thrust is what makes your ship accelerate to make course changes, the thrust section is also where your Jumpdrive is located, if any.

| | | |
|------------------|--------|---|
| Thrust (Gs) | 1,1 Gs | Fusion thrust-12 Acc=(1,05 / 2,11) Gs Airbreather |
| Reaction mass(%) | 10 % | Fuel enough for (10 / 20) GTurns |

Fission or Fusion thrust

Fission drives heat liquid hydrogen from a fission reactor to provide thrust, fusion drives do the same but at a much higher temperature, using fusion. These drives require no electrical power but their maximum delta V (measured in G-turns) is limited by the amount of remass. Visual(Thrust), IR(Thrust) and Neutrino(Thrust) are extremely high when a fission/fusion ship is thrusting, so high that a tracking result is almost guaranteed.

The value in parenthesis is the number of G-turns for a loaded / unloaded ship respectively. Track your remass carefully because if you run out of remass your ship will coast forever, and also be a sitting duck in combat.

Floater or Impulse

Floater and Impulse drives are gravitic drives that require electric power to operate, they generate moderate Visual(Thrust) signature, no IR(Thrust) nor Neutrino(Thrust), but have high Mass(Thrust) signatures.

Floater negates planetary gravity but cannot themselves create thrust. A 1G Floater will negate 100% percent of gravity from any planet. Using a Floater is considered thrusting as you are moved away from the Drift square. Impulse drives thrust normally, in the forward direction of the ship but they may, by sacrificing 0.5G of forward thrust, negate gravity as if having a Floater.

As Floater and Impulse drives expand no fuel you don't need to track fuel expenditure like Fission and Fusion drives must, they are also much harder to detect because they have no drive plume giving huge Visual and IR Signatures, they do have quite large Mass(Thrust) Signatures.

Remass, fuel and fuel processing

Ships use fuel for two things; reaction mass for rockets and jumpfuel, the hydrogen must in both cases come in the form of liquid hydrogen or LHyd.

Liquid hydrogen has a density of less than 10% that of water and as volume is at a premium on starships, and therefore a lot of effort has been spent on how to increase the density of hydrogen storage. Hydrogen thankfully is the most common element of the universe and there is plenty of hydrogen in water, ammonia and methane, in fact there is more hydrogen per cubic meter of those substances than there is in pure liquid hydrogen form, these compounds are also very common on planets, rings, comets and asteroids. These two facts have led to the development of a number of alternative fuel storage technologies. See left tables for details

Jump drive

Jumpdrives take your ship out of normal space, keeps it in hyperspace for a week at return the ship to normal space again, hopefully were you wanted it. Jumpdrives are rated in how many parsec they can propel you per jump, each jump requiring 10% of hull volume in jump fuel (liquid hydrogen) per parsec jumped, ships smaller than 500 m3 (100 dTon) use more than 10% per Jn.

A ship needs a jumpdrive, fuel enough for the jump, Astrogator(s) and power to prep the jumpdrive. Fuel is consumed during the jump prep, half of it will be gone if aborting halfway through for example. Powering up takes between 30 min and 2 hours, depending on available power. Jump prep is very computer intensive, the ship must use 1D6 from the dice pool per parsec jumped at the end of the turn when the jump is performed, failing that and the jump is aborted but the fuel is still lost. In practice this means that a J1 capable ship must have a Model 1 computer, J2 needs a Model 2 and so forth. The rules on hyperspace jumping are covered on pages 26 - 27.

Power

Lots of things on a ship require electrical power but the most important ones are the Floater or Impulse drives, the floorfield, the radar and beam weapons.

Fission or Fusion power

The fuel used by the fission or fusion powerplant of the ship will not be considered here as it is built into the powerplants and will keep the powerplant running for a year before replacement. Powerplants need this 'refuelling' regardless of whether they are run or not. Both fission and fusion plants have fuel that decay over time and this decay make the fuel less efficient and harder to 'burn' (Tritium for fusion plants, Uranium or similar for fission plants). Carrying extra fuel wouldn't help either as that fuel would decay as well. Fusion powerplant refuelling is covered by the annual maintenance fee.

Radiators

A ship in space is very much like a vacuum flask which, as we all know, retains heat well and the same is true for spaceships. Ships with 10 MW or more per 100 m3 (2 EP or more per 100 dTon) have must have radiators extended which then become more vulnerable to battle damage, this will be noted on the ship.xls.

Underpower

Ships may not have enough power for all its beam weapons and will then be limited in how many turns they can fire in a row. If power is less than 20% of what is required the ship cannot fire at all, not even defensively.

Core

The core section covers cargo, hangars, computers and the neutrino and mass sensors. Neutrino and mass sensors are covered under sensors, the reason they are located in the Core is that they too can see right through the hull.

Cargo

Nothing much to say here, cargo is cargo and measured in m3 (or dTons). The loaded / unloaded values for thrust and frame refer to the ships performance with fully loaded cargo, hangar and missile magazine, the other when they are all empty.

Hangars

Hangars houses any craft such as fighters, launches etc.

Computer

Obviously there are thousands of computers everywhere in the ship and the Computer we talk about here is the main raw number cruncher.

Computer power, storage etc is all abstracted into one value called Model number or Model#. Each +1 in Model# means a more powerful computer but each TL has a limit in how powerful machines they can make, after that you can increase Model# by +2 with x10 or x100 networked macroframes, after that there will be no further gains by wiring together more computers.

The Computer Model# is the limit of your Computer dice pool to simulate how the computer can concentrate on different tasks. Hyperspace jumping is a special case as jumping must remove an equal amount of dice from the pool as the Jump number, these dice are not added to the Astrogation task roll but any remaining dice may.

Powerplant refueling

Powerplants need refuelling to work properly, failure to refuel will degrade power output and increase quirkyness. Fusion plants can be refuelled at B+ ports and fission plants can be refuelled at C+ ports. Refuelling costs 1/1000 the powerplant price and takes a week, it is already included in the annual maintenance fee.

| Time since refueling | Damage |
|----------------------|--------|
| 1 year+ | Light |
| 2 years+ | Severe |
| 4 years+ | Stops |

Light -1 beam attacks, -3 to power up

Severe -3 beam attacks, -3 to power up

Stops No power, cannot be powered up

Battery power

Batteries are either set to power just the floater and possibly Impulse thrust, or power for the entire ship. In both cases you input a nominal endurance in hours and Ship.xls will calculate the actual endurance loaded / unloaded. Multiply the hourly endurance by 4 and tick off each turn running on batteries, Impulse thrust is noted in GTurns used, typically twice as much as Floater alone. Ships running on batteries have the same IR(Power) signature as with a running powerplanet but no Neutrino(Power).

Don't add batteries to your designs unless you fully understand the above rules, batteries are tricky and costly and not really needed for most designs.

Hangar craft volume

Externally mounted craft use 100% of volume. Internally mounted craft with hangars specifically designed for them use 150% of volume. Internally mounted craft not specifically designed for the ship or craft stored in the cargo hold use 200% of volume.

Computer dice pool

The computer generate one D6 per Model#, to be used as extra D6 when rolling tasks, use the highest 2D6. Dice pool can only be used on 2D6 tasks, never damage, hitlocation etc. Decide how many extra dice to add before rolling. A Stun damage effect on the Core section (which houses the computer) removes all remaining dice pool for that turn, effective immediately. A Fleet tactician allow the dice pool to be shared among ships, how many D6 and how far depend on skill, this dice pool sharing can never give more dice than what normally would be possible for the receiving ship. See page 39 for details.

Life support

All crewmembers and passengers require one life support unit each, except those in freezers.

Limited 24 hour mission duration

Full Needs 0.25 tons per man week

Closed Everything is recycled including food.

Stations

Stations are rated for their Endurance in hours (used by the Fatigue rules) and G-Load reduction (used by the G-Load rules).

| Station* | Endurance** | G-Load** |
|-----------------|-------------|----------|
| Limited station | 4h | -2G |
| Limited tank | 4h | -5G |
| Full station | 8h | -2G |
| Bridge station | 12h | -2G |

*Larger stations break Initiative ties

**Used by the G-Load and Fatigue rules

Living space

Living space is only needed on ships with mission times in excess of their crewstation shift-durations, this is where the crew eat, sleep and play poker. There is no entry for mass because it has already been figured into the hull Frame. Ships with Closed lifesupport count its volume as living space.

| Volume (dTon) / crew | Mission duration |
|----------------------|------------------|
| <2 m3 (0.2) | 6 hour cruise |
| 2 m3 (0.4) | 12 hour cruise |
| 5 m3 (1) | 1 day cruise |
| 10 m3 (2) | 4 day cruise |
| 20 m3 (4) | 1 week cruise |
| 50 m3 (10) | 1 month cruise |
| 100 m3 (20) | 3 month cruise |
| 200 m3 (40) | 1 year cruise |
| 500 m3 (100) | unlimited cruise |

| | | |
|-------------------|----|----|
| Command | 1 | 1 |
| Pilots | 1 | |
| Astrogators | 0 | |
| Sensor ops (-2) | 3 | 3 |
| Gunners | 5 | |
| Technicians | 5 | |
| Marines | 0 | |
| Passengers | 0 | |
| Other | 1 | 1 |
| Low passage | 0 | |
| Frozen watch (x2) | 17 | 17 |
| Total crew? | 16 | |

If either Sensor Ops or Gunners are in paranthesis they may suffer Dual role penalties.

A negative value in parathesis is the Undermanning modifier.

A x1 or x2 is the levels damage removed by Frozen watch revival. Marines, passengers and others are not affected by Frozen watch revoval, only Crew & RC is.

A question mark means that there is too few Freezers or Life support.

Crew

The Crew location houses the crew and everything that keeps them alive and comfortable, this is also where passengers and the frozen watch are located.

Life support

Life support is required for each crewmember except those stored in Freezers.

Limited life support is air only, food and waste management is entirely up to you. Must be recharged every 24 hours and you'd be hard pressed to use them longer. Think vacc suits or fighter jets.

Full life support handles air recycling, waste management, personal hygiene and anything else you might need. They require 0.25 tons per man-week in supplies which include food and drink of military style quality.

Closed life does everything Full does but need no external resupply. Plants recycles the air and produce food that are grown out of, ahem, biological waste products. Closed life support require electrical power and take up considerable volume which the crewmembers may use as living area. Think high tech green house.

Freezers

Freezers are used to transport passengers or troops cheaply or to hold sick or injured persons, special freezers may also be used to ship live animals.

A ship may hold backup crew held in suspended animation, this is know as the Frozen watch. Each Frozen watch consist of 50% of the crew rounded up. Only two frozen watches are allowed, each use is treated as one level less damage to Crew and Repair Crew, in the case of Repair Crew *only* if there are at least as many technicians as there are bots. If not, RC is repaired with the normal Damage Control rules.

Stations

Stations are needed by all crewmembers except technicians. Screens, joy-sticks, buttons and levers and a a chair. Larger work stations win Initiative ties as last resort, that is why large warships bother to have them.

Limited station Small cramped station that you wouldn't want to occopy for longer durations, may include a cupholder. Think jet fighter.

Limited tank Same as above but fluid filled and the occupant breathes oxygenated liquid, all to resist G-forces. Uncomfortable and messy and those with claustrophobia or fear of drowning may not be able to use them at all.

Full station is a much roomier version of the limited one with space for larger screens, a place to put a tray of food etc.

Bridge station These are much larger affairs that also have plotting boards, holo tanks, extra chairs and whatever is neccessary to give the occupant as much help and support as possible.

Living space

Living space is where the crew spend its time when not at their stations or, in the case of the repair crew, when they are not doing maintenance. Living space is the cabins you live and sleep in but it is also kitchens, eating areas, recreational areas, corridors, elevators, panorama decks etc. The amount of living area per crew determine how long voyages the ship can make without risking disease or mental health, which in Intercept is under the optional fatigue rules.

Ships with close circuit life support count this to the living area too as it mainly consist of high tech greenhouses.

Floor field

Floorfield is a convenient but improbable high tech invention that creates a homogen gravity field. They are rated in how many Gs of thrust they compensate away and ships can have their floor fields for just stations and living area or including the cargo and hangars as well.

Floorfield also for Cargo allow the Repair Crew to benefit from the floorfield when doing repairs in the Core location.

Crew types

Pilots

Pilots are needed for a ship to turn, roll or thrust, including using the Floater. A design that orbits without turning or rolling capability need no Pilots and should more properly be called a station. Larger ships need more than one Pilot, use the Undermanning rules if using less than the required number of Pilots.

Astrogators

Astrogators are needed for a ship to jump. A ship that has no jump drive need no Astrogators and should more properly be called a boat. Larger ships need more than one Astrogators, use the Undermanning rules if using less than the required number of Astrogators. Ships often combine the role of Pilot and Astrogator into one but cannot then both maneuver and astrogate in the same turn (except as a Multitask).

Sensor operators

Each sensor type has separate crew. Small and Medium sensors has 1 operator, Large have 3 and Very large have 10 operators. Ships often combine their different sensor types into one operator but cannot then do simultaneous Scans of different types.

Gunners

Each small or large turret require 1 gunner, small bays require 3 gunners and large bays require 10 gunners. Fixed mounts require 1 gunner for small weapons, 2 gunners for medium, 5 gunners for large and 10 gunners for very large fixed weapon mounts. Ships less than 500 m3 (100 dTon) can have the Pilot fire any number of Fixed mount small weapons without penalties on Pilot and Gunner tasks, think Luke Skywalker and his x4 lasers, x2 launchers.

Ships with static weapon battery organization can manage with just the required number of gunners for one element of the batteries but they can or change their battery configuration after design.

Defenses have the same gunner requirements. Lasers turrets can be used for both attacks and missile defense but the defense will suffer a -3 DM if doing so.. Ships often combine the role of sensor operator with that of gunners but they cannot then fight and Scan at the same time.

Technicians and robots

A ship needs 1 technician per 50 MCr if ship or fraction thereof. Technicians form the repair crew during battles, moving from section to section repairing damage. Technicians need no workstations, these are assumed built into whatever machinery the ship consists of. Smaller ships often omit repair crew altogether but cannot then jury rig battle damage nor stop continuing damage.

The ship may reduce the required number of technicians with robots, how many robots per human depend on tech level.

Command crew

Naval vessels often have command crew to improve Initiative which is very important in Intercept as neither maneuver nor combat is simultaneous.

Sensor and gunner dual roles

Gunners or Sensor ops in parathesis suffer -2 on gunnery from dual role

Sensor operators are often also gunners, especially on civilian ships. The crew requirements assume that this dual roles are in effect as can be seen on the Ship.xls sheet where either gunners or sensor ops are in parenthesis and not counted towards crew total. Gunnery tasks, attacking, defending, shooting at missiles etc are all considered *one* task.

Pilots and Astrogators

Larger ships require more than one Pilot or Astrogator to operate properly. Use the penalties for Undermanning if these numbers cannot be met.

| Size | Volume | Pilot |
|------|-----------------------|--------------------|
| | | Astrog & Tactician |
| 8- | <5 K m3 / < 1 K dTon | 1 |
| 9-10 | 5 K m3 / 1 K dTon | 2 |
| 11+ | 50 K m3 / < 10 K dTon | 3 |

Technicians and robots

How many robots that can be handled per technician goes up with tech level. Repair Crew cannot be revived by Frozen watch, they must be 'repaired', Crew may also be 'repaired'.

| TL | Bots per handler (Bot%) |
|-------|-----------------------------|
| 8-9 | 1 bot per handler (50%) |
| 10-11 | 2 bots per handler (33%) |
| 12-13 | 9 bots per handler (90%) |
| 14+ | Pure bot Repair Crew (100%) |

Sensor ops and sensors

Larger sensor arrays are more complicated and need more sensor operators to handle. Use the Undermanning DMs if not enough ops are available.

| Sensor size | Operators |
|-------------------|-----------|
| Small sensor | 1 |
| Medium sensor | 1 |
| Large sensor | 2 |
| Very large sensor | 3 |

Gunners and mounts

Larger mounts are more complicated and need more gunners to operate. Weapons within a mount fire as one with the number of weapons giving the attack or defense Battery bonus. Fixed mounts have a crew requirement based on the size of the weapon.

| Mount | Area | Weapons* | Crew |
|--------------|------|------------|------|
| Small turret | 0.5 | 1 (0.2) | 1 |
| Large turret | 1 | 3 (0.6) | 1 |
| Small bay | 10 | 300 (60) | 3 |
| Large bay | 50 | 3000 (600) | 10 |
| Fixed | ** | ** | ** |

*Max weapons volume in m3 (dTon)

**Fixed mount values depend on the size of the weapon. Fixed, non-spinal weapons can even be fired by the Pilot or Ship tactician himself without penalty for doing two tasks in a turn.

| | |
|-------------|-----|
| Pilots | 1 |
| Astrogators | 0 |
| Sensor ops | (4) |
| Gunners | 5 |
| Technicians | 5 |
| Total crew | 11 |

Four Sensor ops are not included in the total crew, add stations and life support for them if you want to avoid the dualrole penalty

Sensors table

These are the basic sensors for a ship. Visual, IR and Radar are affected by popup status of the ship but not Neutrino and Mass sensor (both located in the Core section).

| TL | Vis/IR | Radar | Neutr* | Mass* |
|-------------------------|--------|-------|--------|--------|
| 6 | | -3 | | |
| 7 | -4 | -2 | | |
| 8-9 | -3 | -1 | | |
| 10-11 | -2 | +0 | -4 | |
| 12-13 | -1 | +1 | -3 | -3 |
| 14-15 | +0 | +2 | -2 | -2 |
| 16+ | +1 | +3 | -1 | -1 |
| m3(dTon) | 5(1) | 5(1) | 50(10) | 50(10) |
| Price(MCr) | 1 | 1 | 10 | 10 |
| Small* -2** Scan | | Multi | x0.1 | 0.1 SA |
| Medium +0** Scan | | Multi | x1 | 1 SA |
| Large +2** Scan | | Multi | x10 | 10 SA |
| VLarge +4** Scan | | Multi | x100 | 100 SA |

*No reduced size for Neutrino and Mass

**Double Scan modifier for Radar

Sensors

Sensors are required to detect and track other objects. Sensors can see in all directions and are not mounted on specific facings, the only exception is the straight aft centerline where a ship is blind on all sensors unless it is drifting and powered down.

Sensor types

Visual/IR

Sunglare, planet LOS, planet shadow

Visual/IR sensors are basically telescopes that can operate in Visual *or* IR mode. Visual/IR are affected by planet LOS and may also suffer Sun glare. Visual typically pick up sunlight reflected from the hull or thrusters. Visual masking consist of a very black coating that absorbs the visible light. IR uses the infrared spectrum and typically pick up power-plant radiators. IR can also detect ships with turned off powerplants from their ambient hull temperature.

Radar

Planet LOS

A Contact or Tracked result give away the Scanners position

Radar emit microwaves that bounce off the target back towards the sending ship. Radar scans are easy to detect but radars also spot targets faster from the doppler information they give back.

Radar falls off faster than normal sensors which is shown in their Scan size column. Radar masking is radar absorbing materials and cleverly angled surfaces. Open frame ships have significantly higher radar signature.

Neutrino

Sunglare, even when in planet shadow

Neutrino sensors detect neutrinos emitted from fission/fusion powerplants and fission/fusion rockets. Neutrino scans are severely degraded when scanning towards the sun, they can scan through planets but that also mean that they aren't shielded from sun degradation when in planetary shadow. Neutrino sensors are located in the Core section and use full armor whether popup or not. Neutrino masking uses neutrino absorbers to mask emissions.

Mass

Cannot Scan to or from gravity field

Mass detectors detect gravitational pull from ships mass, floorfields and Impulse drives. Mass detectors are unaffected by the Sun and can see though planets, they cannot however scan to or from any planets gravity well. Mass detectors are located in the Core section and see right through the ships hull. Mass masking consist of graviton shielding devices.

Weapons

Ship weaponry are divided in beams and missiles wich uses differemt rules for attack. Weapons are placed inside weapon mounts, one or more per mount and each mount can only be directed at one target.

Mounts

Mounts are independently aimed holders of weapons. Mounts need surface area on the ship, grouping weapons into as large mounts as possible cost you less surface area. Fixed mounts take up less area but must be aimed by the ship itself, all Fixed mounts of a ship must fire at the same target. When designing a warship there's a constant tug of war between streamlining, sensors and mounts, all because of the limited amount of surface area. Adding wings can increase the surface area just enough to fit your stuff in. Yes, there are some open frame hulls with wings just because of that.

Turrets Turrets are small steerable mounts that can hold 1 m3(0.2 dTon) or 3 m3(0.6 dTon) of weaponry. Only turret mounted lasers can defend against missile attacks on the own ship, all lasers can defend against missiles not the the own ships square. All weapons of a turret must attack the same target.

Bays Bays are much larger and can hold 300 m3(60 dTon) or 3000 m3(600 dTon) of weaponry. All weapons of a bay must attack the same target.

Fixed mounts Fixed mounts are aimed by turning the ship. Fixed mounts can therefore be fired by the Pilot or the Ships tactician without penalty, Fixed spinal weaponry *cannot* be fired by the Pilot / Ships tactician without penalty.

Weapon batteries

Weapons inside a mount fire together at a single target with a single roll. The number of weapons instead gives a DM from the Battery table. All weapons of the exact same type that bear on a target should be grouped together to form even larger batteries. Battery grouping is rearranged at whim but requires the same number of gunnery crew regardless of how they are rearranged. Players may agree to forbid battery rearrangement for ships 5000 m3 (1000 dTons) or larger.

Only one screen battery per ship may defend against each attack.

A single battery may defend against each and every attack volley.

The above make very good reasons to group beam weapons into few batteries and also to group screens into few batteries.

Underpower

If a ship doesn't have enough power to operate all its weapon it will simply fire at a lower rate of fire decreasing the chance of a hit, this is called Underpower. A ship has one rating for thrusting and one for drifting.

Weapon mounts

TBD Some text about mounts and there mounting location.

TBD some texts about crewing

| Mount | Area | Weapons* | Crew |
|--------------|------|------------|------|
| Small turret | 0.5 | 1 (0.2) | 1 |
| Large turret | 1 | 3 (0.6) | 1 |
| Small bay | 10 | 300 (60) | 3 |
| Large bay | 50 | 3000 (600) | 10 |
| Fixed | ** | ** | ** |

*Max weapons volume in m3 (dTon)

**Fixed mount values depend on the size of the weapon. Fixed, non-spinal weapons can even be fired by the Pilot or Ship tactician himself without penalty for doing two tasks in a turn.

Battery table

| Number of units in battery | DM |
|----------------------------|----|
| Battery members 2 | +2 |
| Battery members 3-8 | +3 |
| Battery members 9-29 | +4 |
| Battery members 30-69 | +5 |
| Battery members 90+ | +6 |

Underpower

Beam weapons and screens can be used with less than 100% power at a penalty, as long as at least 10% of full power is available.

| Power | DM* |
|------------------|---------|
| Full power 100%+ | - |
| Underpower 50%+ | -2 |
| Underpower 20%+ | -4 |
| Underpower 10%+ | -6 |
| Underpower < 10% | No fire |

*Missiles and sandcasters unaffected

Small laser

| Vol | D | Power | SA | Price |
|--------|-----|-----------|------|------------------|
| (1) m3 | 1 | 10 | 0.1 | 1 MCr |
| TL | PEN | DAMEffRng | Type | |
| 8-9 | 22 | 22 | 0.3 | (IR) Infrared |
| 10-11 | 23 | 23 | 1 | (VIS) Visual |
| 12-13 | 24 | 24 | 1 | (UV) Ultraviolet |
| 14-15 | 25 | 25 | 1 | (EUV) Extr.-UV |
| 16+ | 26 | 26 | 3 | (SX) Soft-X ray |

Medium laser

| Vol | D | Power | SA | Price |
|--------|-----|-----------|------|------------------|
| (2) m3 | 1 | 20 | 0.2 | 2 MCr |
| TL | PEN | DAMEffRng | Type | |
| 8-9 | 24 | 24 | 1 | (IR) Infrared |
| 10-11 | 25 | 25 | 1 | (VIS) Visual |
| 12-13 | 26 | 24 | 1 | (UV) Ultraviolet |
| 14-15 | 27 | 27 | 3 | (EUV) Extr.-UV |
| 16+ | 28 | 28 | 3 | (SX) Soft-X ray |

Large laser

| Vol | D | Power | SA | Price |
|--------|-----|-----------|------|------------------|
| (3) m3 | 1 | 50 | 0.3 | 1 MCr |
| TL | PEN | DAMEffRng | Type | |
| 8-9 | 26 | 26 | 1 | (IR) Infrared |
| 10-11 | 27 | 27 | 1 | (VIS) Visual |
| 12-13 | 28 | 29 | 3 | (UV) Ultraviolet |
| 14-15 | 29 | 29 | 3 | (EUV) Extr.-UV |
| 16+ | 30 | 30 | 3 | (SX) Soft-X ray |

Beams

All beam weapons use lots of power and fire multiple rounds per turn. Beam weapons can be fired with less than full power (by reducing their rate of fire) at considerable hit penalties. Use the Underpower modifiers for that and note that no beam weapon may fire with less than 10% required power.

Laser Lasers are limited in range to about 30 000 km, and even shorter at longer wavelengths and mirror diameters. Lasers are the main defense against missiles but only when mounted in turrets (you can fire lasers at missile volleys as if they were regular ships and then they do not have to be in turrets), use the 10 MW (0.4 EP) lasers for missile defense as PEN and DAM doesn't matter against missiles, any hit stops a missile. Attacks by lasers give away the position of the attacker.

Particle Particle guns have longer effective length thanks to their shorter de Broglie wavelength but are too big for turret mounting. Damage to Crew and Repair Crew is treated as one level higher because of the radiation. Attacks by particle guns give away the position of the attacker.

Meson Meson guns fire a pulse of fast decaying particles and shortly after a short damper pulse to prolong their lifetime. As the damper pulse moves at lightspeed while the particles move at just below lightspeed eventually these particles will leave the damper pulse and decay, preferably inside the target.

Meson guns and screens as well as nuclear dampers can all be fired when Popped in, because they all 'shoot' straight through the hull but you must track using Neutrino or Mass sensors because Visual/IR and Radar tracks are lost when popped in and no attacks can be made without track.

Damage to Crew and Repair Crew is treated as one level higher because of radiation damage. Attacks by meson guns only give away the position of the attacker if the target used a meson screen to defend.

Missiles

Missiles come in three ready made sizes: small, medium and large missiles massing 50 kg, 500 kg or 5 tons respectively. Missiles doesn't have a design system per se but the ready made below can be modified in various ways. Most modifications affect the G rating and some also the price, see sidebar at right.

Magazine

Missile launchers normally hold three missiles per tube, individually selectable, but after those the launcher cannot be reloaded during action. Launchers only fire one missile per turn and each mount can only track one volley at a time but if you still want more than three missiles per tube you should note this under Magazine under the Core section of the Ship.xls. Simply write the number of reloads including the original three. You can select what standard missile type your design will use, the price for a full load of missiles will be noted but *not* included in the ship price, neither are spare parts, crew salaries, tea for the captain, pin-ups for crew locker doors, ship's cat etc.

Launcher range

All missiles are operator guided and have a maximum range that depends on the missile type and TL of the launcher. Missiles beyond this range are automatically lost. Missiles must be inside the launcher arc only when impacting.

| TL | Small missile | Medium missile | Heavy missile |
|-------|---------------|----------------|---------------|
| 7 | 10 | 30 | 100 |
| 8-9 | 15 | 45 | 150 |
| 10-11 | 20 | 60 | 200 |
| 12+ | 25 | 75 | 250 |

Small missile

10 KCr base cost

Small missiles mass 50 kg and are all powered by fission thrusters.

| TL | Perf | PEN DAM | Vis* | IR* | Radar | Neutrino | Mass |
|-------|-------|---------|-----------|-------|-------|----------|------|
| 7 | 2G15m | 28 28 | +6/-6+Sun | +6/-6 | +2 | +6/- | -6 |
| 8-9 | 3G15m | 28 28 | +6/-6+Sun | +6/-6 | +2 | +6/- | -6 |
| 10-11 | 4G15m | 28 28 | +6/-6+Sun | +6/-6 | +2 | +6/- | -6 |
| 12-13 | 5G15m | 28 28 | +6/-6+Sun | +6/-6 | +2 | +6/- | -6 |
| 14-15 | 6G15m | 28 28 | +6/-6+Sun | +6/-6 | +2 | +6/- | -6 |
| 16+ | 6G15m | 28 28 | +6/-6+Sun | +6/-6 | +2 | +6/- | -6 |

*Thrusting/Drifting

Medium missile

100 KCr base cost

Medium missiles mass 500 kg, TL 9- are fission and 10+ are fusion powered.

| TL | Perf | PEN DAM | Vis* | IR* | Radar | Neutrino | Mass |
|-------|-------|---------|------------|--------|-------|----------|------|
| 7 | 2G30m | 34 34 | +8/-4+Sun | +8/-4 | +4 | +8/- | -4 |
| 8-9 | 3G30m | 34 34 | +8/-4+Sun | +8/-4 | +4 | +8/- | -4 |
| 10-11 | 4G30m | 34 34 | +10/-4+Sun | +10/-4 | +4 | +10/- | -4 |
| 12-13 | 5G30m | 34 34 | +10/-4+Sun | +10/-4 | +4 | +10/- | -4 |
| 14-15 | 6G30m | 34 34 | +10/-4+Sun | +10/-4 | +4 | +10/- | -4 |
| 16+ | 6G30m | 34 34 | +10/-4+Sun | +10/-4 | +4 | +10/- | -4 |

*Thrusting/Drifting

Large missile

1 MCr base cost

Large missiles mass 5 ton, TL 9- are fission and 10+ are fusion powered.

| TL | Perf | PEN DAM | Vis* | IR* | Radar | Neutrino | Mass |
|-------|-------|---------|------------|--------|-------|----------|------|
| 7 | 2G60m | 40 40 | +10/-2+Sun | +10/-2 | +6 | +10/- | -2 |
| 8-9 | 3G60m | 40 40 | +10/-2+Sun | +10/-2 | +6 | +10/- | -2 |
| 10-11 | 4G60m | 40 40 | +12/-2+Sun | +12/-2 | +6 | +12/- | -2 |
| 12-13 | 5G60m | 40 40 | +12/-2+Sun | +12/-2 | +6 | +12/- | -2 |
| 14-15 | 6G60m | 40 40 | +12/-2+Sun | +12/-2 | +6 | +12/- | -2 |
| 16+ | 6G60m | 40 40 | +12/-2+Sun | +12/-2 | +6 | +12/- | -2 |

*Thrusting/Drifting

Missile options

All options are cumulative.

Cold start

Cold start missiles moves as regular ships and can turn and drift in any combination as long as GTurns remain. Calculate their number of GTurns they have and count use on the DataCard Missile volley areas. A 4G30min medium missile with the Cold start option would be 2G30min and thus would have 4 GTurns of field.

(-2G, double price)

Extra PEN and DAM

You may increase PEN and DAM by reducing Gs as much as you like, even for nukes.

(-1G, +1 PEN & DAM)

Endurance

Double / triple / quad endurance

(-2G/-3G/-4G, x2/x3/x4 endurance)

Half / quarter endurance

(+2G/+4G half/quarter endurance)

Airframe

Missiles may have airframe to perform aerobrakes and allow launches to and from planets with atmospheres. Treat as airframe type, wings may be added for greater brake Gs. Sensors cannot be used when inside atmosphere during a turn;

(-1G for airframe, -1G per 5% wings)

Decoy missiles

You can increase the signatures of your missiles to create decoys, if you reduce performance to 0G there will be no Neutrino signature.

Vis & Radar decoy

(-1G per +1 to +2 on Vis & Radar Signatures)

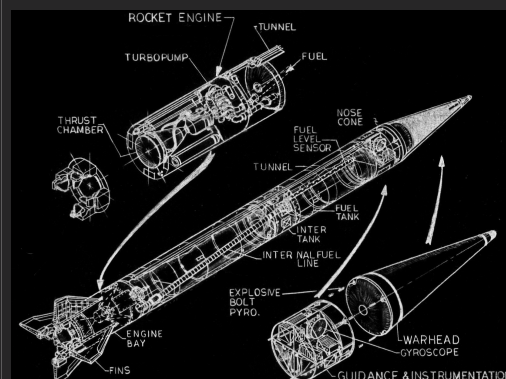
IR decoy

(-1G per +1 to +2 on IR Signatures)

Sensors Visual/IR or Radar sensors may be added with strength from the table below. A Large missile sensor has the same strength as a Small ship sensor, the lower than expected strength for radar comes from its much lower emissive power.

(-1G, double price)

| TL | Small | Medium | Large |
|-------|-------|--------|-------|
| 8-9 | -9 | -7 | -5 |
| 10-11 | -8 | -6 | -4 |
| 12-13 | -7 | -5 | -3 |
| 14-15 | -6 | -4 | -2 |
| 16+ | -5 | -3 | -1 |



Screen ARM values

Sandcasters, meson screens and nuclear dampers have an ARM value that should be at least as high as the attacking weapons PEN value, each point less gives -1 DM on defense.

Sandcasters

Sandcasters are mounted in turrets or bays and require no power, ignore underpower DMs.

| TL | ARM | Type |
|-------|-----|------------------|
| 8-9 | 23 | (IR) Infrared |
| 10-11 | 24 | (VIS) Visual |
| 12-13 | 25 | (UV) Ultraviolet |
| 14-15 | 26 | (UV) Ultraviolet |
| 16+ | 27 | (SX) Soft-X ray |

Nuclear dampers

Dampers cause incoming nukes to spontaneously decay before detonating. They are mounted in bays and require 50 MW to operate.

| TL | ARM | Volume | Price |
|----|-----|--------|--------|
| 11 | 40 | 30 | 90 MCr |
| 12 | 43 | 30 | 60 MCr |
| 13 | 46 | 30 | 30 MCr |
| 14 | 49 | 30 | 30 MCr |
| 15 | 52 | 30 | 30 MCr |
| 16 | 55 | 30 | 30 MCr |

Meson screens

Dampers cause incoming particles to spontaneously decay before reaching the ship. They are mounted in bays and require 500 MW to operate.

| TL | ARM | Volume | Price |
|----|-----|--------|---------|
| 12 | 43 | 300 | 900 MCr |
| 13 | 46 | 300 | 600 MCr |
| 14 | 49 | 300 | 300 MCr |
| 15 | 52 | 300 | 300 MCr |
| 16 | 55 | 300 | 300 MCr |

Defenses

Each weapontype has a specific defense system and there is always plain old armor that protects against everything, except meson gun attacks. Sandcasters and Meson screens have ARM values that determines their strength. Each ARM point less than attack PEN incurs a -1 DM on the defense roll, there is no corresponding advantage in having higher ARM than PEN.

Only one screen battery per ship may defend against each attack.

A single battery may defend against each and every attack volley.

One laser and one damper battery can attack each missile volley.

The above make very good reasons to group beam weapons into few batteries and also to group screens into few batteries.

Sandcasters

Sandcasters fire clouds of crystals that disrupt and scatter the incoming laser pulses. Sandcasters can have any mounts and sand canister reloads are beyond the scope of these rules, consider them having infinite ammunition.

Meson screens

Meson screens manipulate the lifetime of the incoming particles so they either decay before hitting the ship or after passing through the ship. Meson screens can have any mount and should if possible be grouped into large batteries. Meson screens can be fired when popped in.

Anti missile

Nuclear dampers have no effect on non nuclear missiles.

Lasers Missiles are primarily defended against by lasers mounted in turrets. One such battery may defend against every missile volley that attack you ship. Group them together into large batteries.

Sure, lasers, particle guns and even meson guns may be used to fire at missile volleys as if they were regular ships but the Size DM of missiles are just +0, +2 and +4 for small, medium and large missiles. Any hit destroys a missile so use Spray fire when attacking volleys as regular ships.

Nuclear dampers Dampers inhibit the decay of the warheads in nuclear missiles so they never go critical and thus cannot explode. Nuclear dampers have no effect on non nuclear missiles and cannot be used to attack missiles that are not attacking you. They can be used even when the ship is popped in.

Ship statistics

If you have a ship designed by some other game system you can, with enough data and some clever guessing, turn that design into Intercept gameable quantities.

Signatures

Some ship components have signatures that need to be calculated and some of them are different depending on what operating mode the ship is working under.

Visual signature

The visual signature comes light reflected from the hull and drive plumes when thrusting with fission or fusion thrusters. Visual(Hull) depends on how large the Sun factor is; +1 per orbit inside hospitable zone, -1 per orbit outside hospitable zone down to +0.

Visual(Hull) = Size-6+Sun

Visual(HullShadow) = Size-6

Visual(Thrust) = Thrust signature table

Basic/advanced visual masking -2 / -4

IR signature

The IR signature comes from basic thermal radiation from the hull, powerplant heat and drive plumes from fission or fusion thrusters. IR(Hull) is +1 per orbit inside hospitable zone unless in planetary shadow.

IR(Hull) = Size-6

IR(Power) = Powerplant signature table

IR(Thrust) = Thrust signature table

Basic/advanced/extreme IR masking -2 / -4 / -6

Radar signature

The radar signature comes from radar reflected off the hull.

Radar(Hull) = Size

Openframe +2

Popdown unless openframe -2

Basic/advanced/extreme Radar masking -2 / -4 / -6

Neutrino signature

The neutrino signature comes from fission and fusion powerplants and fission and fusion thrusters.

Neutrino(Power) = Powerplant signature table

Neutrino(Thrust) = Thrust signature table

Basic/advanced/extreme Neutrino masking -2 / -4 / -6

Mass signature

The mass signature comes from the mass of the ship itself, whether the ship has a floorfield operating and from mass drives.

Mass(HullNoFloorfield) = Size-6

Mass(HullFloorfield) = Size

Mass(Thrust) = Thrust signature table

Basic/advanced/extreme Mass masking -2 / -4 / -6

Thrust and density

This design system is volume based and assumes a density between 0.25 and 1.0. If you go outside this you must modify your thrust Gs and frame Gs:

Density ≥ 1.0 thrust Gs and frame Gs divided by 2

Density < 0.25 thrust Gs and frame Gs multiplied by 2

Tweak density by buying more advanced armor and frame material.

Hull size table

| Vol(m3) | Size | DAB | Lightlag | SA* | Frame** |
|---------|------|-----|----------|-------------------|---------|
| 15 | +4 | 12 | 7 | 0.03 | 0.3% |
| 20 | +4 | 13 | 7 | 0.05 | 0.3% |
| 30 | +4 | 14 | 7 | 0.07 | 0.3% |
| 50 | +5 | 15 | 10 | 0.10 ¹ | 0.5% |
| 70 | +5 | 16 | 10 | 0.15 | 0.5% |
| 100 | +5 | 17 | 10 | 0.2 | 0.5% |
| 150 | +6 | 18 | 10 | 0.3 | 0.7% |
| 200 | +6 | 19 | 10 | 0.5 | 0.7% |
| 300 | +6 | 20 | 10 | 0.7 | 0.7% |
| 500 | +7 | 21 | 15 | 1.0 ² | 1% |
| 700 | +7 | 22 | 15 | 1.5 | 1% |
| 1000 | +7 | 23 | 15 | 2 | 1% |
| 1500 | +8 | 24 | 15 | 3 | 1.5% |
| 2000 | +8 | 25 | 15 | 5 | 1.5% |
| 3000 | +8 | 26 | 15 | 7 | 1.5% |
| 5000 | +9 | 27 | 20 | 10 ³ | 2% |
| 7000 | +9 | 28 | 20 | 15 | 2% |
| 10 K | +9 | 29 | 20 | 20 ⁴ | 2% |
| 15 K | +10 | 30 | 20 | 30 | 3% |
| 20 K | +10 | 31 | 20 | 50 | 3% |
| 30 K | +10 | 32 | 20 | 70 | 3% |
| 50 K | +11 | 33 | 30 | 100 | 5% |
| 70 K | +11 | 34 | 30 | 150 | 5% |
| 100 K | +11 | 35 | 30 | 200 | 5% |
| 150 K | +12 | 36 | 30 | 300 | 7% |
| 200 K | +12 | 37 | 30 | 500 | 7% |
| 300 K | +12 | 38 | 30 | 700 | 7% |
| 500 K | +13 | 39 | 50 | 1000 | 10% |
| 700 K | +13 | 40 | 50 | 1500 | 10% |
| 1 M | +13 | 41 | 50 | 2 K | 10% |

*Open frame reads SA two rows down

*Airframe reads SA one row up

**Multiply by thrust G, x2 for landing gear

Powerplant signature table

Powerplant sig comes straight from the power output from the table below

| Power MW | IR | Neutrino | |
|----------|----|----------|--------|
| | | Fission | Fusion |
| Human | -4 | - | - |
| 150 kW | +0 | -2 | +0 |
| 500 kW | +1 | -1 | +1 |
| 1.5 MW | +2 | +0 | +2 |
| 5 MW | +3 | +1 | +3 |
| 15 MW | +4 | +2 | +4 |
| 50 MW | +5 | +3 | +5 |
| 150 MW | +6 | +4 | +6 |
| 500 MW | +7 | +5 | +7 |
| 1.5 GW | +8 | +6 | +8 |
| 5 GW | +9 | +7 | +9 |

Thrust signature table

Thrust sig depends on drivetype and thrust. Drives have several different signatures

| | Vis | IR | Neutr | Mass |
|---------|--------|--------|--------|--------|
| Fission | Size+6 | Size+6 | Size+6 | - |
| Fusion | Size+8 | Size+8 | Size+8 | - |
| Floater | Size | - | - | Size+6 |
| Grav | Size | - | - | Size+6 |
| Impulse | Size | - | - | Size+6 |

| Thrust | Sig bonus |
|--------|-----------|
| <1.0G | -1 |
| 1.0G+ | +0 |
| 3.0G+ | +1 |
| 10.0G+ | +2 |

Intercept design notes

Scale

The basic goals for Intercept was to make a space combat system designed for roleplaying situations with two maybe three small vessels and where tactical choices and planning benefit the players more than luck of the roll. Lots of roleplaying situations have the players avoiding combat rather than seeking it; smuggling, blockade running, landing on interdicted planets etc and these should be as interesting and involved as regular combat.

Small engagements are more common in roleplaying but sometimes you just want to play huge warships duking it out. The 1 hour scale, logarithms for everything, damage classes, weapon battery rules, ship and fleet tactics skills are all there to make large warships no more complicated than small ones.

Initiative

I don't like combat systems that consist of two sides whittling away at each others hitpoints, it is unrealistic but most of all boring. I want a clever player to be able to outguess his opponent and actually beat him without taking a single hit. The sensor system, initiative rules, weapon arcs all contribute to give the smarter player the edge.

Those who have played with my Personal combat system (called Initiative for obvious reasons) know I really like combat with tactical decisions and having the Initiative rules on the center stage of the game.

Double blind

The double blind hidden movement system with planetary LOS has gone through so many vastly different versions that I've lost count (a cool but impractical one had laser etched plexiglass templates for scans and arcs). I believe I have struck a reasonable balance between complexity and playability although it still bothers me that ships cannot hide behind planets unless they are in the planets central box.

Thanks

I've played lots of encounters with Cecilia Lindblad and John Hultman which gave me massive of feedback on the first version of Intercept (version 1.x), the second version was ironed out with my kids Elias Lindblad and Josefin Lindblad over the years and finally, the version three was playtested by Cecilia Lindblad, Elias Lindblad, Josefin Lindblad and various colleagues at Machines Games. A lot of thanks should go to Björn Carlsson and Anders Emmerich for playing the many wild and crazy precursors to Intercept.

This game was influenced by Mayday (vector movement), High Guard (design system), Striker (design system, use of logarithms) and GURPS Spaceships (design system).

The websites of Atomic Rocket and Rocketpunk manifesto helped a lot in getting scientific facts and engineering values to mangle and misuse and Bruca Alan McIntosh and his 'Definitive sensor rules' for Fire, Fusion & Steel 2 system.

movement

Drift & gravity, Tracked movement, Untracked movement, Missile movement

Task table

When the rules ask for a task roll you roll against the Target Number on 2D6 +Skill +Modifiers. The amount you beat or missed the target nbr determines the result.

| Task | Steps | Indic | Cont. | Track |
|-------------------|-------|-------|-------|-------|
| VGood (6+) | 8 | 0+ | 1+ | 2+ |
| Good (3-5) | 6 | 0+ | 2+ | 4+ |
| Fair (0-2) | 4 | 0+ | 3+ | 6+ |
| <i>Miss (1-3)</i> | 3 | 0+ | 6+ | 12+ |
| <i>Bad (4-6)</i> | 2 | 0+ | 6+ | 12+ |
| <i>VBad (7+)</i> | 1 | 0+ | 6+ | 12+ |

Failed results are shown in *italic*

Movement steps

1 Drift

Repeat the ships last move and note the position, apply gravity if applicable.

2 Turns and rolls

Turn and/or roll depending on Pilot task result.

3 Thrust

Apply thrust in the direction the ship is facing. Any turning after thrusting costs double

Aerobrake

| Atmosphere | Atmos drag |
|------------------------|--------------|
| Vacuum | No aerobrake |
| Trace | 1 |
| Very thin to thin | 2 |
| Standard+ and gasgiant | 3 |
| Wings | Wing drag |
| 5% or more | +1 |
| 10% or more | +2 |
| 20% or more | +3 |
| Facing vs vector | Angle drag |
| 1+ facings off | +1 |

Damage roll

Roll damage if modifiers are 0+

VGood roll 2 D6 and use lowest

Good roll 1 D6 for damage

Fair or worse 2 D6 and use highest

Damage modifiers

+1 if Gs higher than FrameG and...

+1 per full Gs above FrameG

Speed + Brake Gs

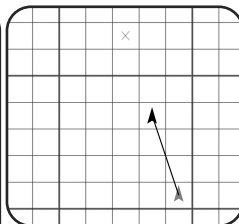
| Hull | 1-3 | 4-6 | 7-8 | 9 | 10+ |
|-------------|------|------|------|------|------|
| Open fr.** | +9 | Dstr | Dstr | Dstr | Dstr |
| Normal** | +3 | +9 | Dstr | Dstr | Dstr |
| Streaml.** | Safe | +3 | +9 | Dstr | Dstr |
| Airframe.** | Safe | Safe | +3 | +9 | Dstr |

Aerobrake/Landing use Speed

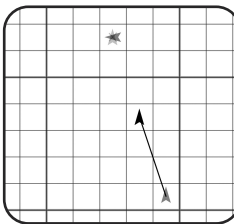
Takeoff use Speed + Atmos drag - 3

***1or 2+ facings off is 1 or 2 rows up.*

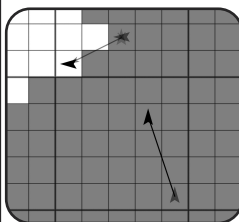
Face new vector after aerobrake



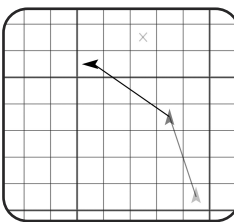
Drifting



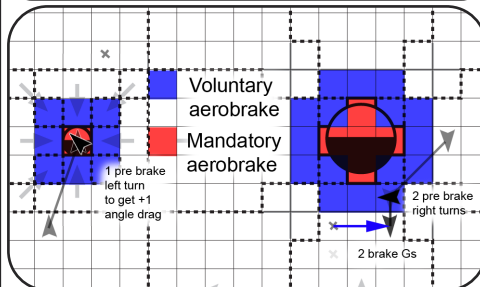
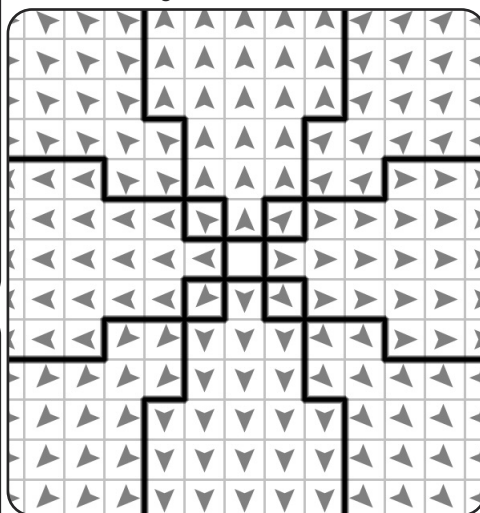
Turning



Thrusting



Move completed



Dock & landing

+6 when landing upside down, or...

Landing or Docking gear (0 to -6)

+1 if Speed* higher than FrameG and...

+1 per full Speed* above FrameG

+1 if ARM is lower dock/ram only**

-1 if ARM is higher dock/ram only**

+1 if DAB if lower dock/ram only

-1 per DAB higher dock/ram, no limit

Impact speed

| Hull | 0 | 1 | 2 | 3 | 4 | 5 |
|-----------|----|-----|-----|-----|-----|---|
| Damage +3 | +9 | +15 | +21 | +27 | +33 | |

**Speed 0 is treated as speed 0.5 here*

***Use the ARM of the hitlocations*

Sequence of play

Drift & gravity

Tracked movement (reverse Initiative)

Untracked movement (plotted)

Missiles movement (reverse Initiative)

Sensors (A/B order)

Beams, then missiles (Initiative)

Docking & ramming (Initiative)

Repairs & Continuing damage

Initiative

Untracked win initiative over tracked and thereafter there's a list of tie breakers:

Initiative descending priority

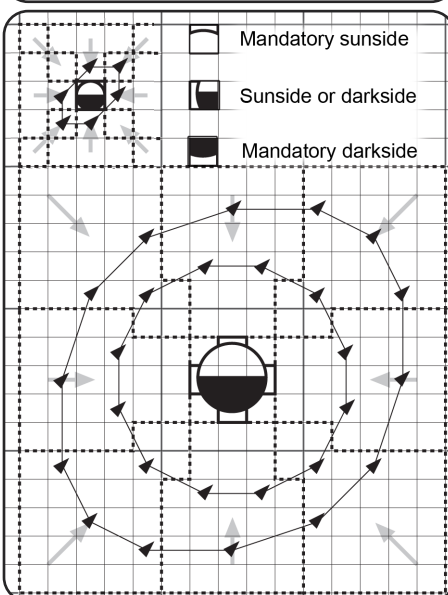
1 Untracked ships win (ignore 2-5)

2 Highest Pilot task result win

3 Higher Ship tactics

4 Crew station (Bridge>Full>Limited)

5 Side A win on odd, B on even turns



Stable orbits and landing zones

Dock and ramming task

Use the same task. Dock require same facing & roll and both hitlocs Crew or Core.

Roll vs Size +Pilot

+2/+2 if you/target drifting (no turns/rolls)

+Impact vector hit DMs if ramming

Task result

VGood

Pick target hitloc, Pick your hitloc

Target dmg use 2D6,decide high or low

Your dmg use 2D6 use lowest

Good

Random target hitloc, Pick your hitloc

Target damage use 1D6

Your damage use 1D6

Fair

Random hitlocation on you and target

Target damage use 1D6

Your damage use 2D6 use highest

Miss or worse

Missmargin <=Size difference is treated as Fair hits, otherwise a clean miss

SENSORS

Scan = Sensor + Scan modifiers, Signal = Scan + Signature

Scan radius table

| Radius | Vis, IR | Neutr, Mass Radar | Max range |
|---------------------|---------|-------------------|-----------|
| Pinpoint 1x1 | +3 | +6 | 1 box |
| Pinpoint 2x2 | +2 | +4 | 2 boxes |
| Pinpoint 3x3 | +1 | +2 | 3 boxes |
| Box 1x1 | -1 | -2 | 5 boxes |
| Box 2x2 | -2 | -4 | 10 boxes |
| Box 3x3 | -3 | -6 | 15 boxes |
| Box 5x5 | -5 | -10 | 25 boxes |
| Light damage* | -1 | -1 | - |
| Severe* damage-3 | | -3 | - |
| Integration +1/turn | | None | |

*Use lowest surface damage

Integration bonus

Each consecutive Same Size, Pos, Type and ship grants +1 on Scan, up to +3. Radar don't get Integration bonus but all other sensors do.

Signatures

The signatures of a ship are affected by what it does, and where it is located.

Sunshine Visual(Hull) +6 (Sun)

Shadow Visual(Hull) +0

Drifting

Ignore thrust signatures.

Popped in (P)

Radar(Hull) -6 except open frame.

Silent running (S)

Ignore IR(Power)

Ignore Neutrino(Power)

Mass(Hull) -6 if Floorfield

Questions for scanner

Does your Scan touch your ships Sunglare?

If yes subtract Sun from the Scan strength

Always ask this question

Does the Scan touch sun/shadow column?

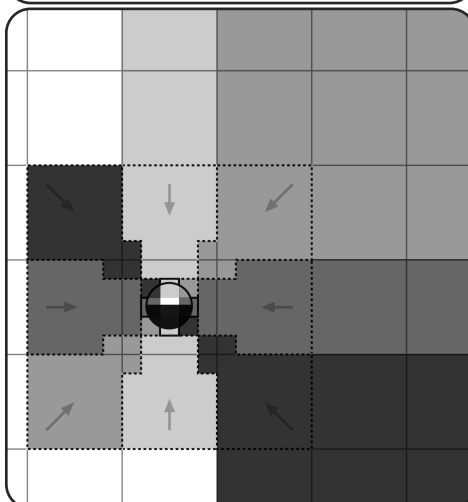
Are you in one of the opposite columns?

Only ask if the Scan touches a Sun or Shadow column. Only ask if the map has asteroids or planets.

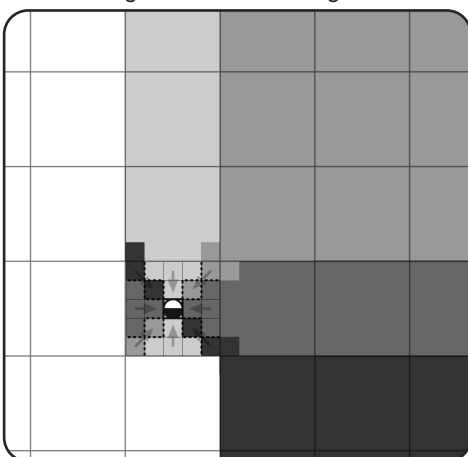
Does the planet block parts of your Scan?

If yes what near or far arc is blocked?

Ask even when the Scan does not touch a gravity well as it might still originate from a gravity well. Only ask if the map has planets



Large Planet Line Of Sight



Small Planet Line Of Sight

Sequence of play

Drift & gravity

Tracked movement (reverse Initiative)

Untracked movement (plotted)

Missiles movement (reverse Initiative)

Sensors (A/B order)

Beams, then missiles (Initiative)

Docking & ramming (Initiative)

Repairs & Continuing damage

Initiative

Untracked win initiative over tracked and thereafter there's a list of tie breakers:

Initiative descending priority

1 Untracked ships win (ignore 2-5)

2 Highest Pilot task result win

3 Higher Ship tactics

4 Crew station (Bridge>Full>Limited)

5 Side A win on odd, B on even turns

Max tracked range table

| Visual, IR | Neutrino, Mass Radar | Max range |
|------------|----------------------|----------------------|
| -3 | -6 | 1 box |
| +0 | +0 | 3 boxes |
| +2 | +4 | 5 boxes ¹ |
| +4 | +8 | 15 boxes |
| +6 | +12 | 50 boxes |
| +8 | +16 | 150 boxes |
| +10 | +20 | 0.15 AU ² |
| +12 | +24 | 0.7 AU |
| +14 | +28 | 2 AU |
| +16 | +32 | 5 AU ³ |
| +18 | +36 | 15 AU |
| +20 | +40 | 50 AU |

1 One lightsecond (Ls)

2 One lightminute (Lm)

3 One lighthour (Lh) (40 Lm really)

Signal chart

If Signal is 0+ you get an Indication and roll a Sensor task to see what Signal gives you Contact or Tracked. Signal 0+ always give at least Indication.

Roll 6+ +Sensors skill and DMs

| Result | Indication | Contact | Tracked |
|--------|------------|---------|---------|
| VGood | 0+ | 1+ | 2+ |
| Good | 0+ | 2+ | 4+ |
| Fair | 0+ | 3+ | 6+ |
| Fail | 0+ | 6+ | 12+ |

Sigs landed & docked

Landed or docked All but Neutrino

Docked with a larger ship -1

Asteroid -2

Planet -3

Side Visual IR

Sunside +Sun -Sun

Darkside +0 -Sun/2

Atmosphere Visual IR

Trace -1 -2

Very thin to thin -2 -4

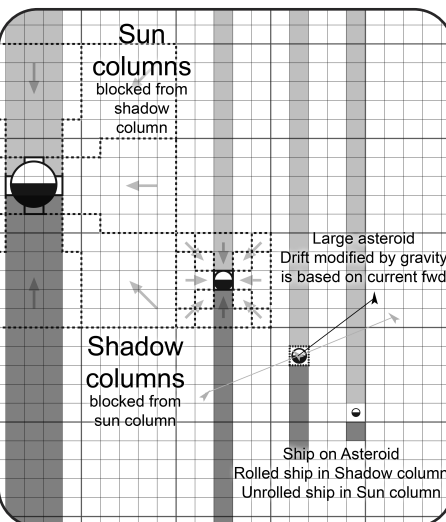
Standard+ and gasgiant -3 -6

Missile signatures

Decoy missiles can have higher Vis, Radar or IR signatures but not Neutr & Mass

| Type | Vis* | IR* | Radar | Neutr* | Mass |
|---------------|------------|--------|-------|--------|------|
| Small missile | +6/-6+Sun | +6/-6 | +2 | +6/- | -6 |
| Medium TL 9- | +8/-4+Sun | +8/-4 | +4 | +8/- | -4 |
| Medium TL 10+ | +10/-4+Sun | +10/-4 | +4 | +10/- | -4 |
| Large TL 9- | +10/-2+Sun | +10/-2 | +6 | +10/- | -2 |
| Large TL 10+ | +12/-2+Sun | +12/-2 | +6 | +12/- | -2 |

*Thrusting/Drifting



Scans inside atmosphere

| Atmosphere | Visual | IR |
|------------------------|--------|----|
| Trace | -1 | -2 |
| Very thin to thin | -2 | -4 |
| Standard+ and gasgiant | -3 | -6 |
| Sunside | No | No |
| Darkside | OK | OK |

COMBAT

Beam to hit, Beam defense, Missile to hit, Missile defense

Underpower

| Power | Attack turns in a row* |
|------------------|------------------------|
| Full power 200%+ | All+ |
| Full power 100%+ | All |
| Underpower 50%+ | 2 turns |
| Underpower 20%+ | 1 turn |
| Underpower < 20% | No fire** |

*Severe power dmg use one row down

**Also prohibit defense except sand

Beam attack table

Lasers, particle accelerators and mesonguns all use this table to determine the target number for hits.

| Range | To hit |
|-------|--------|
| 0* | 9+ |
| 1 | 12+ |
| 2-3 | 15+ |
| 4-10 | 18+ |
| 11-30 | 21+ |

*Treat as range 1 unless co-vector

*Use Same square attack arc rules

| Beam attack modifiers | DM |
|-----------------------|----------|
| Target Size | +Size |
| Target drifting | +2 |
| Battery units | +DM |
| Dualrole | -2 |
| Crew damage | -1 or -3 |
| Weapon damage | -1 or -3 |

Beam defense 9+

Arc is based on attacker direction.

| Screen to hit modifiers | DM |
|----------------------------|----------|
| Battery units | +DM |
| Defender drifting | +2 |
| Untracked / aft centerline | -3 |
| Dualrole | -2 |
| Crew damage | -1 or -3 |
| Weapon damage | -1 or -3 |

Battery or volley table

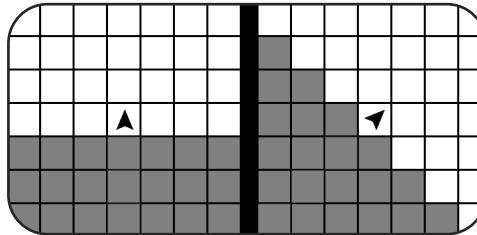
| Number of units in battery | DM |
|------------------------------|----|
| Battery or volley members 2 | +2 |
| Battery or volley members 3+ | +3 |
| Battery or volley members 6+ | +4 |
| Battery or volley members 9+ | +5 |
| etc | |

Sprayfire

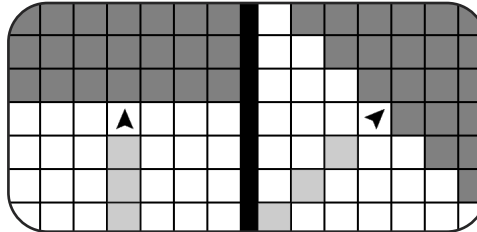
Req proximity detonation or 3+ volley
No minimum battery for beams

| Result | Sprayfire |
|--------|------------------------------|
| VGood | 3 Fair: 1 picked, 2 adjacent |
| Good | 2 Fair: 1 random, 1 adjacent |
| Fair | 1 Fair: 1 random |

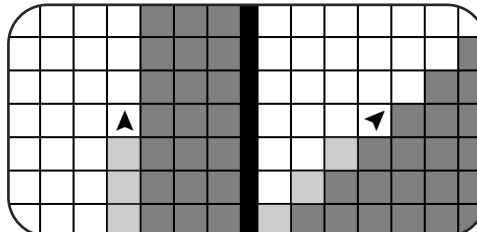
*Locations outside 1-6 miss



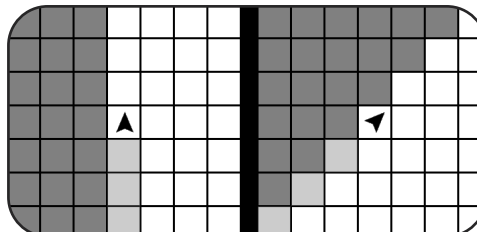
Top turret/bay arc



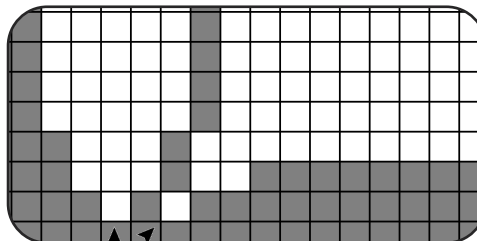
Bottom turret/bay arc



Left turret/bay arc



Right turret/bay arc



Fixed firing arcs

Surface centerline attacks

Attacks will generally hit 2 hitlocs.

Front centerline will hit 3 locations:

Top, Left and Right hitlocations.

Aft centerline will hit 3 locations:

Bottom, Left and right hitlocations.

Left centerline will hit 3 locations:

Left, Top and Bottom.

Right centerline will hit 3 locations:

Right, Top and Bottom.

| Defense Result | Effect on attack |
|----------------|------------------------|
| VGood | Attack stopped |
| Good | Attack two steps worse |
| Fair | Attack one step worse |
| Miss or worse | No effect on attack |

Sequence of play

Drift & gravity

Tracked movement (reverse Initiative)

Untracked movement (plotted)

Missiles movement (reverse Initiative)

Sensors (A/B order)

Beams, then missiles (Initiative)

Docking & ramming (Initiative)

Repairs & Continuing damage

Initiative

Untracked win initiative over tracked and thereafter there's a list of tie breakers:

Initiative descending priority

1 Untracked ships win (ignore 2-5)

2 Highest Pilot task result win

3 Higher Ship tactics

4 Crew station (Bridge>Full>Limited)

5 Side A win on odd, B on even turns

Missile attack 15+

Missed volleys may continue moving if fuel and launcher range permits.

Attack arc is from missile Drift, same square use Top (Bottom if rolled)

Roll 15+ on 2D6 +Gunnery

| Missile to hit modifiers | DM |
|-----------------------------|----------|
| Small/Medium/Large missiles | +0/+2/+4 |
| Proximity detonation | +3 |
| Impact vector | +DM |
| Volley units | +DM |
| Remaining thrust Gs | +1/G |
| Target drifting | +2 |
| Dualrole | -2 |
| Crew damage | -1 or -3 |
| Weapon damage | -1 or -3 |

Missile defense 9+

Lasers may attack or defend but not both in a turn. One laser and one damper battery may attack each volley. Attack arc is based on impact direction.

| Turret modifiers | DM |
|-----------------------------|----------|
| Small/Medium/Large missile | +0/+2/+4 |
| Impact vector | +DM |
| Battery units | +DM |
| Defender drifting | +2 |
| Untracked or aft centerline | -3 |
| Dualrole | -2 |
| Crew damage | -1 or -3 |
| Weapon damage | -1 or -3 |

Impact vector

Impact vector is separation from last turn

| Effect | 0 | 1 | 2 | 3 | 4 | 5+ |
|--------------|----|-----|-----|-----|-----|----|
| DM | +4 | +2 | +1 | - | -1 | -2 |
| PEN&DAM*-12 | -6 | -3 | - | +3 | +6 | |
| Dock & ram+3 | +9 | +15 | +21 | +27 | +33 | |

*Nukes ignore PEN & DAM modifiers

DAMAGE

Penetration, Damage, Repairs & Powering up, Continuing damage

Effective range

Beam weapons have an effective range inside which they can focus. beyond that range penetration and damage begin to fall off.

| Range | PEN | DAM |
|------------------------|-----|-----|
| Inside Effective range | -0 | -0 |
| Inside 3 x EffRng | -3 | -3 |
| Beyond 3 x EffRng | No | No |

Impact vector

Impact vector is range of last turn

| Effect | 0 | 1 | 2 | 3 | 4 | 5+ |
|----------|-----|----|----|---|----|----|
| DM | +4 | +2 | +1 | - | -1 | -2 |
| PEN&DAM* | -12 | -6 | -3 | - | +3 | +6 |

*Missile PEN and DAM only, Nuclear missiles ignore PEN and DAM modifiers

Hitlocation table

Fair Roll hitlocation

Good Roll hitlocation, may pick adjacent

VGood Pick hitlocation

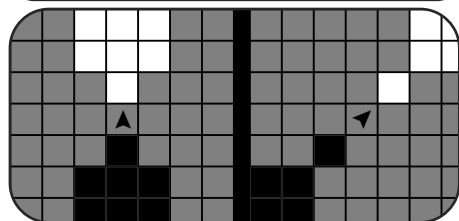
| 1D6* | Internal / Surface |
|------|--------------------|
| 1 | Hull / - |
| 2 | Hull / Surface |
| 3 | Crew / Surface |
| 4 | Core / Surface |
| 5 | Power** / - |
| 6 | Thrust / - |

*From front: Use lowest die from 2D6

*From rear: Use highest die from 2D6

*Otherwise roll 1D6

**Right ARM value when no power



White Roll 2D6 and use the lowest

Gray squares Roll 1D6

Black Roll 2D6 and use the highest

Surface centerline attacks

Attacks will generally hit 2 hitlocs.

Front centerline will hit 3 locations:

Top, Left and Right hitlocations.

Aft centerline will hit 3 locations:

Bottom, Left and Right hitlocations.

Left centerline will hit 3 locations:

Left, Top and Bottom.

Right centerline will hit 3 locations:

Right, Top and Bottom.

Penetration table

Meson hits are always Full penetration.

| PEN-ARM | Penetration |
|---------|-----------------------|
| 3+ | Full, normal damage |
| 0-2 | Partial, one row down |
| -1- | Stopped, No damage |

Damage table

Roll 1D6*+DAM-DAB for damage.

Surface hits cause neither Stun nor CD

A roll of 1 cause CD if Scratch+

A roll of 6 cause Stun if Scratch+

| | Crew | Surface |
|----------------------------------|--------------|-----------|
| DAM-DAB Hull | Core & Power | Thrust |
| Partial Penetration one row down | | |
| 15+ | Destr** | Destr** |
| 12-14 | Critical | Destr** |
| 9-11 | Severe | Critical |
| 6-8 | Light | Severe |
| 3-5 | (Scratch) | Light |
| 0-2 | No effect | (Scratch) |

*Fair: Roll 2D6 and use lowest

*Good: Roll 1D6

*VGood: Roll 2D6 and use highest

**Destroyed non-Hull give same row Hull

Continuing Damage on a roll of 1

5,6: Increase damage

1: CD stops

Successful repairs stop CD

Stun on a roll of 6

Hull 1 random step of turning

Crew All tracks and missiles lost

Core Computer pool and jump prep lost

Power Silent running

Thrust 1 random step of turning

Repairs and Power up

Light/Severe/Critical Roll 3+ / 6+ / 9+

Fair+ Jury Rig, remove CD

VGood Jury Rig, remove CD, continue repairs

Important modifiers

Repair crew Light / Severe dmg -1 / -3

Repair crew Critical damage No repair

Number of Gs above Floorfield -1/G*

Undermanning -DM

Preparation +DM

*Only where Floorfield is applicable

*No turns/rolls treat Gs as one less

| Ship size | Volume | Power up |
|-----------|------------------------|----------|
| 8- | < 5 K m3 / < 1 K dTone | 3+ |
| 9-10 | 5 K m3 / 1 K dTone | 6+ |
| 11+ | 50 K m3 / 10 K dTone | 9+ |

Result

VGood Power is on next turn, RC continue

Good Power is on next turn

Fair Use Severe power damage effects

Miss or worse No power

Sequence of play

Drift & gravity

Tracked movement (reverse Initiative)

Untracked movement (plotted)

Missiles movement (reverse Initiative)

Sensors (A/B order)

Beams, then missiles (Initiative)

Docking & ramming (Initiative)

Repairs & Continuing damage

Damage effects

Surface

Use lowest damage for Vis/IR/Radar

Light Attack/defense -1, Vis/IR/Radar -1

Severe Attack/defense -3, Vis/IR/Radar -3

Critical No attacks/defense/Vis/IR/radar

Destroyed No repair

Sensors use lowest damage

Hull

Light Max Streamlined hull, Pilot task -1

Severe Max Normal hull, Pilot task -3

Critical Max Open frame

No turn or thrust, no Pilot task

(worse than VBad for Initiative)

Destroyed Ship is destroyed.

Crew

Light Attacks/screens/sensors -1

Pilot task -1

Severe Attacks/screens/sensors -3

Pilot task -3

Severe No thrust, turn, attacks, defense.

Destroyed No repair*

*Neither frozen watch nor RC repairs

Core

Light Computer-1, Mass/Neutrino -1

Severe Computer-3, Mass/Neutrino -3

Critical Computer=0, No Mass/Neutrino

Destroyed No repair

Power

Severe+ alternative fuel halved

Light Thrust 2 turns in a row*

Severe Thrust 1 turn in a row*

Power up -3

Underpower one degree worse

Critical No thrust*, No attack/defense**

Destroyed No repair

*Fission or fusion thrust unaffected

**Missiles and Sandcasters unaffected

Thrust

Severe+ remass halved

Light Thrust 2 turns in a row

Jump task -1, Jn-1

Severe Thrust 1 turn in a row*

1/2 remass, 1/2 jumpfuel

Jump task -3, Jn/2

Critical No thrust, 1/2 remass

1/2 remass, 1/2 jumpfuel

No jumps

Destroyed No repair

*Ignore JR for jump drive damage