

Intercept rules are written in the same order as the sequence of play below. Skim over this page briefly and then start playing, the rules will tell you what to do at each step. The Design system, pages 51-63, is only needed if you want to design your own ships. Page 65-68 hold duplicates of tables normally used, organized by subject, in the order you'll need them, print them out for reference during play.

Sequence of play

Movement

Ships roll Pilot tasks or use Pilot default to determine Initiative, in A/B order.

Drift & gravity

Ships, missiles, asteroids etc are all affected by gravity and move in the same manner. Untracked ships do their drift on their hidden player map. Ships that are about to jump this turn say so and pay the dice pool cost, do not yet roll the task.

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. Each ship aerobrake, turn and thrust, in that order.

Untracked ships turn 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.

Missiles movement (reverse initiative order)

Non-Snap missiles (endurance > 1 turn) are launched and move here, thrusting and tracking fuel expenditure, Snap missiles move in the combat phase. Missiles must always be within launcher range but within launcher are only when attacking.

Remove any missiles beyond launcher range.

Decide on Silent running if powered thrust was *not* used during movement

Sensors

Scans (A/B order)

Perform up to two sensor scans per side in A/B order. Target asks questions regarding Sunglare and Planet LOS, and scanner modify the Scan accordingly.

Position and Tracked information is revealed after both side scans are done

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

Combat

Beam and missile attacks (initiative order)

Combat is resolved in Initiative order with each attacking with beams and then missiles before continuing to the next ship, this goes on until all ships have had the opportunity to attack. Snap missiles launched become Tracked if the launching ship is Tracked, non-Snap missiles move during the movement phase.

Each attack is done by to hit, defense rolls, hitlocation, penetration and damage before continuing with the next attack, damage results are effective immediately. Lasers cannot both attack and defend in a turn, it's attack *or* defense for.

Docking and ramming (initiative order)

Docking and ramming at the end of the combat phase, in initiative order. Landing, crashing and aerobraking are done during the movement phase next turn.

Check Lost tracking from damage results

Repair Crew

Repair crew may move to a location and attempt to jury-rig, power up etc, VGood result allow them to move and act again. Repair crew remain where they ended until the next repair phase. Boarding action prohibit repairs and powering up attempts.

At the end of the Repair Crew phase roll for any CD remaining, to see if they increase, remain or fizzle out, ships that jump roll Astrogration task and jump.



Good 3-5 hitmargin

Fair 0-2 hitmargin

Miss 1-2 missmargin

Bad 3-5 missmargin

VBad 6+ *missmargin*

Exploding dice

Computer dice pool

[illegible]

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.

Task roll

A lot of situations call for a task to be performed; pilot a ship, fire weapons etc. A task states a target number to roll equal or higher using two six sided dice, 2D6, plus various modifiers, most notably skill, positive modifiers are added to the roll and negative are subtracted from it.

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 1-2 missmargin You nearly made it, damned.

Bad 3-5 missmargin You botched the task, are you really qualified for that?

Very bad 6+ missmargin Oh my God! You totally screwed it up!

Exploding dice If you roll a natural 12 on any task (or a six on a damage roll) you add 1D6/2 rounded down, keep rolling and adding until you fail to roll a 6. Exploding dice are used on all task die rolls of 12 and damage rolls of 6, no other die rolls use the exploding dice rules.

Computer dice pool

All ships must have a computer of at least rating 0 but computers rated 1 or more 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, Jury-rig and Power up rolls, every task that rolls 2D6. Hyperspace jumps during the turn of jumping reduce the pool by 1D6 per Jn attempted, see page 40-41 and 54.

Pilot task

Ships roll Pilot tasks or use Pilot defaults to determine Initiative, in A/B order

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*. Ships may skip the task roll however and instead use the *Pilot default* table on the next page, this is especially useful when you are Untracked as rolling a Pilot task will give your ships *Size* away.

A/B order

Leftmost uncrossed box determine A/B order and fractional thrust

The picture at bottom left shows the lower left of a map-sheet. At the bottom row there 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 repeat the fractional thrust turns, see page 5 for details.

The player designated A roll Pilot tasks first and perform Sensor scans first, A/B turns is also 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 turn orders like this: ABC on turn 1, BCA on turn 2, CAB on turn 3 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. Each phase of a turn (movement, sensors, combat, repairs) are completed for all players before continuing to the next phase. The order within each phase is determined by Initiative for movement and combat and by A/B initiative for sensors and repairs.

Initiative

At the start of the movement phase all ships roll their Pilot task or use the Pilot default table, in A/B order and the results determine the Initiative for the ships, with ties broken by the list in the sidebar at right.

It doesn't matter in what order untracked ships plot their move but they must still roll Pilot task or use Pilot default, to determine steps of turning and attack order among multiple Untracked ships or if they become Tracked during a turn.

Movement is done in *reverse Initiative order* so the worst Initiative moves first and the best moves last. This way higher initiative see the lower initiative moves before moving on their own, perhaps maneuvering into the blind aft centerline of the enemy?

Sensors is done in *A/B order*. On A turns player A declares up to two scans, and executes them. Then player B does the same. On B turns it's the other way around with B starting and A following.

Combat is done in *Initiative order* where the highest Initiative ship fires its beams and then missiles, followed by the second highest and so on until all ships have had a go. As damage takes effect immediately the higher Initiative has a clear advantage.

Repairs are done in *A/B order*. On A turns player A perform all repairs in any order on all his ships and then player B does the same, on B turns the order is reversed.

Skill levels

Skill level for Pilot, Gunnery, Repairs etc are assumed to be 2 if nothing else is said. Rookies may sometimes have skill 1 and navies might have 3. Ship tactics and Fleet tactics are typically absent, see page 33 for details.

Pilot default

Instead of rolling a Pilot task you may opt to use Pilot default, by reading it off the table at right. Rolling a Pilot task give away your ships Size so you may want to go with Pilot default if you are untracked, or maybe you just want less randomness. The table give you the Steps of turning allowed for each turn of four. Look up the Size of your ship in the table then go 1 row uper per Pilot skill and 1 row down if Crew is Light damaged or 2 rows down if Severe damage.

How many Steps of turning the table give you will in parenthesis give you the task result degree for Initiative and rules needing the task result (aerobrakes, landings, dockings and ramming etc). Note however that Pilot default can only give you 6 steps of turning and thus no better than Good result, so a VGood Pilot task roll will always beat a Pilot default no matter the skill of the Pilot.

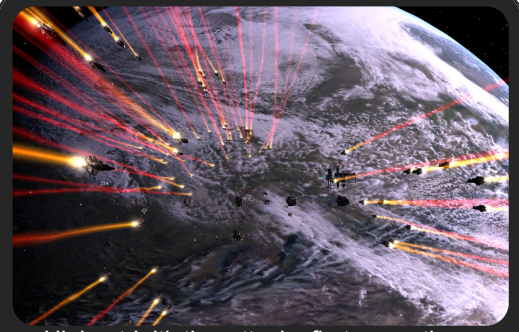
Multiple crew roles

Dualrole gunners

Sensor operators or Gunners in parenthesis are termed dual role, they share two jobs and thus cannot do both. If they attacked or defended they cannot Sense in the next turn, if they Sensed in a turn they may still attack and defend however. Civilian ships usually have dual role gunners, military ships usually don't.

Small craft

Ships less than 500 m3(100 dTon) can allow the Pilot to fire Fixed mount weapons at no penalty, ships less than 50 m3(10 dTon) let the Pilot handle Sensors as well. A small 4 laser fighter can be handled entirely by the Pilot, add a Robot for repairs and you have your basic X-wing!



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
- 2 Highest Pilot task result win
- 3 Highest Ship tactics skill win
- 4 Crew station (Bridge>Full>Limited)
- 5 A win on A turns, B on B turns

Pilot default

Ships may instead of rolling a Pilot task use this table for Initiative and Steps of turning, modify Size with Pilot DM. The Steps of turning from the table also give you the degree of success as shown below the table.

Size*	Steps of turn (degree of success)			
0-	6(G)	6(G)	6(G)	6(G)
1	6(G)	6(G)	6(G)	4(F)
2	6(G)	4(F)	6(G)	4(F)
3	4(F)	4(F)	4(F)	4(F)
4	4(F)	4(F)	4(F)	3(M)
5	4(F)	3(M)	4(F)	3(M)
6	3(M)	3(M)	3(M)	3(M)
7	3(M)	3(M)	3(M)	2(B)
8	3(M)	2(B)	3(M)	2(B)
9	2(B)	2(B)	2(B)	2(B)
10	2(B)	2(B)	2(B)	1(VB)
11	2(B)	1(VB)	2(B)	1(VB)
12	1(VB)	1(VB)	1(VB)	1(VB)

*One row up per Pilot skill

*Crew damage Light/Severe 1/2 rows down

*Hull damage Light/Severe 1/2 rows down

- 6 steps is a **Good** result
4 steps is a **Fair** result
3 steps is a **Miss** result
2 steps is a **Bad** result
1 steps is a **Very Bad** result

Undermanning

Lower than required crew make tasks harder

100% crew	No DM
At least 30% crew	-3
At least 10% crew	-6
Less than 10% crew	No task allowed

Dualrole gunners

Sensor operators or Gunners in parenthesis are termed dual role. If they attacked or defended in the previous turn they cannot roll a Sense task, if they Sensed in a turn they may still attack/defend.

PILOT SIZE+

Players roll ship Size or better each turn to determine how many steps of turning they may use but most importantly to determine Initiative ie who moves first and fires last.

Situation	DM	
Pilot skill	+DM	
Crew damage Light / Severe	-1 / -2	
Hull damage Light / Severe	-1 / -2	
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 1-2	Miss	3
Fail by 3-5	Bad	2
Fail by 6+	VBad	1

Movement sequence

1 Drift

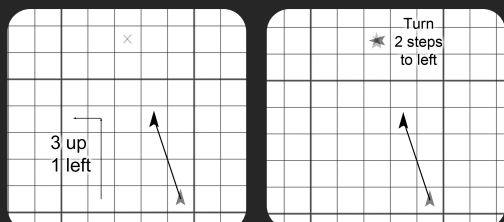
Repeat the ships last move and note the position, apply gravity if applicable, this is your Drift.

2 Turns and rolls

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

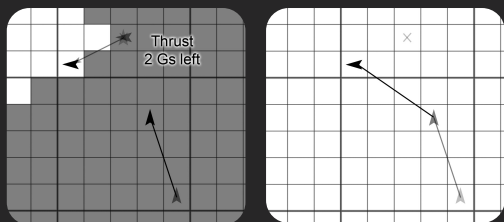
3 Thrust

Apply thrust in the direction the ship is facing.



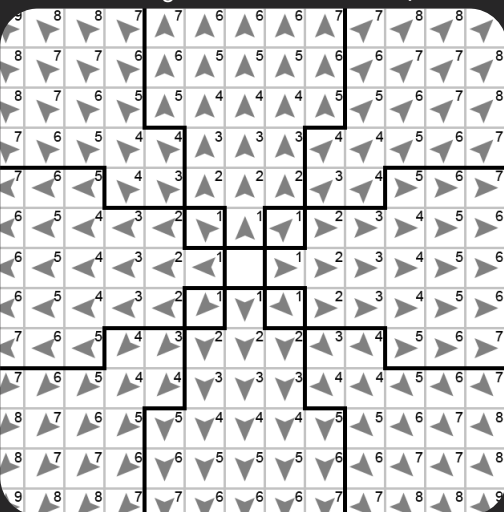
Drifting

Turning



Thrusting

Move completed



Legal thrusts with number of Gs shown

Split movement (optional)

Split movement is done in these 4 steps

Initial turn - No more than half, rounded up

Initial thrust - No more than half, rounded up

Final turn - No more than half, rounded down

Final thrust - No more than half, rounded down

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 in the direction it thrusted. The direction it is moving has no effect on the direction its nose faces.

Movement sequence

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

How many turn steps of turning comes from Pilot task roll or Pilot default

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

Rolling cost 3 steps of turn.

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. After all ships have Turned and Thrusted its time to do non-snap missile launches and drifts, also in reverse Initiative order. Missiles ignore turning as they can thrust in any direction.

Drift

Look at your ships last move and repeat it in your head, draw a small cross where the new position would be. In the example at left the last move was 3 up and 1 to the left so you count 3 up and 1 to the left from your ship's current position and mark with a little x, this is called your Drift square. If you did it correctly the current position of your ship will be exactly midway between your Drift and your ships Past position (gravity may further modify Drift, see page 20-21). 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.

Turn

How many steps of turning you have depends on the Pilot task result or Pilot default, whichever you chose. Turn your ship up to the number of steps, left or right, or spend 3 steps to roll the ship. Look at the diagram at left to see where you may thrust based on your ships facing. The ship in the example turn two steps to the left. Missiles ignore this and can thrust in any direction.

Thrust

Each ship does its Thrust right after turning and can only thrust into squares in its forward facing arc, there is no strafe thrust or reverse thrust. The ship in the example thrust 2 G in the left arc. A ship may instead elect to drift, to not thrust at all. Drifting makes a ship easier to hit but also better at defending itself. When Thrust is done draw a line from the previous to the new position, done.

Silent running may be chosen after movement but only if no powered thrust was used. Silent running means turning the powerplant off, which mean only missiles and sandcasters can be used in combat. See page 7 and 17 for details.

Split movement (optional)

Normally you do all your turning and rolling before thrusting but instead you may choose Split-movement to have movement split into these 4 steps:

Initial turn - No more than half your steps may be used, rounded up

Initial thrust - No more than half of your thrust may be used, rounded up

Final turn - No more than half your steps may be used, rounded down

Final thrust - No more than half of your thrust may be used, rounded down

When aerobraking you do the first two steps before the aerobrake and the second two steps after, see page 25-26 for details.

Fractional thrust

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

The row of boxes on the datacard at right show Gs available at each turn of four, one row for Loaded and one for Unloaded. The table at right shows the Thrust available at each turn for damaged ships.

Fission and fusion ships track fuel expenditure from full Gs actually thrust- ed, the example at right would when loaded use 2 GTurns the first turn and 1 GTurn the other three turns, ships using Redlining use fuel based on actually thrust- ed Gs, see page 32.

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 'box 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.

Diagonal squares are treated as being 1.5 squares but after you have summed up all squares of the range or move you drop any remaining .5, this means that all eight directions are legit for a 1G ship as diagonals are 1.5 but the .5 is dropped.

Optional: You may allow 2G ships thrusting diagonally to thrust 2 diagonal squares every odd turn (turn 1 and 3 but not turn 2 and 4).

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. 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 Split movement. 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 thrust 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 what type of missile if the ship has several types.

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), see page 9 for details.

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

Powerplant is shut down and no system that uses power can be used, only Visual/IR sensors, missiles for attack and sandcasters for defense, no floater, grav or impulse may be used and no floorfield. Fusion or fission thrusters 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 sectors reversed as well as top and bottom, fixed forward arc remain the same.

Thrust
 1.3/1.8
 Loaded ☒ Fractional ☐
 Unloaded ☒ Fractional ☐

Thrust	None	Light	Severe
0.25+	1 0 0 0	0 0 0 0	0 0 0 0
0.50+	1 0 1 0	1 0 0 0	1 0 0 0
0.75+	1 1 1 0	1 0 1 0	1 0 0 0
1.00+	1 1 1 1	1 1 1 0	1 0 1 0
1.25+	2 1 1 1	1 1 1 0	1 0 1 0
1.50+	2 1 2 1	1 1 1 1	1 1 1 0
1.75+	2 2 2 1	2 1 1 1	1 1 1 0
2.00+	2 2 2 2	2 1 2 1	1 1 1 1
2.25+	3 2 2 2	2 1 2 1	1 1 1 1
2.50+	3 2 3 2	2 2 2 1	2 1 1 1
2.75+	3 3 3 2	2 2 2 2	2 1 1 1
3.00+	3 3 3 3	3 2 2 2	2 1 2 1
3.25+	4 3 3 3	3 2 2 2	2 1 2 1
3.50+	4 3 4 3	3 2 3 2	2 2 2 1
3.75+	4 4 4 3	3 3 3 2	2 2 2 1
4.00+	4 4 4 4	3 3 3 3	2 2 2 2
4.25+	5 4 4 4	3 3 3 3	2 2 2 2
4.50+	5 4 5 4	4 3 3 3	3 2 2 2
4.75+	5 5 5 4	4 3 4 3	3 2 2 2
5.00+	5 5 5 5	4 4 4 3	3 2 3 2
5.25+	6 5 5 5	4 4 4 3	3 2 3 2
5.50+	6 5 6 5	4 4 4 4	3 3 3 2
5.75+	6 6 6 5	5 4 4 4	3 3 3 2
6.00+	6 6 6 6	5 4 5 4	3 3 3 3
6.25+	7 6 6 6	5 4 5 4	3 3 3 3
6.50+	7 6 7 6	5 5 5 4	4 3 3 3
6.75+	7 7 7 6	5 5 5 5	4 3 3 3

Sensors

Sensors				Signatures			
Visual	X	-1		Visual (Hull)	+2	Radar (Hull)	+8/+4
IR	X			Visual (Thrust)	+8	Neutrino (Power)	+4
Dual				IR (Hull)	+2	Neutrino (Thrust)	-
Radar		-1		IR (Power)	+6	Mass (Hull)	+8
Neutrino				IR (Thrust)	-	Mass (Thrust)	+8
Mass							

Scan size	Visual	IR	Radar	Max range
Square 1x1	+3	+6	1 box	
Square 2x2	+2	+4	2 boxes	
Square 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 / Severe dmg	-1/-2	-1/-2	-	
Same sensor*	-2	-2	-	

*Same sensor do both scans, apply to both

Scan modifier table

Scan size affects your scan according to the table below, each size also has a range limit.

Radius	Vis, IR	Radar	Max range
Square 1x1	+3	+6	1 box
Square 2x2	+2	+4	2 boxes
Square 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 / Severe dmg	-1/-2	-1/-2	-
Same sensor*	-2	-2	-

*Same sensor do both scans, apply to both

Questions to Scanner

Does your Scan touch your ships Sunglare?

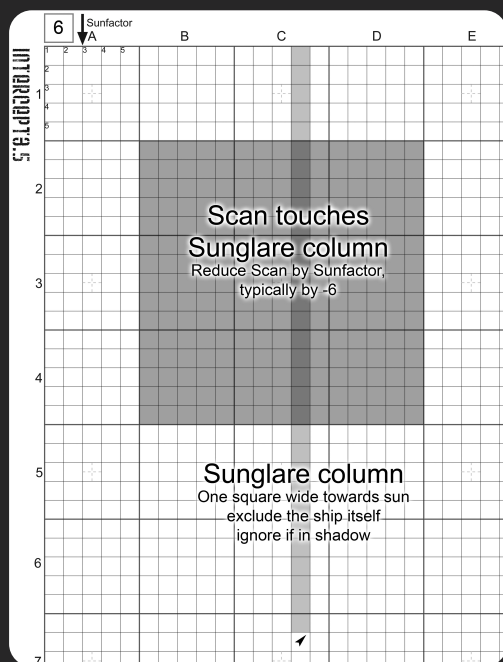
If yes subtract -6 (Sun) from the Scan strength
Always ask this question

Does a planet block parts of your Scan?

Only ask this if the map has planets or asteroids, see pages 24-29.

Do you scan the planet squares?

If a scan touches a planet or asteroid the scanner may omit them, see pages 22-29.



Sunglare column is one square wide and stretches from the ship towards the sun, it does *not* include the ship square itself. Any scan that touches it suffer Sun reduction, typically -6. If the ship is in planet shadow there is no Sunglare, see page 22.

-6-

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. Smaller scans are stronger while larger scans are weaker, to big a scan and your targets may go undetected despite being in the scan area.

Players take turns scanning for each other, in A / B order as it is called. The scanner reveal the Scan area, Scan strength and sensor type, to the other player. The opponent asks questions that may reduce the Scan strength from Sunglare or remove some parts of the scan area from Planet LOS. If a ship or missile is inside the remaining scan area the target add his Signatures to the Scan strength to get the Signal. If the Signal is 0 or better the Scan gets a Contact and the signal is revealed to the scanner. The scanner may the roll a Sense task to see if he can get a Position or Tracked result. Then the other player does a scan until both players have had the chance to do two scans.

The actual positions, facing etc isn't revealed until the end of the Sense phase.

Scan

Scan strength = Sensor + Scan modifiers (calculated by *scanner*)

Integration bonus give +1 after four consecutive identical Scans

Entire Scan area must be inside max range (see table at left)

Ships cannot Scan if they are popped in, see page 9 for details

Two scans using the same sensor from the same ship have both scans at -2

The individual map squares are called *squares* and the 5x5 square areas are called *boxes*. Each Scan size 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.

Integration bonus simulates the fact that sensors get better signal to noise ratios as scan duration increase. Four *consecutive identical scans* from the *same ship* get +1, 16 such scans get +2. For extra realism but far higher complexity the target should only apply the integration bonus if it has been inside the scan for the duration, scanner simply state the number of consecutive turns and target apply in secret.

Scan questions

Scan questions are asked by the target, and affects the scan

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

Sunglare column is a 1 square wide column from the ship to the sun

Sunglare column does *not* include the square the ship is in

Ships in planet shadow ignore Sunglare, see pages 20-29.

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 (Sunfactor), Sunglare is ignored if the scanning ship is in a planets shadows but then other rules apply, see pages 20-29.

Sunfactor

Sunfactor is 6 in earth orbit (-1 per orbit out, +1 per orbit in)

The *Sunfactor* or *Sun* for short, represents the strong visible, infrared and neutrino emanating from the central star, and is typically 6, sunfactor can never be less than 0. Scans touching the Sunglare column subtract Sunfactor from Scan strength and ships not in the planet shadow column add Sunfactor to their Visual(Hull) signature, there are more Sun effects when landed on planets.

If your scenario does not take place in earth-orbit use 6, +1 per orbit inward (7 for Venus, 8 for Mercury) or -1 per orbit outward down to 0 (5 for Mars, 4 for the asteroid belt). Write the Sun value in its box on the mapsheet.

A more exact Sun formula, round to nearest whole number, never below 0

Sun = 6 - 4 * Log10(L / R), L = Luminosity, R = Orbit radius in AU

Sensor types

There are four types of sensors in Intercept, Optical, Radar, Neutrino and Mass (Optical uses Visual or IR). Each type of scan has its own peculiarities:

Visual Sun glare, planet LOS, planet shadow, uses Vis signatures

IR Sun glare, planet LOS, planet shadow, uses IR signatures

Radar Planet LOS, Contact reveal pos, steep falloff, uses Radar signatures

Neutrino Sun glare, even when in planet shadow, uses Neutr signatures

Mass Steep falloff, uses Mass signatures

See further descriptions and details for each sensor type on page 58.

Signatures

The signatures of a ship determines how easy it is to detect. Different Signatures are used for different scans, Vis for Visual scans, IR for IR scans and so forth. Signatures are also affected by what the ship is doing and where:

Sunshine Visual(Hull) + 6 (Sunfactor)

Shadow column Visual(Hull) + 0

Drifting Ignore all thrust signatures ie all sigs with "(Thrust)" in its name.

Popped in (P) Radar(Hull) varies by streamlining (see DataCard)

OpenFrame -, Normal -2, Streamlined -4 and Airframe -6

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

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

Near* asteroid / planet / gasgiant -1/-2/-3 (ignore for Neutrino scans)

**Near is on or adjacent to, landed have larger reductions, see page 20-27*

Signal

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

Radar Contacts learns **Position** of the scanner if they have a radar

Position, facing etc isn't revealed until after the Sense phase is over

Signal is what you actually end up seeing on your screens; *Nothing*, *Contact*, *Position* or a fully *Tracked* target good enough to shoot at. Use the Sense table at right to determine what degree of success is required for a *Position* or *Tracked* result, Auto means no Sense task is even required.

Nothing is the result if the Signal was less than 0. Target tell you nothing.

Contact Target tell you the Signal of each 0+ Signal. The scanner may try a Sense task to try to get a *Position* or a *Tracked* result.

Contact is automatic if the Signal is 0 or better.

Position Target tells you its position, no facing, rolled or vector is given, target also tell you the type of Signature; Visual(Hull) or Infrared(Thrust) for example. The scanner may try a Sense task to try to get a *Tracked* result.

Position is automatic if the Signal is 6 or better.

Tracked means the target tell you everything about its ship; its position, vector, facing, if it has rolled etc. Target also tell you its damage status, and all capabilities of the ship, basically everything on the datacard. Tracked ships move in the open on the common map before any untracked ships, Tracked ships that launch missiles or ships will have them tracked too. *Tracked status remain from turn to turn* with no need to Scan, unless Lost tracking occur.

Tracked is automatic if the Signal is 12 or better.

Lost tracking

Tracked is lost only if all enemy ships have lost tracking

A ship can lose track of a target under certain circumstances. Losing track means the target goes back to hidden movement and the tracker need to re-track the ship again in order to attack or defend against it. All ships capable of tracking the target must lose tracking for it to be lost, we simply assume that all ships of a side share tracking data between them. Tracking is not lost and launched missiles are not lost when popped in, see page 9 for details on popped in.

Target in the aft centerline when tracker is thrusting (see page 8)

Target blocked from tracker by planetary LOS, see page 22

Tracker Surface location Critical+ for Visual, IR and Radar sensor track

Tracker has Core location Critical+ for Neutrino and Mass sensor track

Tracker has crew Critical+ damaged

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

SENSE 0+

After all your Scans are resolved and you got at least one Contact ie at least one 0+ Signal you may roll a Sense task, the result holds for all your scans and all targets.

Dual operators may not Scan if the attacked or defended last turn.

Situation		DM	
Sensor skill		+DM	
Crew damage Light / Severe		-1 / -2	
Surface damage Light / Severe		-1 / -2	
Signal	Contact	Position	Tracked
12+	Auto	Auto	Auto
6-11	Auto	Auto	Fair
3-5	Auto	Fair	Good
0-2	Auto	Good	Very Good
-1-	Nothing	Nothing	Nothing

Nothing No information is given.

Contact The target tell you all 0+ Signals. Contact information is revealed right away

Position The target also tell you its position, but not its facing, rolled status or vector. Target also tell the type of signature.

Position is revealed at the end of Sensor phase

Tracked The location, vector, facing and identity are revealed. Tracked targets move in the open and before non-Tracked ships. Tracked status is kept until Lost tracking occurs.

Tracked is revealed at the end of Sensor phase

Radar A radar Contact+ learn the position of the scanner if the contact has a working radar.

Do not reveal any actual positions and facing etc until after Sense phase is over

Integration bonus

Four consecutive identical Scans (same Scan size and position, same ship and sensor), you get a bonus of +1, 16 such scans give +2.

Aft centerline

If your ship is thrusting it is blind in its Aft centerline, a line of squares straight back from the ships rear. Targets there cannot be tracked, attacked or defended against.

Max tracked range (Sensor+Sig)

For longer ranges see the table on page 45

Visual, IR	Radar	
Neutrino	Mass	Max range
-7-	-13-	No track
-6	-12	1 square
-4	-8	3 squares
-2	-4	1 box
+0	+0	3 boxes
+2	+4	5 boxes ¹
+4	+8	15 boxes
+6	+12	50 boxes
+8	+16	150 boxes

¹ ~1 lightsecond (Ls), actually 6 boxes

Combat

Now it's time for what we all have been waiting for; combat!

Only Tracked ships may be attacked and defended against

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

The ship perform all its Beam attacks and then all its Missile attacks

For each beam volley attack:

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

Roll penetration using PEN-ARM, roll damage using DAM-DAB

For each missile volley attack:

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

Roll penetration using PEN-ARM, roll damage using DAM-DAB

Repeat with the next lower initiative ship until all ships are done.

Yes, damage is inflicted immediately so Initiative *is* important! Larger warships tend to get lower initiative so they need higher initiative fighters to defend their Aft centerline, just the way we like it!

Weapon arcs

Not all of a ships weapons or defenses may attack or defend against a particular target, which ones is determined by their mounting and where the target is located relative to the ship. All weapons and defenses are installed in one of two classes of mounts; fixed mounts or turret / bay mounts.

Fixed mount Weapons or defenses in fixed mounts have little or no movement for the weapon but instead relies on the entire ship turning to put its target within its arc. Fixed mounts are always mounted forward and take up a smaller amount of surface area than turrets and bays, huge fixed mounted weapons are called spinal mounts.

Turret / bay mount Weapons or defenses mounted in turrets or bays have a wider arc of traversal, 180 degree half-spheres, but their drawback is that they use more surface area than Fixed mounts for a given weapon. Larger turrets and bays use less surface area per weapon so you should cram as many weapons you can in as large turrets or bays as possible when designing ships.

Turrets and bays can be mounted in four areas on the hull; *top, bottom, left or right*. Left and right mounts cover a bit more than half the map and so does top and bottom - think of the ships as having the nose tilted down so top mounts would cover the front 180 degrees while bottom mounts cover the rear 180 degrees. see the picture at top left. If a ship is rolled its top and bottom are reversed, a rolled ship also has its left and right reversed too of course.

Notice that top & bottom as well as left & right share some squares where opposite mounts both bear; this is called '*the money lane*' by gunners because they place bet on who will bag a target there. Try to maneuver your ship so your target is in the money lane to maximize the number of weapons and defenses that can be used against it. Achieving this is tricky, but learning to use the Split movement rules on page 4 may help.

Aft centerline (thrusting only)

Drifting ships completely ignore all their own aft centerline effects

Targets in the aft centerline can't be attacked and defended against

Tracked targets in the aft centerline will lose their tracked status

Drifting ships ignore the Aft centerline but if you thrust, even when you thrust using your Floater alone, the Aft centerline squares are blind from drive exhaust, neutrinos, gravity waves etc. This means that you cannot attack ships there, cannot defend against attacks coming from there and you lose track of any ship there. Denying the enemy access to your aft centerline while striving to stay in your enemy's, is the key to staying alive in space battles.

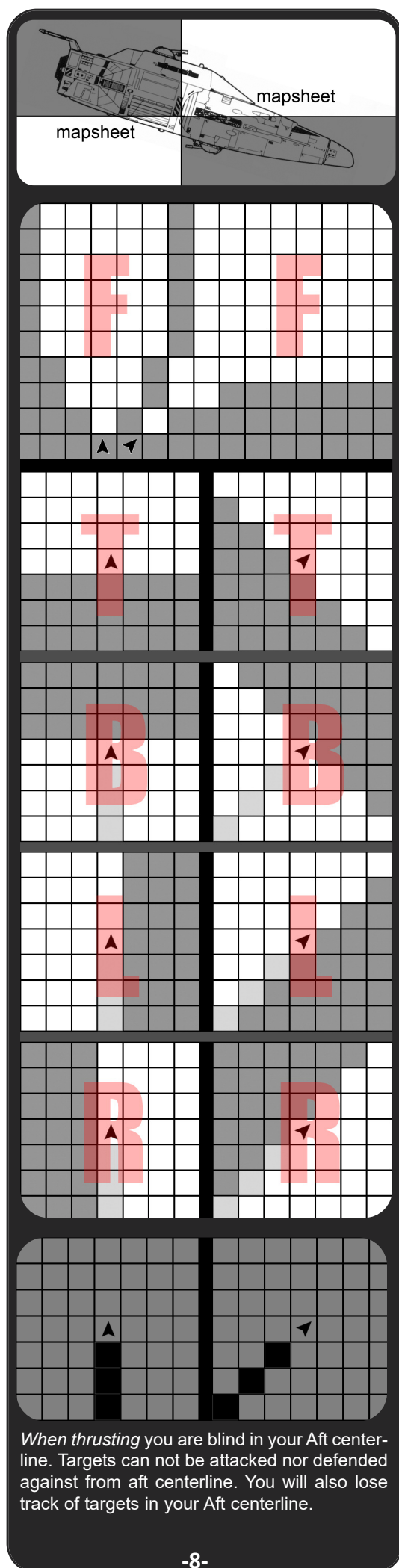
Target drifting

Drifting ships completely ignore all their own aft centerline effects

+2 if target drifted during the movement phase, attack and defense

Ships that don't thrust get a +2 for being so easy to predict, they also get a +2 to defense for being a stable platform.

Using Float is also considering thrusting, see page 20



Same square attack direction

Attack direction comes from the attackers Drift position

Missiles launched this turn use the Drift from the launching ship

If the Drift was also same square higher initiative decide direction

Beam range is 1 instead of 0 unless the ships are also co-vector

When the attacker and target are in the same square, how can you tell what direction the attack came from (for aft centerline, arcs or hitlocation)?

Treat the attack as if coming from the attackers Drift position. If the Drift position is also on the same square the higher Initiative ship determines what direction the attack came from. Note that for beam attacks the range is treated as at least 1 unless the ships are also co-vector ie has the same past.

Ships may pop in sensors and weapons during combat

Once Popped in the ship remain Popped in for the rest of the turn

Popped in ships become Popped out again at the start of the next turn

Ship must be Popped out to scan*, attack* or defend*

Ships cannot Pop in if they scanned*, attacked* or defended* in the turn Popped in keep Tracked and launched missiles but cannot attack or scan*

**Neutrino & Mass sensors, meson guns & screens and dampers ignore pop in limits.*

Before any attack rolls has been made on a target it can opt to pop in. This means it will unfold its weapons and sensors inside protective hatches making them protected by the full amount of ships armor, this also make the weapons and sensors useless. Once popped in a ship remain so for the rest of the turn but all ship return to popped out status at the start of each new turn. Popped out ships use the left and popped in use the right (higher) ARM value when checking penetration for the Surface hitlocation.

Ship automatically pop in when aerobraking or taking off from planet with atmosphere. Ships may pop in at any time but they *may not* pop in if they have already *scanned, attacked or defended* this turn.

Attack and defense tasks

Only Tracked ships may be attacked and defended against

Each actual attack is done through an attack task performed by gunners, the target number depends on the range to the target for beam weapons and depend on attack vector for missiles, various DMs are added to the roll, the most important of which is the *target Size*. For convenience each DataCard has precalculated target numbers with Size DM included, for various ranges for beams and various attack vectors for missiles, see the picture at right.

Before the attack roll has been made the defender should be given time to decide if to pop in to protect his weapons and sensors or what defenses to use. The defense task reduces the degree of success of the attack, in short you need an equal or better degree to fully stop an attack. Defenses can be used against every attack of its type, one group of sandcasters can defend against any number of laser attacks in a turn for example.

Beam and missile volley

An attacked ship may use *one* group of defense weapons to defend against *each* beam or missile volley attack. This makes it important to group your attacks into as many weapons as possible to get past the defenses. Using 2 weapons in a volley give a +2 DM and 3 weapons will get you a +3 DM, after that you can look it up on the table at right.

Ships under the same Ship tactician may even group identical weapons from different ships into one attack, but never for defense, see page 33.

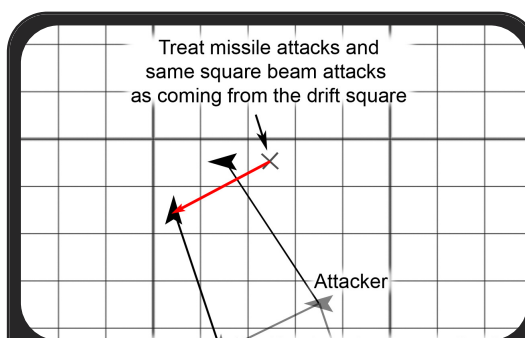
Sprayfire

Sprayfire is *mandatory* for Proximity missile attacks

Sprayfire is *optional* for any beam or any volley of 3 or more missiles

Sprayfire damage is always rolled as Fair hits ie 2D6 use low D6

Sprayfire trade damage for multiple hits, all hits score damage as if a Fair hits (rolling 2D using the lowest D6) but better degrees of success hits more locations. Sprayfire attack option must be decided before rolling to attack. Sprayfire can also be used against missiles or a group of identical ships with the same facing, position and vector; degrees of success determine the number of hits.



Same square attack direction

Beam range	0*	1	2-3	4-10	11-30	31+
Beam attack nbr	5+	8+	11+	14+	17+	20+
Attack vector	0	1	2-4	5-9	10+	
Missile attack number	5+	8+	11+	14+	17+	
Vector DM / PEN & DAM	+6/-6	+3/-3	-/-	-3/+3	-6/+6	

The DataCard holds precalculated target numbers to attack the ship with beams or missiles

Beam & missile volley table

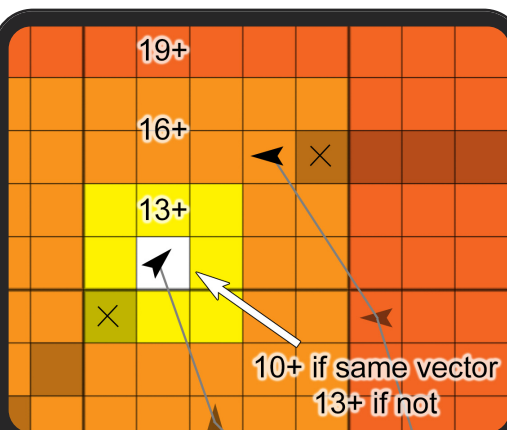
Weapons of the same kind in an attack should be grouped together with a single attack roll. Missile attacks also use this table for volleys.

Number of units in group	DM
Volley members 2	+2
Volley members 3+	+3
Volley members 6+	+4
Volley members 9+	+5
Volley members 30+	+6
Volley members 60+	+7
Volley members 90+	+8 etc

Sprayfire

Any beam attack, and any 3+ missile attack *may* use Sprayfire. Proximity attack missiles *must* use Sprayfire. See page 17.

Hit result	Sprayfire
Very Good	3 Fair: 1 picked, 2 adjacent
Good	2 Fair: 1 random, pick 1 adjacent
Fair	1 Fair: 1 random



BEAM ATTACK

Range	0*	1	2-3	4-10	11-30	31+
Target nbr	13+	16+	19+	22+	25+	28+

*Must also have same vector or treat as range 1

*Use Same square attack direction rules, page 9

All beam weapons use the same range table to determine target number, use this table or the one with Size included on the target DataCard. Beams cannot fire beyond 3x effective range

Beam to hit modifiers	DM
Target Size	+Size
Target drifting	+2
Gunner skill	+DM
Crew damage Light / Severe	-1 / -2
Surface damage Light / Severe	-1 / -2
Power damage Light / Severe	-1 / -2
Underpower	-DM
Volley units	+DM
Cooked shots (PEN&DAM +3)	-3

BEAM DEFENSE II+

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

Screen to hit modifiers	DM
Gunner skill	+DM
Crew damage Light / Severe	-1 / -2
Surface damage Light / Severe	-1 / -2
Volley units	+DM
Defender drifting	+2

Result	Effect on attack
VGood	Attack stopped
Good	Attack two steps worse
Fair	Attack one step worse
Miss or worse	No effect on attack

Beam combat

Beam attacks are performed before missile attacks for the current ship. Beams fire at PEN & DAM -3 beyond effective range, cannot fire beyond x3

Underpower only apply if you beam attacked the last turn

Same square attacks are treated as range 1 unless also co-vector

Targets in a thrusting attackers aft centerline cannot be attacked

All beam weapons (lasers, particle accelerators and meson guns) use the same to hit roll table, based on range. Use the table at left or the precalculated values on the target ship's DataCard, apply the DMs from the table (the Size DM is already included in the DataCard values). Roll one attack per volley, roll defense and if the attack survived do hitlocation, penetration and damage, damage effects take effect immediately, see page 14-16.

All beam weapons have effective ranges where the fire at full effect, inside x3 the effective range they fire with PEN & DAM -3, beyond that they cannot fire at all (the x3 rule should really be 'next range band' so x3 for range 3 is 10 squares, not 9). Effective range have no effect on attack rolls however, they only affect damage and the maximum range to fire. The different beam technologies have different inherent focal limits, diffraction limit if you must ask, making lasers short range, particle beams mid range and meson weapons long range, this is also affected by the size of the aperture and tech level of the weapon of course.

Lasers

Target learns attacker position if they have a working Visual/IR sensor

Each 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 far away without prohibitively large mirrors. Lasers are used against thin hulled ships and against missile fire but *lasers cannot attack and defend in the same turn*. Lasers may defend against missiles attacking the defending ship, see defenses below and missile defense on the next page.

Particle accelerators

Target learns attacker position if they have a working Visual/IR 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; a Scratch, Light or Severe hit to Crew or Repair Crew become one level more serious, see radiation damage on page 15.

Meson guns

Target learns attacker position if they have a working Meson screen

Meson guns may fire and Meson screens may defend 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 the attackers own armor too. Hits by meson guns also cause radiation damage, page 15.

Aft centerline when thrusting cannot be attacked from

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

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

All beam weapons may fire at missiles as if they were ships, albeit much harder to hit than ships of course (small missiles are Size +0, medium +2 and large +4), use Spray attack rules; 1, 2 or 3 missiles shot down for Fair, Good or VGood attack.

Underpower

Underpower has separate values for Thrust, Drift (and Jump prep)

Underpower only apply if you beam attacked the last turn

You defend at no penalty except when Underpower is *No fire*

Missiles and sandcasters are unaffected by Underpower

All beam weapons have storage banks to allow firing at full rate of fire (ROF) for an entire turn. Firing requires the powerplant to refill these banks and if the powerplant cannot deliver the power requirement to do that the weapons will have to fire at a lower ROF with a negative DM as a consequence, this is called Underpower. Ship DataCards has Underpower listed for Thrusting, Drifting or Jump prepping, use appropriate value but only if you beam attacked in the last turn. Ships using the optional Hyperspace rules use the Jump prepping Underpower, see page 40-41.

Full You have enough power to attack and defend at no penalty.

-2 or -4 Your beam attacks suffer a -2 or -4, your defense is still unaffected.

No fire You may only use missiles to attack and only sandcasters to defend.

Never The special case of *Never* means the ship may not fire at all as the powerplant cannot charge up the lasers no matter what the ship does.

The very first time a ship attack with beams in a game it can always fire without considering Underpower, this even includes beam equipped ships with no power at all (those with *Never* as Underpower), one turn of attacking is always allowed (we assume that storage banks were charged before the game started).

Defenses

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

Attacks from Aft centerline when thrusting cannot be defended against

Untracked attackers cannot be defended against

Only the ship being attacked may defend against that attack

Beam defenses are sometimes called 'screens' from an old Terran tradition. They all reduce the degree of success by which the attack was made.

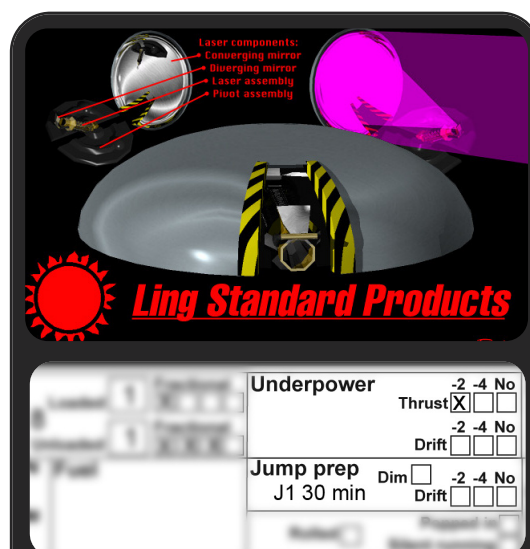
Lasers may defend against attacking missiles, each laser may attack or defend but not both in a turn. Lasers may defend with no penalty unless Underpower is *No fire* in which case it may not defend at all using lasers.

Sandcasters fire clouds of crystals that disrupt and scatter the incoming laser pulses, they are aimed at the attacking ship to get a thick enough cloud. Sandcasters can be fired when Powered down and are unaffected by 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.

A single group may defend against each and every attack volley

The above make very good reasons to group defenses into as large groups as possible but note that all weapons grouped must be exactly the same type. The defense result will reduce the attack result, possibly stopping it completely.



Underpower

Full You may fire however you like, offensively and defensively, with no DM.

DM Apply the DM to attacks only if you beam attacked the last turn, never use the DM on beam defensive fire against missiles.

No fire You cannot fire beams at all, not even defensively against missiles.

Never The powerplant is too weak to ever recharge the beam weapons, you may never* fire the weapon, not even defensively.

You may allow ships with **Never to fire a single time during the entire scenario, offensively or defensively. We simply assume the energy banks for the lasers where externally charged prior to launch.*

Power to beam weapons Underpower

Beam power 100%+	Full
Beam power 50%+	-2
Beam power 10%+	-4
Beam power < 10%	No fire

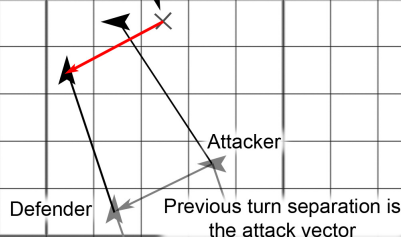
COOKED SHOTS

Beam attacks may overcharge the weapon to increase PEN & DAM but with reduced rate of fire and risk of overheating. Before rolling to hit the attacker may declare a *Cooked shot*. Roll for weapon damage but the weapon damage only takes effect after the attack.

To hit -3, PEN+3, DAM +3

1D6	Damage	Use roll
15+	Destroyed	No
12-14	Critical	No
9-11	Severe	4+
6-8	Light	2+
3-5	Scratch	Auto
1-2	(no effect)	

Treat missile attacks and same square beam attacks as coming from the drift square



MISSILE ATTACK 19+

Missile attack with a relative vector of 2

Attack vector

Attack vector is the separation of the missiles or launching ship and the target from last turn

Attack vector	0	1	2-4	5-9	10+
Vector DM	+6	+3	-	-3	-6
PEN* & DAM*	-6	-3	-	+3	+6

*Nukes ignore PEN & DAM modifiers

Missile to hit modifiers	DM
Target Size	+Size
Target drifting	+2
Gunner skill	+DM
Crew damage Light / Severe	-1 / -2
Surface damage Light / Severe	-1 / -2
Vector DM	+DM
Volley units	+DM
Remaining thrust Gs 1/2/3+	+1/+2/+3
Proximity attack (PEN&DAM -6)	+3

MISSILE DEFENSE 11+

Lasers may attack or defend but not both. Defense nbr is also based on the Attack vector from the table above.

One laser group and one nuclear damper group may defend against each missile volley. Attack direction is based on Drift.

Missile defense modifiers	DM
Small/Medium/Large missiles	+0/+2/+4
Gunner skill	+DM
Crew damage Light / Severe	-1 / -2
Surface damage Light / Severe	-1 / -2
Vector DM	+DM
Volley units	+DM
Defender drifting	+2

Result	Effect on attack
VGood	All missiles shot down
Good	Attack two steps worse
Fair	Attack one step worse
Miss or worse	No effect on attack

Proximity attacks

All missiles including nukes may opt to do *proximity* attacks, increasing hit chances at the expense of PEN and DAM. The warhead is fragmented into shrapnel before hitting, like a shotgun round compared to a solid slug.

Proximity attacks that miss will not continue moving, obviously.

Proximity attacks always use Sprayfire rules

See Spray fire rules on page 9

To hit +3, PEN & DAM -6

Missile combat

Missile attacks are performed after beam attacks for the current ship

Snap missiles launch during the attacking ship's combat phase

Regular and Cruise launch and move during the missile movement phase

If the launching ship is Tracked the missiles it launches also become Tracked

Missiles outside of launcher range at the end of the movement phase are lost

Missiles need only be within launcher arc when attacking

Targets in a thrusting attackers aft centerline cannot be attacked

Snap missiles last for the current turn only and are removed after the attack roll, *Regular missiles* must thrust their full G (remaining Gs in an attack give positive hit DMs) and *Cruise missiles* behave as ships; they may drift or thrust as the launcher sees fit, limited to its amount of fuel (measured in GTurns). Snap missiles that miss their target are lost, Regular and Cruise missiles with endurance or GTurns remaining may continue, misses from Proximity attacks or nukes are always lost of course. Missiles beyond *launcher range* are also lost but missiles need only be inside *launchers arc* when attacking.

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, Size +0

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, Size 2.

Heavy missiles mass 5 ton and are launched from large bays or fixed, Size 4.

Missile signatures and capabilities are found in the design system on the opposite page, nuclear missiles are found on page 31.

Launch position

Missiles launch from launching ships drift position

Missiles must be inside launcher range at all times

Missiles must be inside launcher arc only when attacking

Cruise missiles move as regular ships and count fuel use vs GTurns

Launched missiles use the Drift position from the launching ship instead of the actual position of the launching ship. This his may sound wrong but if mis-siles were to benefit from both the launching ship's thrust as well as their own would be strange. 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. What this all mean is that missiles do their attacks from their (or the launching ships's) drift position as shown in the image at the upper left. Missiles must be within launcher range at all times but their target need only be in the launcher arc when actually attacking.

Attack vector

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

Attack vector hit DMs affect missile attacks and defense equally

Attack vector is important for missiles, as well as docking and ramming. Low relative vectors increase hit and defense chances and lowers damage while high relative vectors decrease hit and defense chances but increase damage. Consult the table at left for Vector DM and PEN & DAM modifiers based on the attack vector. Attack vector only affect missiles, ignore for beam attacks.

Defenses

Each lasers may attack or defend but not both in a turn

Untracked missiles cannot be defended against*

Only the ship being attacked may defend against that attack

One laser and one damper group can attack each missile volley

These groups 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.

*Snap missiles (launched during the combat phase) are tracked if the launching ship is tracked. Regular and Cruise missiles (launched during the missile movement phase) also become tracked if the launching ship is tracked, they can also become tracked during the Sensors phase, just like a ship.

Missiles

Missiles come in three 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.

Snap missiles Missiles with only one turn of endurance are called Snap missiles. They are launched and attack during the combat phase and only if the launching ship is tracked can they be defended against. If they miss they are spent and removed from play, they will never be on the map itself.

Regular missiles Missiles with longer endurance than one turn are called regular missiles to avoid confusion. They launch at the end of the movement phase. They always use their full G rating each turn and are removed from play when their endurance (measured in turns) is used up.

Cruise missiles Regular missiles that behave like ships in that they can vary their thrust and even drift are called Cruise missiles. Calculate their performance in G turns by multiplying their G rating with the number of turns of endurance. A 4G30min Cruise missile would have a rating of 4G8 for example. They may use from 0 up to their full G rating each turn (using as many GTurns as the thrust used) and are removed from play when their endurance (measured in GTurns) is used up. When drifting they use the right side Signatures below.

Magazine

Missile launchers normally hold three missiles per tube, individually selectable, but after those the launcher cannot be reloaded during a game. 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

Missiles must be inside launcher range at the end of the movement phase

Missiles are operator guided and have a maximum range that depends on the missile type and TL of the launcher. Missiles must be inside launcher arc only when attacking or using their sensors.

TL	Thrust			Launcher ranges		
	Small	Medium	Large	Small*	Medium*	Large*
7	2G15m	2G30m	2G1h	10(1)	30(3)	100(10)
8-9	3G15m	3G30m	3G1h	15(1)	50(5)	150(15)
10-11	4G15m	4G30m	4G1h	20(2)	70(7)	200(20)
12-13	5G15m	5G30m	5G1h	30(3)	100(10)	300(30)
14-15	6G15m	6G30m	6G1h	30(3)	100(10)	300(30)
16+	7G15m	7G30m	7G1h	30(3)	100(10)	300(30)

*10 000 km squares (100 000 km squares)

Small missile

10 KCr base cost

Small missiles mass 50 kg and are all powered by fission thrusters.

PEN	DAM	Vis	IR	Radar	Neutrino	Mass
28	28	+6/-6+Sun	+6/-6	+2	+6/-	-6

Left value is thrusting, right value is drifting (cruise missiles only)

Medium missile TL

100 KCr base cost

Medium missiles mass 500 kg, TL 9- use fission and 10+ use fusion thrust.

PEN	DAM	Vis	IR	Radar	Neutrino	Mass
34	34	+8/-4+Sun	+8/-4	+4	+8/-	-4

Left value is thrusting, right value is drifting (cruise missiles only)

Large missile

1 MCr base cost

Large missiles mass 5 ton, TL 9- use fission and 10+ use fusion thrust.

PEN	DAM	Vis	IR	Radar	Neutrino	Mass
40	40	+10/-2+Sun	+10/-2	+6	+10/-	-2

Left value is thrusting, right value is drifting (cruise missiles only)

Missile options (cumulative)

Endurance

Increase or decrease the missile's endurance using these modifiers.

Double / triple / quad endurance

(-2G/-3G/-4G, x2/x3/x4 endurance)

Half / quarter endurance

(+2G/+4G half/quarter endurance)

Cruise and Cold-start missiles

Cruise missiles moves as regular ships and can turn and drift in any combination as long as GTurns remain. Calculate G-turns (Gs x endurance in 15 min turns) keep track of its use. Cold-start are regular that start drifting.

(Cruise missile -2G, price x3)

(Cold start missile -1G, price x2)

Extra PEN and DAM

You may increase PEN & DAM by reducing Gs (for nukes too, see page 31)

(-1G per +1 PEN & DAM)

Airframe or Hypersonic

Missiles may be *airframe* or *hypersonic* to perform aerobrakes using the wings and allows launches to and from planets with atmospheres. Hypersonic missiles use no fuel when aerobraking or are launched from an atmosphere thanks to their air breathing thruster. No onboard Sensors can be used when aerobraking or taking off.

(Airframe -1G, price x2, 10% wings, TL 6+)

(Hypersonic -2G, price x3, 20% wings, TL 8+)

Decoy missiles

You can increase the signatures of your missiles to create decoys, if performance become 0G there will be no Neutrino signature. Decoys still work after the endurance of the missile is up.

Vis(Hull) & Radar(Hull) signature increases

(-1G per +1, +2 or +3)

Sensors

Visual/IR or Radar sensors may be added to your missiles, radar signature increase by +2 if the missile is scanning. You may also increase Sensitivity by +1 per 1G spent.

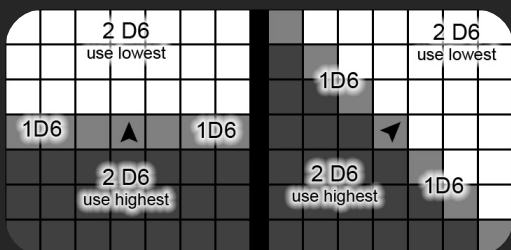
(Visual/IR sensor -1G, Price x2)

TL	Small	Medium	Large
Radar sig	+2/+4	+4/+6	+6/+8
7	-8	-6	-4
8-9	-7	-5	-3
10-11	-6	-4	-2
12-13	-5	-3	-1
14-15	-4	-2	+0
16+	-3	-1	+1

(Radar sensor -2G, Price x3)

TL	Small	Medium	Large
Radar sig	+2/+4	+4/+6	+6/+8
7	-12	-8	-4
8-9	-11	-7	-3
10-11	-10	-6	-2
12-13	-9	-5	-1
14-15	-8	-4	+0
16+	-7	-3	+1

HITLOCATION



Fair hit Roll as picture above

Good hit Roll as above, may pick adjacent

VGood hit No roll, attacker pick from table

Roll	Hitlocation	Where (skill)
1	Hull	Outside (mechanic)
2	Crew	Inside (mechanic)
3	Core	Inside (electronic)
4	Surface*	Outside (electronic)
5	Power**	Inside (engineer)
6	Thrust	Inside (engineer)

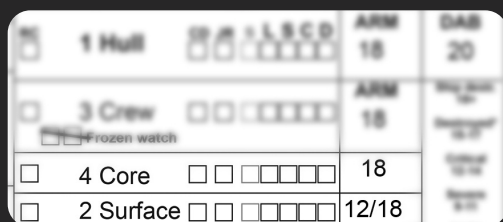
*Left / right ARM value when popped out / in

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

Sprayfire

Any beam attack, and any 3+ impact missile attack may *opt* for Sprayfire. Proximity attack missiles *must* use Sprayfire.

Hit result	Sprayfire
Very Good	3 Fair: 1 picked, 2 adjacent
Good	2 Fair: 1 random, pick 1 adjacent
Fair	1 Fair: 1 random



Use the left ARM value when popped out
Use the right ARM value when popped in

PENETRATION

Meson hits always penetrate.

PEN-ARM	Penetration result
3+	All hits penetrate
2	Good & VGood hits penetrate
1	VGood hits penetrate
0-	No hits penetrate

Situation	PEN & DAM
Beyond effective range*	-3
Cooked shot	+3
Attack vector modifier	+Modifier
Proximity attack (missiles)	-6

*Attacks beyond 3x effective are impossible

Attack vector Modifier

Attack vector is the separation from the missile and target in the previous turn, or from the launching ship and target if launched this turn.

Attack vector	0	1	2-4	5-9	10+
Vector DM	+6	+3	-	-3	-6
PEN* & DAM*	-6	-3	-	+3	+6

*Nukes ignore PEN & DAM modifiers

Damage

Now it is time to determine how much damage the attack inflicted, if any. First you must determine where you hit, the hitlocation. Then the defender determine if the armor at the hitlocation blocked the attack or not, finally you roll to see how much damage the location suffered. The damage roll may also start some ongoing damage that may get worse over several turns. If you prefer a simpler damage system with just one hitlocation and one damage score you may use the optional simplified damage rules on page 36-37 instead of these.

If your Repair Crew is located in the hitlocation that was hit they too will take damage, see page 17 for details about Repair Crew.

Hitlocation

Fair Roll hitlocation, see picture and table at left.

Good Roll hitlocation but attacker may opt for adjacent entry

VGood Attacker pick hitlocation

Roll hitlocation using the picture and table at top left. The roll depends on where the attack came from, with front attacks using the lowest of 2D6 while rear attacks use the highest, attacks exactly from the side simply roll a D6. Your attacks degree of success, modified by defenses, can modify the rolled hitlocation. Fair hits use the hitlocation as rolled, Good hits let you pick an adjacent hitlocation from the table if you want and Very Good hits let you pick whatever hitlocation you want. Note that certain hitlocations have lower ARM values than others;

Surface location use the left ARM value when popped out and the right higher value when popped in as the weapons and sensors are hidden behind covers.

Power location may have two ARM values, the left is used when the powerplant is running radiators extended, the right higher value is used when the powerplant is off and its radiators are hidden behind covers.

Thrust location have lower ARM value as its rocket plume or high tech impulse drive momentum exchange handwavium need to be exposed.



Penetration

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

Cooked beam attacks increase PEN and DAM by +3

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

Proximity detonated missiles modify PEN and DAM by -6

PEN-ARM 3+ will always penetrate

PEN-ARM 0- will never penetrate

Meson gun attacks always penetrate so ARM value has no effect and you can skip over to damage, all other attacks must determine the PEN of the attack and the ARM of the hitlocation. Now it's time to determine the ARM value.

Surface use left ARM when popped out, right ARM when popped in

Power use left ARM when powered, right ARM when powered down

The ARM value is different depending on hitlocation and some have different values based on what the ship does as explained above. Look at

Damage

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

Scratch The location has some scratches but work normally, it also cannot be Jury-rigged and therefore will remain until real repairs are made, real repairs are not really part of Intercept because of time needed, see page 45 for details.

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 beyond repair, may cause Pass-on-damage

Ship destroyed The ship is destroyed, no ifs, no buts.

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, remove any Jury-rigs.

Equal new damage raises the damage one level, remove any Jury-rigs.

Lower scratch+ old damage remain, remove any Jury-rig.

Damage roll

DAM - DAB + 1D6 (roll is modified by degree of success)

Sprayfire attacks are always rolled as Fair hits regardless of degree

Roll damage if DAM with modifiers are -2 or higher

Modify table row by Hitlocation or Pass-on-damage

Use DAM - DAB and add 1D6, modify depending on the degree of hit:

Fair hit Roll 2D6 and use the lowest, CD on 1, ED on 6

Good hit Roll 2D6 and use the highest, CD on 1, ED on 6

VGood hit Treat as a roll of 6, roll Exploding Dice to that

A damage result of less than Scratch are ignored, jury rigs remain, no 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.

Pass-on-damage

When a location other than Hull suffers a Destroyed result or is hit when already Destroyed, give Hull damage *two levels less* damage, this is called pass-on-damage. *Ship destroyed* result always destroy the ship of course.

Exploding Dice, ED, on an modified roll of 6

A modified roll of 6 cause Exploding Dice or ED

Exploding dice or ED add 1D6/2 to roll, rounded down, keep rolling each 6

If the roll is a 6 your roll adds exploding dice similarly to a natural roll of 12 for task rolls. Add 1D6/2 rounded down, keep rolling as long as you get 6.

Continuing damage, CD, on a modified roll of 1

A modified Scratch+ roll of 1 cause Continuing Damage or CD

CD effect is rolled *after* repairs, 6 fizzle out, 1 and 2 increase damage

CD is also caused by Cooked shots and Redlining, roll CD effects then too

Whenever a Fair, Good or Sprayfire damage roll turns up a 1, note it as Continuing Damage (CD). After Repairs phase (any successful Jury-rigs also removes the CD) and if the CD remains roll 1D6 for each CD:

6 and the CD fizzles out, remove it

3-5 the CD remains but there's no damage increase

1 or 2 and the location gets one level worse.

If this make it the location Destroyed the CD stops but a CD starts in the Hull location instead.

DAMAGE



DAM-DAB+ROLL

A roll of 6 cause Exploding Dice

A Scratch+ roll of 1 cause CD

Sprayfire hits are always rolled as Fair hits

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

DAM-DAB +roll*	Damage result
Surface, Power or Thrust - one row up	
Pass-on-damage - two rows down	
18+	Ship destroyed
15+	Destroyed & Pass-on
12-14	Critical
9-11	Severe
6-8	Light
3-5	(Scratch)
0-2	No effect

***Fair** 2D6 and use the *lowest* D6

***Good** 2D6 and use the *highest* D6

***VGood** Treat as if you rolled a 6, yes with ED

A roll of 1 is CD, a roll of 6 is ED

Sprayfire hits are always rolled as Fair

Pass-on-damage

When a location other than Hull suffers a Destroyed result or is hit when already Destroyed, give Hull damage *two levels less* damage, this is called pass-on-damage. CD if any will carry over to the Hull.

Radiation damage

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

DAMAGE EFFECTS

Hull

Light Max Streamlined hull, Pilot task -1
Jump task -1, Jump rating -1
Severe Max Normal hull, Pilot task -2
Jump task -2, Jump rating / 2 round down
Critical Max Open frame, no turn/roll allowed
No jumps allowed
Destroyed Ship is destroyed.

Crew

Particle, meson and nuke hits cause radiation that increase damage one level for Scratch, Light and Severe results.
Light Perform tasks roll -1 DM
Severe Perform tasks roll -2 DM
Critical Cannot perform task rolls
Destroyed Same as Critical but no 'jury-rig'
Repair Crew are affected the same

Core

Light Computer pool -1
Mass and Neutrino Scans and Sense rolls -1
Severe Computer pool / 2 round down
Mass and Neutrino Scans and Sense rolls -2
Critical No Computer pool dice
No Mass/Neutrino Scans
Destroyed Same as Critical but no jury-rig

Surface

Light Attack and Defense tasks -1
Visual, IR and Radar Scans and Sense rolls -1
Severe Attack and Defense tasks -2
Visual, IR and Radar Scans and Sense rolls -2
Critical No attack or defense
No Visual, IR or Radar Scans
Launched missiles lost, tracked targets lost*
Destroyed Same as Critical but no jury-rig
Neutrino and Mass unaffected

Power

Light Beam attacks -1, Powered thrust 75%
Severe Beam attacks -2, Powered thrust 50%
Jump prep time x2
Critical No beam attacks or Powered thrust
No Jump prep, no Jump
Destroyed Same as Critical but no jury-rig
Fission and fusion thrust unaffected
Missiles and Sandcasters unaffected

Thrust

Light Thrust 75% and rocket remass 75%
Jump task -1, Jump rating -1
Severe Thrust 50% and rocket remass 50%
Jump task -2, Jump rating / 2 round down
Critical No thrust and rocket remass 50%
No jumps allowed
Destroyed Same as Critical but no jury-rig

Damage effects

Specific damage effects on each location is shown on the left.

Scratch No effect whatsoever but a second Scratch will cause Light damage

Light Lightly affected, -1 on tasks rolls, -1 on Sensitivity, 75% on stats.

Severe Severely affected, -2 on tasks rolls, -2 on Sensitivity, 50% on stats.

Critical Critically affected, location can't be used but can be Jury-rigged.

Destroyed Location is destroyed, and cannot be repaired, check Pass-on-damage.

Hull section houses the hull itself, fuelscoopes, landing and docking gear, and the streamlining of the ship, it also houses any stealth masking.

Crew area houses the control stations, bridge, living quarters, freezers and life-support. RepairCrew can perform 'Jury-Rig repairs' on Crew just as for other locations; fixing controls, splicing broken bones etc.

See Traveller rules on page 43 for players or individual NPC damage.

Frozen watch If Crew location suffers damage and the ship still has Frozen watch boxes unchecked, some or all of the frozen watch can be awoken:

Check one or two Frozen watch boxes to reduce Crew damage 1 or 2 levels*

**Destroyed results can never be reduced by Frozen watch revival*

Core section houses the computer, cargobay, internally carried craft and the missile magazine, it may also house 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.

Surface location holds all weapons and all sensors (except Neutrino and Mass detectors which are located in Core location). Surface location has two armor values; the lower when popped out and the higher when popped in. The limits on attacks in a row refers to attacks, defense does not count and neither does launching missiles except if they attack on the same turn they launch.

Power section houses powerplant, fuel, fuel processing and batteries. Missiles, sandcasters as well as fission and fusion thrusters are unaffected by Power damage as they draw no power.

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

Thrust section houses the ships engines and their fuel if any, it also houses the jumpdrive. Engines are vulnerable because they are open to space, including Impulse drives.

Severe+ damage halves remass and jumpfuel (round down)

RepairCrew When a location is damaged that currently houses the RepairCrew they too take damage. See the next page for details.

Effects of damage to multiple locations

Always use the *worst* restriction of those that apply. It is the responsibility of the opponent to remind a player when restrictions from damage apply.

Computer pool Use Surface damage

Turning Use Hull damage

Thrusting fission & fusion Use Thrust damage

Thrusting powered Use the worst of Power and Thrust damage

Scanning Visual/IR or Radar Use Surface damage

Scanning Mass or Neutrino Use Core damage

Beam attack Use the worst of Power and Surface damage

Beam defense Always allowed except if Crew, Surface or Power Critical+

Missile attack Always allowed except if Crew or Surface Critical+ damaged

Sandcaster Always allowed except if Crew or Surface Critical+ damaged

Jumpdrive Use worst of Hull and Thrust damage, Power affects prep time.

Repair Crew

Repair Crew normally do maintenance on their ship but that is outside of the scope of these rules, in Intercept Repair Crew perform *Jury-rigs* or *Power ups*. Normally Repair Crew move to one location of the ship and roll one task, if the result was VGood however they may move to another place and try a new task.

Jury-rigs

A Jury-rigged location is treated as one level less damaged

Scratch damage cannot be Jury-rigged

Hull, Surface and Thrust locations are outside

Repairs will be fragile makeshift jury-rigs rather than full blown proper repairs and the effects of this is that damaged ships only get temporary reduced damage effects and they are also more fragile after these makeshift repairs.

When a section is to be repaired you use the Repairs task at right, target number is based on the damage severity of the location. 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 has no further effect, any Continuing Damage is also removed.

Whenever a section takes any damage the JR on that section is removed, this happens even if the new damage had no effect on the damage level. After the indicated period has elapsed roll 4+ on 1D6 to keep the Jury-Rig, these periods are usually too long to have any bearing in a game but may affect RPG sessions.

Falling off during Jury-rigs

Roll for falling off only if the ship thrust

Treat as thrust -1 if no turn, and thrust +1 if rolled

Roll falling off before Jury-rig attempts are rolled

Repairs on Hull and Surface, are performed from the outside of the ship and if the ship thrust the repair crew run the risk of falling off. Ships less than 125 m3 (25 dTon) are so small that all locations must be repaired from outside, except the Crew location. Thrust here is how far from Drift the ship is after thrust, floater and aerobrake.

Roll 1D6 above thrust to be safe, failing increase RC damage one degree and keep rolling. For roleplaying purposes those fallen off are dead if the ship used fission or fusion thrust and alive and moving along the ships Drift vector if not.

Powering up from Silent running

Power up roll against ship Size

The Powering up roll is ship Size or higher, the assumption is that larger ships take longer to power up. Untracked ships must roll for powering up but need not tell their opponent what their target number is nor their result.

Repairing crew damage

Repair crew can 'repair' themselves, mark with JR as usual

Repair Crew can 'repair' themselves, don't forget to apply damage DMs in this case. Repair Crew can also 'repair' the Crew location in the same way. Frozen watch revivals have no effect on Repair Crew, is simply reduces the damage suffered by the Crew location when hit, see previous page for details.

Repair crew taking damage

Repair Crew in a location being hit also suffer damage, mark the damage on the RC damage track. Repair Crew remain in the last section they performed a task, they can also be moved to any location without doing anything, they'll 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 hit section. How much damage the RC suffer depends on hitlocation.

Crew, Core or Power RC receive same damage as the location hit.

Hull, Surface or Thrust RC receive damage even if armor blocked the hit.

Radiation damage Increase RepairCrew damage one level, same as for Crew

JURY-RIG 8+/11+

Roll a task 8+ for Light or Severe and 11+ for Critical, Scratch cannot be Jury-rigged.

Modifier	DM
Repair skill	+DM
Power dmg Light / Severe	-1 / -2
Repair crew dmg Light / Severe	-1 / -2
Repair crew Critical damage	No jury-rigs
Number of Gs above Floorfield*	-1/G
-1G if no turn or roll, +1 G if roll	
Undermanning	-DM

*Hull, Surface & Thrust repairs ignore floorfield

*Core repair is affected by floorfield only if Floorfield cover cargo and craft.

VGood Jury-rig holds for 1 week*

RC can move to other location and act again

Good Jury-rig holds for 1 day*

RC can move to adjacent location and act again

Fair Jury-rig holds for 4 hours*

Miss or worse Jury-rig failed

*After period roll 4+ each period to keep JR

POWER UP SIZE+

Powering up from Silent running is rolled during the Repair phase

Modifier	DM
Repair skill	+DM
Repair crew Light / Severe dmg	-1 / -2
Repair crew Critical damage	No powerup
Result	

VGood Power is on next turn

RC can move to other location and act again

Good Power is on next turn

RC can move to adjacent location and act again

Fair Power is on next turn

Miss Power is on the turn after the next

Bad No power, try again

VBad No power, and CD in Power location

Hitlocation and repairs

Different locations require different skill to repair

Location	Skill	Where
Hull	Mechanic	Outside repairs
Crew	Mechanic	Indoor repairs
Core	Electronic	Indoor repairs*
Surface	Electronic	Outside repairs
Power	Engineer	Indoor repairs*
Thrust	Engineer	Indoor repairs*

*Outside repairs if Size < 50 dTon

Falling off

Outside RC Roll 1D6 > G-load after Movement phase to avoid 1 one level worse damage, keep rolling until success or RC is Destroyed.

G-load = net thrust and aerobraking

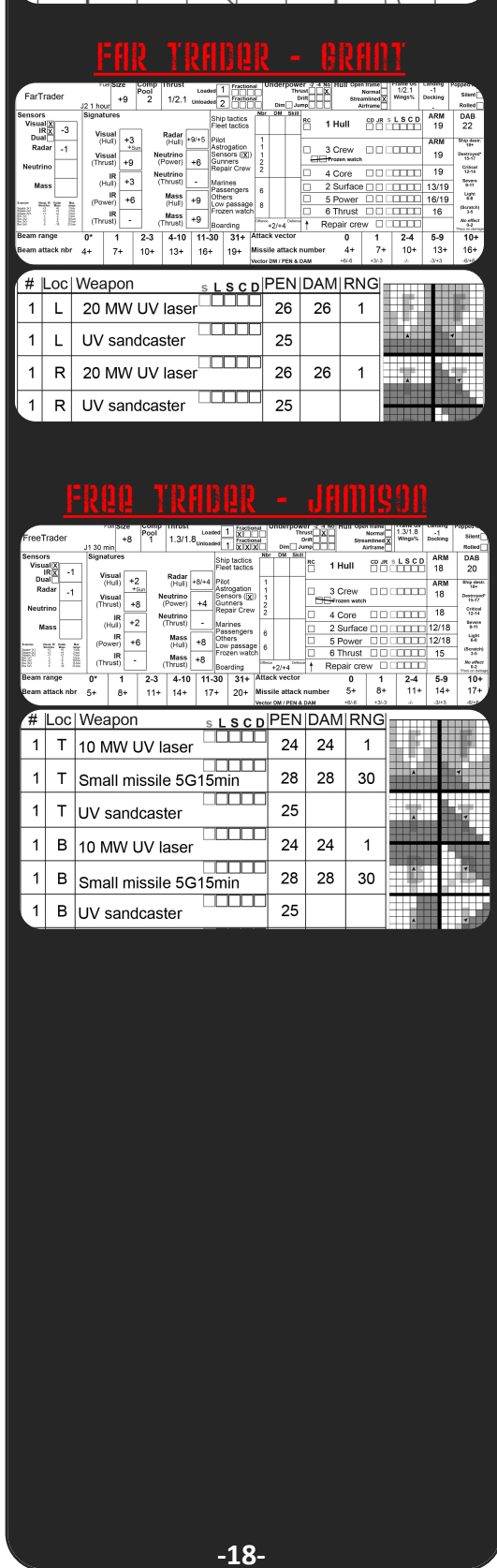
-1 if the ship didn't turn

+1 if the ship rolled

Undermanning

Lower than required Repair Crew make Jury-rigs harder to perform.

Amount of crew	Task DM
100% crew	No DM
At least 30% crew	-3
At least 10% crew	-6
Less than 10% crew	No task allowed



Two traders disagreeing over something leading to hostilities. Let's call the aggressor Grant and let's call the defender Jamison. Grant has an Empress Marava class Far trader, Size 8 with 2 computer dice pool, their crews are both skill 2 in all departments. The ship has two turrets mounted left and right, each holding a 20 MW laser and a sandcaster. Jamison has a Beowulf class Free trader, Size 7 with 1 computer dice pool. The ship has two turrets mounted top and bottom, each holding one 10 MW laser, one small missile launcher and one sandcaster. Look up the ships' stats from their DataCards at left. Let's just say this is turn 2 and that Jamison has lost the initiative to Grant, both have finished movement as seen in the picture.

No underpower apply as neither ship beam attacked last turn

Beam target number at 2-3 squares fro the Free trader is 11+

Grant have +2 gunnery, and +2 for both left and right turret bearing in the front centerline. A roll of 7+ (Grant could have chosen two separate 9+ attacks instead but Jamison would be allowed to use his sandcaster result on both). Grant decide to use his 2 computer dice to roll 4D6 and pick the best two D6.

Jamison must decide what his defense should be including any computer pool to use *before* the attack is rolled. Only the top mounted turret bear, Jamison use its sandcaster and his 1 dice pool, rolling 3D6 and picking the best two D6.

Grant rolls a 10 on his best 2 of 4D6, which is 3 above the 7+ required, a Good result. Jamison must roll 11+ +2 for skill for his sandcaster, he roll 3 dice and roll a 9 exactly, a Fair result. The Fair defense reduce the quality of Grant's attack from Good to Fair, it was reduced in severity but not fully stopped, time to roll hitlocation and damage.

The attack comes from the front so hitlocation is rolled with 2 D6 and using the lowest, Grant rolls a 5 and a 6 of which 5 is used; Power location. As Fair hits may not modify the hitlocation rolled the result stick. Penetration next.

Jamison's powerplant is running so the left ARM value of 16 for the Power location is used. Grants lasers have PEN and DAM of 26 but fire beyond their effective range of 1 so their PEN and DAM is reduced to 23 (they cannot fire at all beyond 3 range). $PEN - ARM$ is $23 - 16 = 7$, and looking it up on the table we see that the hit is guaranteed to penetrate no matter what degree it has.

The lasers have DAM 23 and Jamisons ship has a DAB of 20, $26-20 = 3$.

The hit was a Fair hit so Grant rolls 2 D6 and adds the lowest die roll to 3. Grant rolls two sixes and the player yell exploding dice! The lowest die was 6 so Grant gets to add 1D6 / 2 rounded down to the result, he rolls a 2 so the final die roll becomes 7, 6 + 2/2 rounded down. 7 + 3 = 10 as a damage roll.

Looking it up on the damage table it would be Severe damage but Surface, Power and Thrust locations are treated as one degree more severe for a final damage of Critical. Jamison can no longer use his powerplant, not until his Repair Crew have managed to Jury-rig it down to an effective Severe.

Grant on the Intercom “Looks like you’re toast Jamison!”

Jamison retaliate

Damage results take effect immediately

With his power location suffering a Critical damage there can be no beam attack retaliation from Jamison, but he can still use his missiles.

Missile target number is 7+

The separation between Jamison and Grant in the last turn was 3 squares so the target number for a hit is 7+. Only the top mounted turret bear so Jamison will launch 1 missile from his Drift square (missiles launch from the Drift square, not from the ships position, see page 12). The relative velocity of a missile impact affect both its chance of a hit (and the defenses chances) as well as its PEN and DAM. Attack vector is simply the separation between the target and attacker the least turn, the separation is 4 squares which give us no Vector DM and no PEN & DAM modifications.

Jamison's missiles are 5G15m so 2G remain after thrusting 3 squares from the Drift; a +1 per G remaining give us a 5+ to hit. Jamison has no dice pool left so he will roll 2 dice but before rolling Grant must decide on his defense.

Decide on defenses before the attacker roll

A laser cannot both attack and defend in the same turn

Grant used both lasers to attack so there is no defense for him.

Jamison roll 8 which is 3 more than the 5+ required, a Good hit.

Hitlocation roll is based on attack direction

Attacker may modify rolled location based on final degree of success

Hitlocation is rolled by 2 D6 and using the lowest because the attack is from the front. A 3 and a 5 is rolled and the 3 is used; Core. Jamison scored a Good hit so he may modify the result up or down by 1, he decides on Surface. Grant has attacked so he cannot pop-in, the left ARM value of 15 is used.

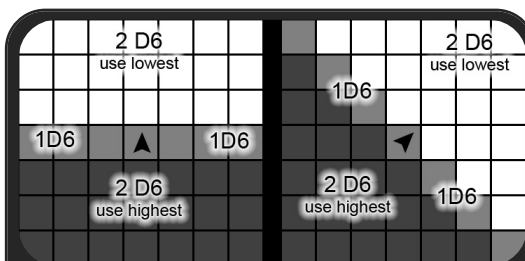
PEN - ARM determine what degree of success is required to penetrate

The missile has a PEN of 28 which is unaffected by the Attack vector of 4, the ARM of the Surface location is 15. PEN - ARM is 28 - 15 = 13, looking it up on the table we see that the hit is guaranteed to penetrate.

DAM - DAB is used when rolling damage

The missile DAM is 28 also unaffected by the Attack vector of 4. Grants Far trader has a DAB of 22 as a Far trader is somewhat larger than a Free trader. DAM - DAB is 28 - 22 = 6. Jamison scored a Good hit so the damage roll is simply 1D6. Ja,ison rolls a 3 for a final damage of 9. Looking up 9 on the damage table we find Severe but Surface location increase the damage by one degree to Critical. A Critical hit on the Surface location means all tracks are gone, no Scans are allowed, any launched missiles are lost and no attacks or defenses allowed!

Jamison on the intercom "Who is toast you say?"



HITLOCATION

Fair hit Roll as picture above

Good hit Roll as above, may pick adjacent

VGood hit No roll, attacker pick from table

Roll	Hitlocation	Where (skill)
1	Hull	Outside (mechanic)
2	Crew	Inside (mechanic)
3	Core	Inside (electronic)
4	Surface*	Outside (electronic)
5	Power**	Inside (engineer)
6	Thrust	Outside (engineer)

*Left / right ARM value when popped out / in

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

MISSILE ATTACK 19+

Attack vector

Attack vector is the separation of the missiles or launching ship and the target from last turn

Attack vector	0	1	2-4	5-9	10+
Vector DM	+6	+3	-	-3	-6
PEN* & DAM*	-6	-3	-	+3	+6

*Nukes ignore PEN & DAM modifiers

PENETRATION

PEN-ARM	Penetration result
3+	All hits penetrate
2	Good & VGood hits penetrate
1	VGood hits penetrate
0-	No hits penetrate

DAM-DAB+ROLL

A modified roll of 6 cause Exploding Dice

A modified Scratch+ roll of 1 cause CD

Sprayfire hits are always treated as Fair hits

Destroyed** results or hitting already Destroyed

non-Hull locations cause Pass-on-damage

DAM-DAB +roll*	Damage result
Surface, Power or Thrust - one row up	
Beyond effective - one row down	
Attack vector - see table	
Pass-on-damage - two rows down	
18+	Ship destroyed
15+	Destroyed & Pass-on
12-14	Critical
9-11	Severe
6-8	Light
3-5	(Scratch)
0-2	No effect

*Fair Roll 2 D6 and pick the lowest D6

*Good Roll 2 D6 and pick the highest D6

*VGood Treat as a roll of 6, with ED as usual

A roll of 1 is CD, a roll of 6 is ED

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, Mercury and Luna, Large planets are Earth and Venus. If the optional 100 000 km square 1 hour turn rules are used our Small planets become Uranus and Neptune and Large planets become 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, and incidentally also happens to denote the *near* 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 last position affect the current drift

Ships with their *last* position on a planet do *not* adjust for gravity

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 gravity arc the ships *last* position is in and move the drift pos according to the arrow. This is the ships new drift position.

A ship remaining in the gravity modified Drift square is considered *drifting*, if not 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

Float is done after gravity adjustment in the Drift part of movement

Legit facing for Float-thrust is based on the ships facing of its *last* turn

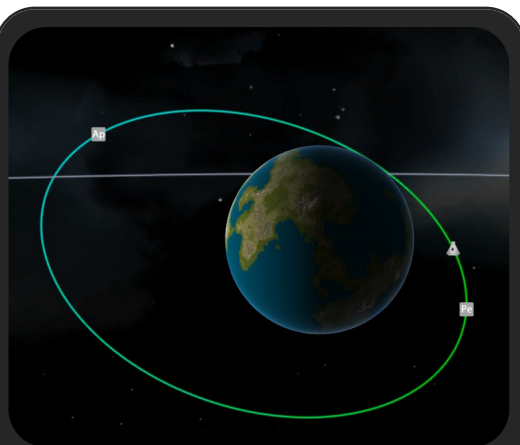
Float may only move the Drift to negate gravity for the turn

Write F next to a ship that used Floater on the plotting map

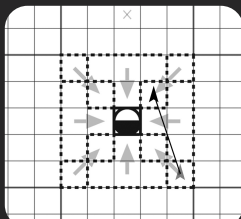
Ships with a Floater (Grav or Impulse have built in Floaters too) may negate gravity, apply gravity as usual and then if the past position facing allow it they can thrust 1G in the opposite direction of gravity canceling its pull. Float-thrust *is* considered 'thrust' and a ship can use regular thrust in combination with Float thrust as long as the past position facing allows it, Float-thrust also have the same Signatures as regular thrusting. If damage prohibit regular thrust on a turn it also prohibits Float-thrust and ships with fractional Float-thrust may only use them on the turns that allow them.

Belly-landers have their 'up' aligned perpendicular to the thrust direction, examples are the space shuttle, Millenium Falcon and Serenity. Belly-landers may Float-thrust left or right.

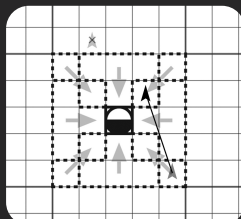
Tail-landers have their 'up' aligned parallel to the thrust direction, examples are the lunar lander, Rosinante of the Expanse and the Tintin rocket. Tail-landers Float-thrust along the nose direction.



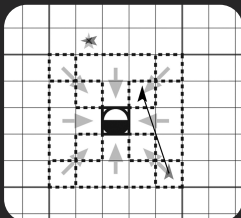
Orbiting a planet



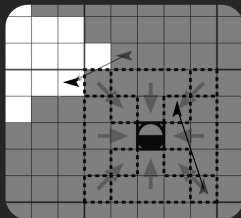
Drift before gravity



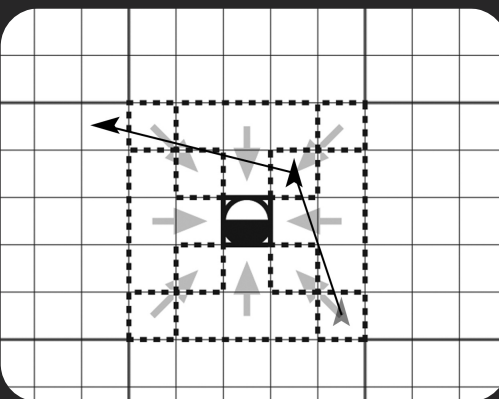
Drift after Gravity



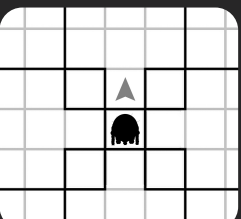
Turning



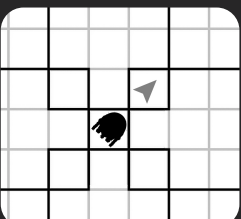
Thrusting



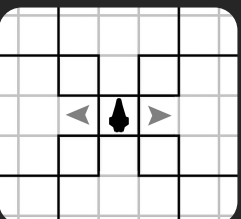
Completed movement



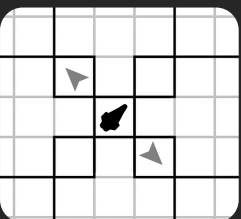
Tail lander legal Float



Tail lander legal Float



Belly lander legal Float



Belly lander legal Float

Hitting planets

Ships ending their movement on a planet will hit the planet the next turn
Crossing the planet without ending on it will not hit the planet

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. 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.

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.

There is the possibility of perpetually crossing the planet back and forth, assisted by gravity - this is called *polar orbit* but 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.

We will now briefly step through a number of turns of drifting in gravity for one example of a stable orbit. This is just one example as there are many more that you can discover for yourself.

Turn 1 A ship is moving 2 squares up and 1 square to the right before applying gravity. The ship's current position is in a gravity field arc pointing to the right so we move the Drift square to the right. The ship is not thrusting so we are done for now.

Turn 2 The ship is now moving two squares straight up before gravity. The ship is still in the right pointing gravity field arc so we move the drift once again to the right. Done.

Turn 3 The ship is now moving two squares up and one to the right before gravity. The ship is now in the down-right gravity arc so we move the Drift one to the right and one down before moving. Remember, the ship's *current* position affects how the *drift* is moved.

Turn 4 The ship is moving two squares to the right and one up before gravity. The ship's current position is in a gravity arc pointing down so we move the drift down. Notice that our ship has turned 90 degrees around the planet. If we keep doing this the ship turns 90 degrees around the planet every four turns for a complete revolution every 16 turns! We have achieved stable orbit.

Shadow column

Ships in shadow treat Sunfactor as 0

Ships in shadow ignore Sunflare

Neutrino scans ignore planets and Shadow columns

Planets cast long shadows where ships can hide. The column below a planet, 1 square wide for Small planets and asteroids, 3 squares wide for Large planets, is called the Shadow column and stretches all the way to the bottom edge of the map. Asteroids have shorter shadows, see page 23. Ships in the shadow column are in shadow and not lit by the sun which has certain effects in the game. Ships inside shadow ignore Sunflare (except Neutrino scans) and treat the Sun factor as 0 for Visual(Hull) signatures. When a ship is in the same square as an asteroid (or on the surface of an asteroid or planet) the rules of Sunside or Darkside determine if you are in shadow or not, see page 23, 28-29.

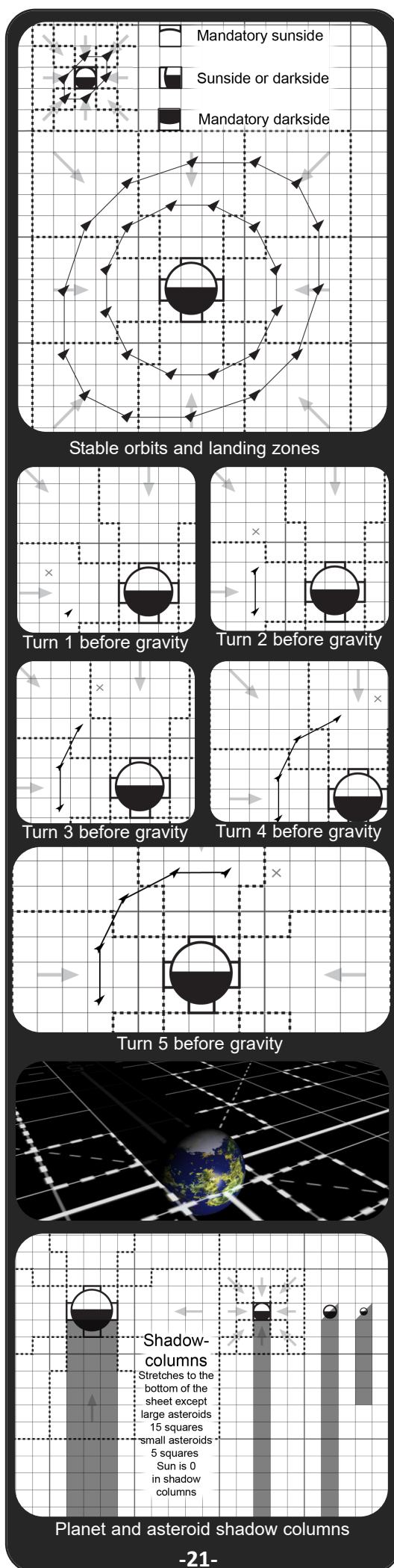
Actual shadow column lengths are as follow:

Large planet 3 squares wide and 150 long (1 500 000 km)

Small planet 1 square wide and 50 long (500 000 km)

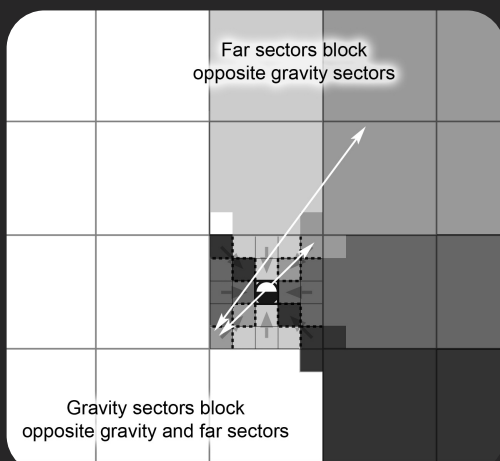
Large asteroid 1 square wide and 15 long (150 000 km)

Small asteroid 1 square wide and 5 long (50 000 km)

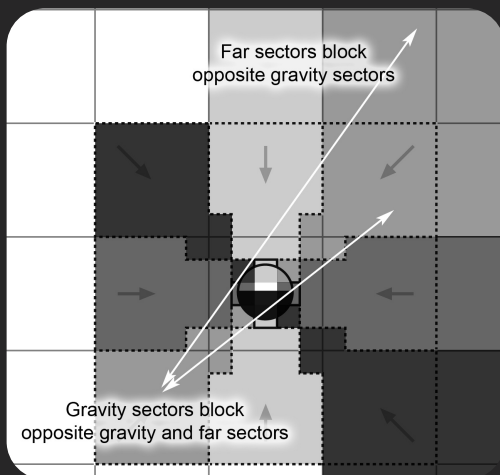


On or adjacent to a planet square

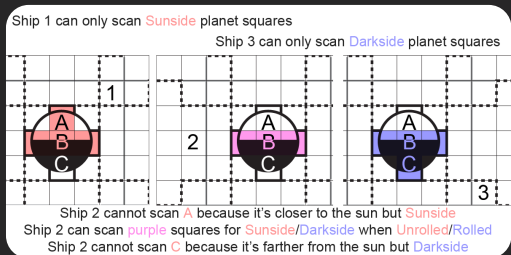
Ships near an asteroid, planet or gas giant have lower signature for all but Neutrino sensors
Asteroid / Planet / Gas giant -1 / -2 / -3



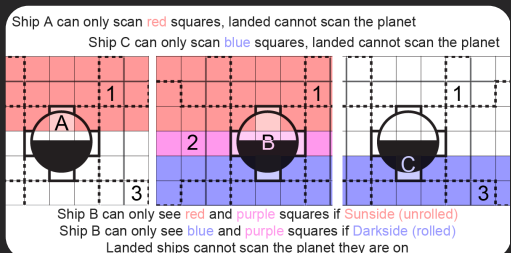
Small planet Gravity and Far sectors



Large planet Gravity and Far sectors



Ships may scan Sunside squares when closer to Sun
Ships may scan Darkside squares when farther from Sun
Unrolled/Rolled scan Sunside/Darkside when equal



Sunside ships may scan squares closer to Sun
Darkside ships may scan squares farther from Sun
Both may scan squares equal range from Sun

Planet Line Of Sight (LOS)

Planets also block Line Of Sight (LOS) of course, ships on one side of the planet won't see and won't be seen by ships on the other side. Planet LOS is symmetric so a ship that cannot see a someone cannot also be seen by him.

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

Does the Scan touch your ships Sunglare?

Ships in shadow ignore Sunglare

If the scan touches your Sunglare column and you are not in shadow you say yes and reduce the scan strength of your scan by Sunfactor (typically 6). If the scan does not touch your sunglare column or your ship is in shadow you answer no and leave the scan as it was. This question is always asked.

Does a planet block parts of your Scan?

Scans from outside gravity which also don't touch a gravity ignore LOS

Scans from far sector block the opposite gravity sector

Scans from a gravity sector block the opposite gravity and far sector

Planet LOS work by something called gravity and far sectors, a planets gravity sectors are simply the gravity arcs while the far sector extend from the gravity sector all the way to the edge of the map and beyond, look at the pictures at left for the near and far sectors of planets, small and large.

There are two cases that can affect a scan from planet LOS

1 If your ship is inside a gravity sector (the gravity well) the opposite gravity and far sectors are blocked. If your scan touches any of the blocked sectors you must tell your opponent what is blocked of the scan, if your scan doesn't touch the blocked sectors you tell him nothing.

2 If your ship is in a far sector the opposite gravity sector only is blocked. If your scan touches that blocked gravity sector you must tell your opponent what is blocked, if your scan doesn't touch the sector you tell him nothing.

Ship signature near a planet square

On or adjacent to Asteroid / Planet / Gas giant -1 / -2 / -3

Ships near (on or adjacent to) an asteroid, planet or gas giant are harder to detect for all but Neutrino sensors, the modifier is applied by the target.

Scanning planet squares

Scanner may always choose to omit scanning planet squares

Sunside planet squares can only be seen from ships closer to the sun

Darkside planet squares can only be seen from ships farther from the sun

Equal distance to Sun may scan Darkside if ship is rolled or Sunside if unrolled

Landed ships must omit the asteroid/planet/gasgiant they are landed on

If your scan touches any planet squares themselves you may omit scanning them or, for each planet square scanned, tell the target Sunside if the square is farther from the sun than you, or Darkside if the square is closer to the sun than you. Planet squares at the same distance to the sun as you are scanned Sunside if unrolled or Darkside if rolled.

If your ship is on a planet square during the sensors phase it will crash or land the next turn, guaranteed. If landed see page 28-29.

Scanning from a planet square

These rules apply in the rare case when a scanning ship is on a planet square

Sunside (unrolled) scans have all squares farther from the sun blocked

Darkside (rolled) scans have all squares closer to the sun blocked

This too is covered by the Does a planet block parts of your Scan? and its a dead giveaway if parts of this scan is blocked so try to only scan squares you can see when on a planet square. If your ship is on a planet square during the sensors phase it will crash or land the next turn, guaranteed.

Special sensors

The above rules on apply to the Visual and IR Scans, other work as follows:

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

Neutrino Ignore all planet LOS rules, Sunglare still apply, even in shadow

Mass Ignores the Sunglare rules, ignores all planet LOS rules too.

Planet LOS examples

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

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 was not inside the Scan he would say Nothing, if inside the Scan but with a Signal of -1 the target would still say Nothing, if the Signal was 0+ it would be a Contact so the target would tell its position and what Signature(s) that gave 0+ Signal, the scanner would then probably do a Sense task to try to get a Tracked result or a Position from the Contact. The target player has also learned that the scanner's ship is somewhere below the Scan area, thank's to the Sunglare.

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"

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.

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?"

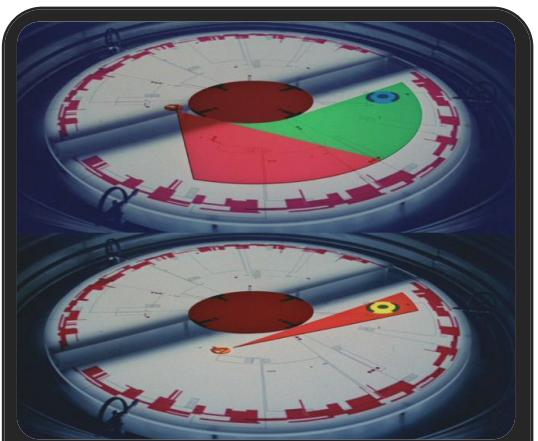
Player A "Not from within, but it touches"

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

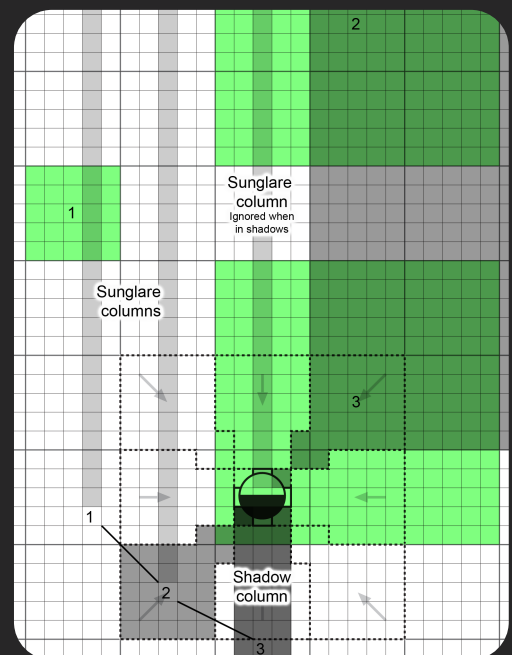
Player A "Gravity north"

The scan touches the sunglare column but as the ship is in shadows the answer is no. 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, had the ship been one square further up it would be in the gravity sector (gravity-well) so the entire opposite arc would be blocked, all the way to the top of the map.

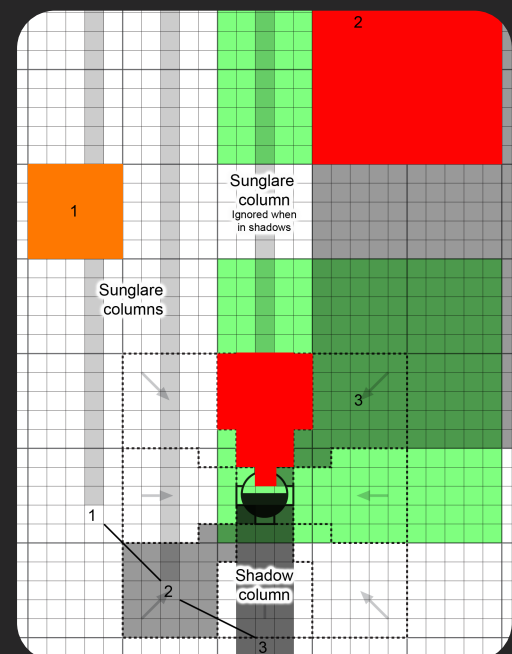
I have colored the parts of the scan that should be ignored in red.



Star Wars planet LOS



Planet LOS Scan examples



Planet LOS result
Orange suffer Sunglare
Red is blocked

Asteroids

Asteroids come in many sizes, from rocks that can be as small as ships all the way up to huge ones of nearly 1000 km in diameter, larger than that and they are planets. Asteroid are much smaller than the square they are in so you cannot crash into them like you can planets. Being stationary in an asteroid square is treated as being in orbit, you can also land on them of course.

Rocks are less than 1 km in diameter and should be designed using the Intercept design system with just a hull and Normal for streamlining. Land on them using the docking rules on page 27, and you can stay in their shadow using the Shadowing rules, also on page 27.

Small asteroids are at least 1 km in diameter and less than 100 km in diameter, their shadow column extent 5 squares in the opposite of the Sun direction. Stationary ships in a small asteroid square will orbit once every 2 turns.

Large asteroids are at least 100 km in diameter and less than 1000 km in diameter, their shadow column extent 15 squares. Stationary ships in a large asteroid square will orbit every 4 turns.

Asteroid orbit

Stationary in Small asteroid sq are rolled at Drift on every turn

Stationary in Large asteroid sq are rolled at Drift on 1 & 3 of every 4 turns

Being stationary but not landed in a large asteroid square have no gravity effects except that the ship is rolled on certain turns. Small asteroids roll the ship on every turn and large asteroids roll the ship on turn 1 and 3 of every 4 turns. As rolled ships are Darkside while unrolled ships are Sunside each ship will shift from Darkside to Sunside and back again, doing a full cycle every 2 turns for Small asteroids and every 4 turns for Large asteroids.

Landing on asteroids work the same as for small planets; landing is Sunside if unrolled or Darkside if rolled, see page 28 for details.

Asteroid movement

Asteroids drift and are affected by gravity just as ships

Asteroids can never collide with ships or other asteroids

Try to avoid having moving asteroids as they make things much more complicated. Ships are considered stationary if they have the same vector as the asteroid, you may then land or stay in orbit following the asteroid, ships landed follow along as they move. Asteroids are affected by gravity in the same way as ships, to model Phobos or Deimos of Mars, just have two small asteroids in orbit around a Small planet.

Asteroid LOS

Ships in shadow ignore Sun glare

Rolled ships in an asteroid square are in shadow

Shadows are 5 squares for Small and to the edge for large asteroids

Asteroids have shadow columns just as planets but they are only 1 square wide and for small asteroids only go 5 squares. Ships on the *asteroid square* itself are considered to be in shadow if rolled and outside shadow if unrolled. The only effect of being in shadows is that ships in shadow treat the Sunfactor as 0 for their Visual(Hull) signature, just as for ships in planet shadows.

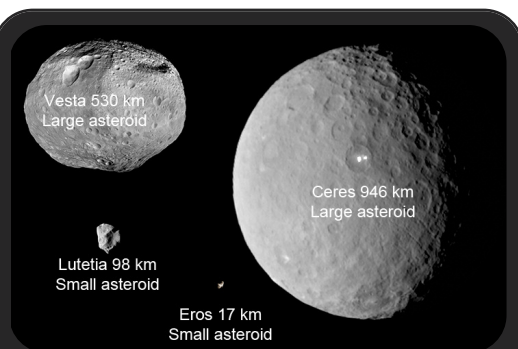
Does the Scan touch your ships Sun glare?

Answer no if you ship is in shadow, either in the shadow column or when rolled in the asteroid square itself. If the answer was yes subtract -6 (Sunfactor) from the Scan strength as usual.

Does a planet or asteroid block parts of your scan?

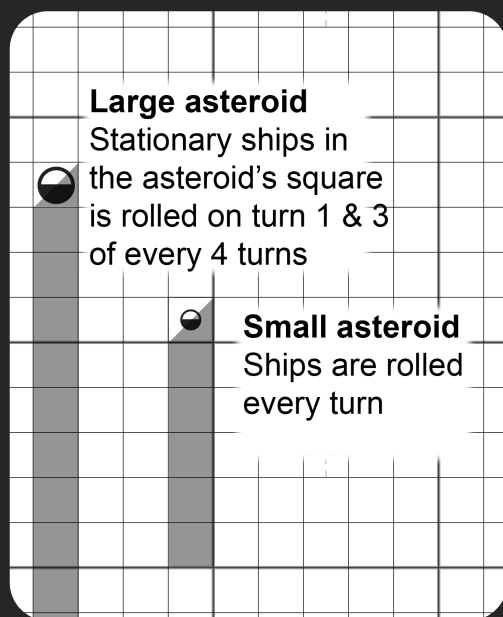
Asteroids are simply too small to block LOS even when the ship is in the asteroid square itself. Simply answer *no* to this question. To block LOS with the help of an asteroid your ship must be in the asteroid square itself, see page 22.

If you want something better than merely being in the shadow of an asteroid for detection purposes consider landing on it. This will make you even harder to detect, see pages 28-29 for details.



Asteroid features

Feature	Large	Small
Size	<1000 km	<100 km
Shadow	15 squares	5 squares
Orbit	Every hour	Every 30 min



Large asteroid shadows go 15 squares
Small asteroid shadows go 5 squares down

Questions to Scanner

Does your Scan touch your ships Sun glare?

Answer *no* if you ship is in shadow, either in the shadow column or when rolled in the asteroid square itself, otherwise answer yes if your scan touches the sun glare column.

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

Does a planet block parts of your Scan?

Only ask this if the map has planets or asteroids, see pages 28-29.

Do you scan the planet squares?

If a scan touches a planet or asteroid the scanner may omit them, see pages 28-29.

Aerobrake and landing

Aerobrakes are done when starting on or adjacent to a planet with atmosphere and with nonzero speed, aerobrakes move the ship *after* Turning and Thrusting. Landings are done when starting on a planet with nonzero speed.

Mandatory Aerobrake is when you start your turn on a planet square. Your ship must use the full airdrag of the atmosphere and you'll be glad you did as any remaining speed after aerobrake will be collision with the ground.

Voluntary Aerobrake is when you start your turn adjacent to a planet square. Your ship may use any pressure from zero up to the actual pressure at the ground for drag, a 10 000 km square is much bigger than the 100 km or so thickness of an atmosphere, this also means that an out of control ship adjacent to a planet square will never suffer involuntary aerobraking.

Aerobrake procedure (Movement, reverse Initiative)

Ships starting on a planet do not adjust their Drift for gravity

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

Decide airdrag if voluntary, this must be decided *before* rolling for Pilot

Drift and gravity (Floater) Modify Drift for gravity as usual, apply Float-thrust if you want to and the ships past facing allow it. Ignore both gravity and Float-thrust if past is on a planet.

Turning and thrusting Ships turn and thrust as usual here, or perform the initial step of Split movement with turn/2 and thrust/2 *rounded up*.

Pop in & Forced facing Sensors and weapons will automatically pop in before an aerobrake, you keep you Tracked targets and launched missiles as usual when popping in. Facing will be adjusted to face in the direction of the current vector, if the vector is zero no adjustment is done and no aerobrake can take place. If the facing was adjusted you gain +1 *Maneuver* but will suffer more aerobrake damage as your streamlining is treated as one step worse.

Airdrag Maximum drag is based on atmosphere thickness. *Voluntary* aerobrake may use Airdrag from 0 up to maximum, *mandatory* aerobrake *must* use maximum Airdrag, Airdrag is in both cases limited to the speed prior to aerobrake.

Wingdrag Wingdrag is based on wings of the ship, +1 if Forced facing. Pilot decide how much of their Wingdrag to use but never be more than the amount of Airdrag used.

Aerobrake Airdrag + Wingdrag is now used to move the drift into any square as long as the new speed is no more than the original speed prior to aerobrake.

Adjust facing after aerobrake After an aerobrake is done you must adjust the ships facing to face along its new vector. If the aerobrake reduced the speed to 0 your ship will be adjusted to face its original pre aerobrake move instead.

Roll aerobrake damage Roll aerobrake damage using the speed before the aerobrake + brake Gs from Airdrag + Wingdrag and your streamlining (treated as one worse if Forced facing). Roll if modifiers are -2 or higher.

Brake Gs is the net distance of the ship before and after the aerobrake.

(Final split movement) If you used Split movement previously now you can apply the final turn/2 and thrust/2 *rounded down*. Note that if your ship suffered Hull damage from the aerobrake it may not be able to turn as much.

Roll landing damage If the aerobrake was mandatory you have landed or crashed and must roll landing damage.

Landing procedure (Movement, reverse Initiative)

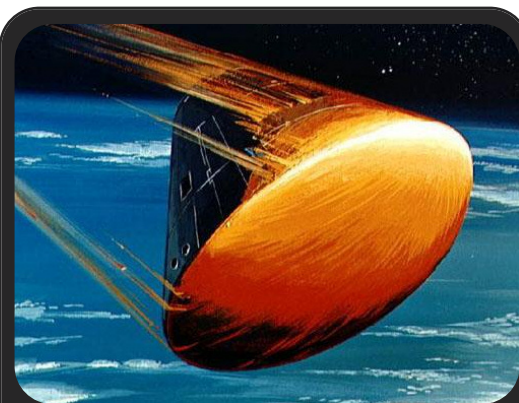
Ships starting on a planet do not adjust their Drift for gravity

If your ship start the turn on a planet square with nonzero speed it will land or crash. If the planet has atmosphere you should have reduced speed using aerobraking and will be facing directly away from the past position.

Turn Try to turn the ship so it faces its past position, this is where you want to thrust towards to cancel out your speed before hitting the ground.

Thrust Try to reduce the speed to zero or as low as possible.

Roll Landing damage Landing ships must roll landing damage as its -2 or higher with all modifiers.



AEROBRAKE SEQUENCE

Decide airdrag, must be done before Pilot task
Drift and gravity (including Floater)
Turn and thrust (or initial Split movement)
Pop in and Forced facing
Aerobrake (Airdrag and Wingdrag)
Adjust facing (new Drift or original Drift if 0)
Roll aerobrake damage, based on Pilot task (final Split movement)
(roll Landing damage, based on Pilot task)

Airdrag and Wingdrag

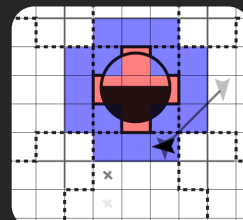
Aerobrake Gs comes in two types; *Airdrag* which is based on atmosphere and *Wingdrag* which is based on wings and facing.

Atmosphere	Airdrag*
Vacuum	No aerobrake
Trace	1
Very thin to thin	2
Standard	3
Dense or gasgiant	4

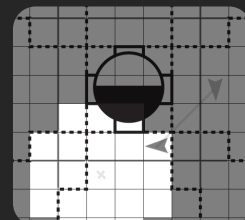
*Airdrag can never be more than Speed

Wings	Wingdrag*
Wings less than 5%	0
Wings 5% or more	1
Wings 10% or more	2
Wings 20% or more	3
Forced facing	+1

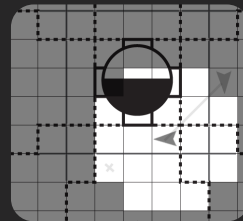
*Maneuver can never be more than Airdrag



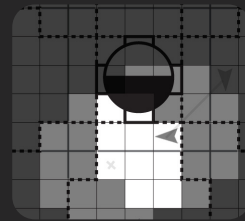
Drift & forced facing



Airdrag + Wingdrag



Speed limit



Legal aerobrakes

Voluntary blue, Mandatory red
Voluntary aerobrake using 1 Airdrag & 1 Wingdrag
Speed was 2

ROLL+MODIFIERS

Aerobrace DAM

Speed is the speed before aerobrace, Brake Gs are the number of aerobrace Gs used
Dstr results destroy the ship

Hull type	Speed + Brake Gs					
	1-2	3-4	5-6	7-8	9-10	11+
Open frame	6	9	12	Dstr	Dstr	Dstr
Normal	0	3	6	9	12	Dstr
Streamlined	Safe	0	3	6	9	Dstr
Airframe	Safe	Safe	0	3	6	Dstr

Aerobrace use Speed + Brake Gs

Takeoff use Speed + Airdrag - 3

Forced facing use 1 row up

Ships face along new vector after aerobrace

Landing DAM

Impact speed is the final speed after aerobrace and possibly Split movement. Always roll if modifiers are -2 or higher, even at speed 0.

	Impact speed					
	0*	1	2-4	5-9	10-19	20+
Landing	3	6	9	12	15	18

**Treat Impact speed 0 as 0.5 for FrameGs*

Modifiers (where applicable)

Landing gear & port DMs (landing only)

Docking gear DMs (docking cooperatively only)

+1 if Brake Gs or Impact speed > FrameGs

+2/+3 if Brake or Impact \geq x2 / x3 FrameGs

Hitlocation and Damage roll for acting ship

Damage rolls for aerobrace, dock, land and ram all use this way to roll. Note that this damage roll is *not* rolled the same way as combat damage is rolled. Both ships not thrusting improve task 1 result level, and both ships not turning/rolling improve task result 1 level.

Pilot task*	Hitlocation	Damage roll
VGood	Hull	Treat as 1, no CD
Good	Hull	3D6 use low, no CD
Fair	Hull	2D6 use low, no CD
Miss	2D6 use low	1D6
Bad	1D6	2D6 use high
VBad	2D6 use high	Treat as 6, ED

**Docking no thrust on both improve task 1 lvl*

**Docking no turn on both improve task 1 lvl*

Damage table

Roll damage if modifiers are -2 or higher

A roll of 6 cause Exploding Dice

A Scratch+ roll of 1 cause CD

DAM-DAB	Damage
+roll*	result

Surface, Power or Thrust - one row up

Pass-on-damage - two rows down

18+	Ship destroyed
15+	Destroyed & Pass-on
12-14	Critical
9-11	Severe
6-8	Light
3-5	(Scratch)
0-2	No effect

Aerobrace Signature

See page 28 for details.

Aerobrace damage roll

Past position on voluntary or mandatory aerobrace square

Roll damage based on Aerobrace DAM, do not subtract your ships DAB

Hitlocation and damage roll is based on Pilot task or Pilot default

If you aerobraked you may need to roll damage. Determine aerobrace DAM from the table at right and apply modifiers. Hitlocation and how damage is rolled depends on your Pilot task roll or Pilot default. If the aerobrace was mandatory you must also roll Landing damage, even if the speed ended up being 0. **Dstr** on the table destroys the entire ship, no ifs, no buts, no rolling needed.

Landing damage

Past position on planet is a landing/crash, even if speed is 0

Roll damage based on Landing DAM, do not subtract your ships DAB

Hitlocation and damage roll is based on Pilot task or Pilot default

Planet landings always brake remaining speed to zero

If your ships past is on a planet you must roll for damage, yes, you must roll damage even if speed was 0! Hitlocation is based on the Pilot task result and is typically Hull unless you screwed up your Pilot roll. After rolling Landing damage your ship has zero velocity, your ship and the ground has soaked up the excess speed, ouch!

Landing gear & port

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. If the port is not cooperating the modifier does not apply (if landing somewhere else, prohibited from landing etc), see page 27 for docking and ramming.

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

Taking off (during Movement, reverse Initiative order)

Landed ships Drift is the same as their location

Taking off from a planet skips gravity

Fission and fusion thrust with scoops use no takeoff fuel in atmospheres

Taking off from a planet uses the Movement sequence with some changes:

Drift & gravity Landed ships has zero velocity so your Drift will be the same as your location, landed ships are not affected by gravity.

Turning and thrusting Decide how much thrust you'll use, typically all you have, use the table below or calculate it from Thrust + Airdrag - 3, and then use that value on the Aerobrace DAM table at left.

Atmosphere	Aerobrace factor
Vacuum	No damage
Trace	Used thrust - 2
Very thin to thin	Used thrust - 1
Standard	Used thrust
Dense or gas giant	Used thrust + 1

Gas giant skimming

Speed x Brake Gs x 5% = fuel skimmed per turn (15 min)

Stationary hovering will still give 1.25% per turn (15 min)

Speed x Brake Gs x 20% = fuel skimmed per turn (1 hour)

Stationary hovering will still give 5% per turn (1 hour)

Your ship must have Fuel scoops and fuel tankage to skim (reaction mass, jumpfuel or use the special fuel tankage if you have). A fuel purifier is optional but will reduce the risk of a misjump when applied to skimmed jumpfuel. When using the large scale maps please note that both speed and brake Gs are treated as x2 so a speed of 1 braked to zero would in fact rolled on the aerobrace damage table as 2 + 2 = 4!

Docking and ramming



Docking (after Combat phase, Initiative order)

Previous position must be on the targets previous position

Current position must be on the targets current position

Both ships must have the same facing or the docking miss

No thrust on both ships increase effective docker Pilot task one level

No turning on both ships increase effective docker Pilot task one level

Use the targets Docking gear only if it is cooperating in the docking

Docking is done at the end of the combat so all have had a chance at firing prior to the dock. If your ship was on the target the previous turn and your ship is on the target this turn, and both ships are facing the same direction you may dock. Simply state your intention and roll damage on you and the target.

Damage rolled is based on your ships current Pilot task result, better result means lower damage on you and the target. If neither ship thrust the task is one degree better, if neither ship turned or rolled the task is one degree better. This is a great way to avoid docking damage but the docking will probably take longer to perform. Rotating stations are tricky, damned you Stanley Kubrick!

Docking gear All ships have airlocks to allow docking but better equipment means safer dockings. Only if the target ship cooperate in the docking will its docking DM be used, but your docking gear DM will still apply of course.

Ramming (after Combat phase, Initiative order)

Current position must be on the targets current position

Both ships must have the same facing or the ramming miss

Do not use Landing or Docking gear DMs

ARM is based on target hitlocation vs your hitlocation ARM

Lower Size get vector from higher, or from rammer if Size is equal

Decide in the scenario prior to playing whether ramming will be allowed at all and if so, what ships may attempt rams. Ramming is done after the Combat phase so all ships has had a chance to attack. If your facing doesn't match the targets facing the ramming attempt fail. Successful ramming does not mean you are docked but as your vectors will be the same the ships are set up for a docking the next turn.

Hitlocation Use the hitlocation from page 26 for your ship, Hull for a Fair or better Pilot task, target hitlocation uses the table at right. Note that relative ARM values are from the actual locations hit. Try hitting your opponent's ship in the Surface location as it has really thin armor there when popped out.

Vector after ramming Both ships will Drift using the vector of the largest Size of the two ships in the ramming. If equal Size the Drift vector will use the ramming ships vector, yes, you can tackle equal or smaller Size ships this way.

Shadowing

Ships in shadow from Shadowing are still affected by Sunflare

If your ship is has same position, vector and facing but roll is opposite vs a 2+ Sizes larger ship you are in its shadow so your Visual(Hull) treat Sunfactor as 0. Sunflare still apply when being in shadow this way however. Works with cooperating ships but cooler still is doing it with a tracked unaware enemy, hide in the shadow of an unaware foe, very cool!

ROLL+MODIFIERS

Docking and ramming DAM

Relative vector is the separation between you and the target on the last turn. Always roll if modifiers are -2 or higher, even at speed 0.

Relative vector

	0*	1	2-4	5-9	10-19	20+
Landing	3	6	9	12	15	18

*Treat Impact speed 0 as 0.5 for FrameGs

Modifiers (where applicable)

Landing gear & port DMs (land only)

Docking gear DMs (dock cooperatively only)

+1 if Impact speed > FrameGs

+2/+3 if Impact speed ≥ x2/x3 FrameGs

+1 if 3+ higher ARM (dock & ram only)

-1 if 3+ lower ARM (dock & ram only)

+1 if lower DAB (dock & ram only)

-1 per higher DAB (dock & ram only)

*Docking / ramming attacker use Hull ARM

*Docking / ramming target use hitlocation

Damage roll for target ship

Damage rolls for docking and ramming targets use this table, use the table on the previous page for the docking or ramming ship.

Pilot task*	Target hitloc	Target dam
VGood	Pick	4D6**
Good	Pick	3D6**
Fair	1D6 pick adj.	2D6**
Miss	1D6	1D6
Bad	1D6	1D6
VBad	1D6	1D6

*Docking no thrust on both improve task 1 lvl

*Docking no turn on both improve task 1 lvl

**Docking use low D6, ramming use high D6

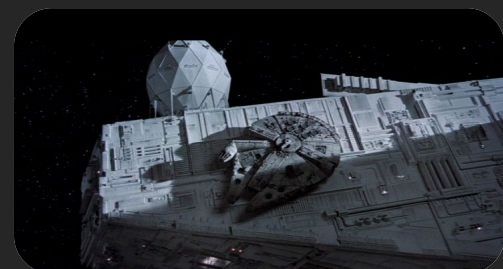
Damage table

A roll of 6 cause Exploding Dice

A Scratch+ roll of 1 cause CD

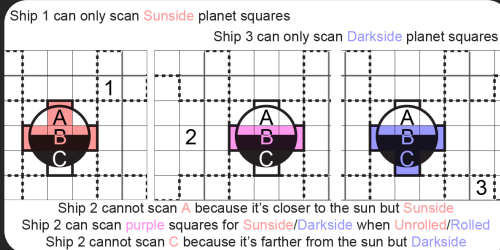
Destroyed** results or hitting already Destroyed non-Hull locations cause Pass-on-damage

DAM-DAB	Damage
+roll*	result
Surface, Power or Thrust - one row up	
Pass-on-damage - two rows down	
18+	Ship destroyed
15+	Destroyed & Pass-on
12-14	Critical
9-11	Severe
6-8	Light
3-5	(Scratch)
0-2	No effect



Scanning near planets

Affects Scans by Visual, IR and Radar



Ships may scan Sunside squares when closer to Sun
Ships may scan Darkside squares when farther from Sun
Unrolled/Rolled scan Sunside/Darkside when equal

Near planet or landed signature

Affects Visual, IR, Radar & Mass

	Near*	Landed
Larger ship (2+ larger)	-	-1
Small asteroid	-1	-2
Large asteroid	-1	-3
Small planet	-2	-4
Large planet	-2	-5
Small gas giant	-3	-6
Large gas giant	-3	-7

*On or adjacent to

Landed ambient light

Affects Visual and IR

Aside from Visual(Hull) being affected by +Sun when in sunshine as usual, Visual and IR signatures are also degraded by ambient light.

Landed side	Visual	IR
Sunside	-Sun/2*	-Sun/2*
Darkside	-0	-Sun/4*

*Round down

Landed atmosphere

Landed atmosphere	Visual	IR
Trace	-1	-2
Very thin to thin	-2	-4
Standard	-3	-6
Dense or gas giant	-4	-8

Sensors affected

Visual and IR

Landed size, LOS, ambient and atmosphere

Radar

Landed size and Landed LOS

Unaffected by ambient and atmosphere

Mass

Landed size

Unaffected by LOS, ambient and atmosphere

Neutrino

Unaffected by everything, treat all targets as being in space using the normal rules

Aerobrake Signature

Aerobraking forces a Pop in so no Scans, attacks or defenses can be made. Tracked targets and launched missiles remain.

Visual & IR sigs both add Speed + Brake Gs to the Visual(Hull) and IR(Hull) respectively.

Aerobrake Sigs

Visual(Hull) = Visual(Hull) + Speed + Brake Gs*

IR(Hull) = IR(Hull) + Speed + Brake Gs

*Use highest of this or Visual(Hull) + Sun

-28-

Landed ships

Ships that are landed on asteroids, planets or gasgiants are considerably harder to detect, if the planets have an atmosphere it gets harder still. Not all scan types are affected by all factors as noted, Neutrino scans are completely unaffected and treat landed ships as if being in space, while radar and mass ignore both ambient light and atmosphere.

Landed LOS

Affects Visual, IR, Radar

Ships can only scan for Sunside squares that are equal or farther from the sun

Ships can only scan for Darkside squares that are equal or closer to the sun

When scanning for landed ships you must specify if you scan for Sunside or Darkside targets. Look at the picture at left to see what squares you may scan for Sunside or Darkside in, note that squares equally far from the sun as you may be scanned for both Sunside or Darkside, but not both in the same scan of course. Sunside ships are landed in sunshine and unrolled, Darkside ships are in darkness and must be rolled.

Near planet or landed signature

Affects Visual, IR, Radar and Mass

The larger the object you have landed on the harder it is to find your little ship amidst all that background. Modify your signature by the factor from the table. Landed size affect all signatures except Neutrino.

Landed ambient light

Affects Visual and IR

A ship in space is silhouetted by the blackness and coldness of space but when landed the ship is camouflaged by reflected sunlight of the surroundings or the infrared radiation from the body landed on. Note that a Sunside ship adds +Sun to its Visual(Hull) as usual, and then apply ambience of -Sun/2 rounded down, also note that IR is -Sun/2 Sunside but -Sun/4 Darkside.

Landed atmosphere

Affects Visual and IR

Landed ships are harder to detect if they are covered with an atmosphere and we assume that this carpeting is even stronger in infrared. Ships in the atmosphere of a gasgiant could in theory go to any thickness but that would require special hulls outside of the scope of Intercept, referee must adjudicate this.

Procedure

If your scan contains an asteroid, a planet or a gasgiant and you scan using Visual, IR or Radar (sensors affected by Landed LOS) you must tell your opponent whether you Scan for Sunside or Darkside targets (Mass and Neutrino sensors ignore this). When the opponent then ask you if any part of your Scan is blocked (Mass and Neutrino ignore this too) you must tell him what parts of your Scan is blocked to Sunside or Darkside. Next, if one or more targets are within the remaining scan area the target apply the various modifiers to their signatures and if the sum of signature and scan strength is 0+ it's a Contact.

Visual Visual(Hull) add Sun if Sunside or 0 if Darkside as usual, then apply Landed size, ambience and atmosphere effects.

IR Apply Landed size, ambience and atmosphere effects.

Radar Apply Landed size only. Radar would be ideal if it didn't have that horrible scan area modifier. The requirement to reveal your position if you get a Contact or better doesn't help either.

Mass Apply Landed size only. Mass sensors ignore Landed LOS so you can detect landed ships from any direction. Too bad they have the same atrocious scan area modifier as radar, at least they won't reveal the scanner position.

Neutrino These ignore all aspects of being landed but they are large and expensive so only science vessels and large warships carry them - also, if the fission or fusion thruster is off and the fission or fusion powerplants is also off they see jack shit.

Scanning when landed

Affects Visual, IR, Radar

Sunside (unrolled) scans can only see squares that are equal or closer to sun

Darkside (rolled) scans can only see squares that are equal or farther from sun

Sunside scans inside an atmosphere are always affected by Sunglare

If a ship scans from landed on a planet and the opponent asks "Does the planet block parts of your Scan?" scans from Sunside have all squares farther from sun blocked, from Darkside all squares closer to the sun are blocked. It is the responsibility of the target to ask for blocked by planet or asteroid squares and the responsibility of the scanner to inform the target of what squares that are blocked, if any. For details of line of sight checking see pages 22-23.

Visual and IR Scans work normally, atmosphere will reduce the strength of the Scan by the table at right, the scanner must take planetary LOS into account, see figure at right.

Radar Scans work normally, atmosphere has no effect but the scanner must take planetary LOS into account, see figure at right.

Mass Scans ignore all aspects of scanning when landed.

Neutrino Scans ignore all aspects of scanning when landed.

Combat between space and landed ships

Landed ships are considered drifting, with Drift DMs in effect

Affects lasers, missiles and particle guns but not meson guns

Sunside ships cannot fight targets farther from the sun

Darkside ships cannot fight targets closer to the sun

Lasers defending against missiles ignore atmosphere effects

Meson guns can fire at any target and are unaffected by atmosphere

Atmosphere affect weapons adversely, but differently depending on type.

Ships in the Sunside cannot attack or be attacked by targets further from the sun, ships in the Darkside cannot attack or be attacked by targets more sunward.

Landed ships are always considered drifting.

Lasers beams Lasers can fire through atmosphere but with a attack DM and reduced PEN & DAM depending on atmosphere thickness. Laser defense fire against missiles are *not* affected by atmosphere because laser defense against missiles happen at a few kilometers range at most.

Particle beams Particle weapons double all modifiers, including hit DMs.

Meson beams Meson guns are unaffected by atmospheres, they don't even have to worry about being in the right hemisphere to fire.

Missiles Missiles must be Airframe or Hypersonic to be used in an atmosphere, Airframes are highly streamlined missile with 10% wings when used to maneuver and they use the left values in the table at right, Hypersonics are even more streamlined missile with 20% wings when used to maneuver, they use the right values in the table at right. Use the table Missiles through atmosphere

Enter/Exit is the maximum speeds allowed when entering or exiting an atmosphere of a particular thickness, left/right for Airframe/Hypersonic.

Brake is the reduction to speed when coming from before using the Attack vector table, apply the brake after checking Enter/Exit max speeds. Do not apply Brake when firing from a planet to space.

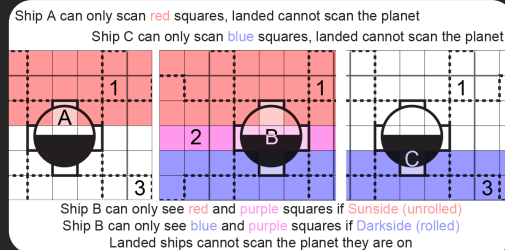
Air2Air finally is the Attack vector to use when attacking from within the atmosphere to a target also within the atmosphere, always use highest pressure of the two and only use when both are inside Trace or more thickness.

Example 1: A ship fires a missile at a target on the ground in thin atmosphere, The missile hit with a speed of 5 which would have destroyed it if it was Airframe, luckily this is a Hypersonic missile. The Attack vector is $5 - 2 = 3$.

Example 2: A landed ship decides to launch a missile on a target in space, the missile is airframe with 5G of thrust. Trace atmosphere can the full 5G, Very thin to thin must limit thrust to 4G, Standard must limit thrust to 3G and firing from a Dense or gas giant atmosphere would be limited to 2G for the first turn.

Example 3: A landed ship is attacking another landed ship in standard atmosphere, using sensor data from a ship in space to track the target. An Airframe missile would use 0 as Attack vector while a Hypersonic one uses 1.

Scanning when landed

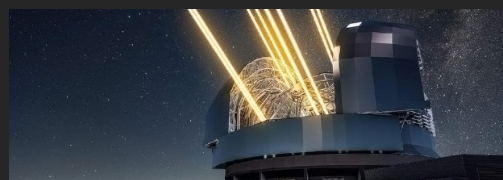


Sunside ships may scan squares closer to Sun
Darkside ships may scan squares farther from Sun
Both may scan squares equal range from Sun

Scans through atmosphere

Visual and IR scans from landed are reduced in strength from any atmosphere.

Atmosphere absorption	Visual	IR
Sunside Sunglare	-Sun	-Sun
Darkside Sunglare	-	-
Trace	-1	-2
Very thin to thin	-2	-4
Standard	-3	-6
Dense or gas giant	-4	-8



Beams through atmosphere

Beam attacks have a negative attack DM from atmosphere and reduced PEN and DAM. Particle beams double these modifiers and mesonguns completely ignore them.

Lasers	DM*	PEN* & DAM*
Trace	-1	-2
Very thin to thin	-2	-4
Standard	-3	-6
Dense or gas giant	-4	-8

*Particle beams double all modifiers

Missiles through atmosphere

Airframe/Hypersonic missiles have a max speed to enter/exit atmosphere, they also have Impact speed reduction, Air to Air speed.

Missiles	Enter/Exit ¹	Brake ²	Air2Air ³
Trace	5/7	-1	1/2
Very thin to thin	4/6	-2	0/1
Standard	3/5	-3	0/1
Dense or gas giant	2/4	-4	0/1

¹Safe speeds (use value before Brake applied)

²Speed reduction from space before impact

³Speed to use on the Attack vector table below

Attack vector

Attack vector is the separation from last turn, reduce the value used by atmosphere above before determining Vector DM and PEN & DAM

Effect	0	1	2-4	5-9	10+
Vector DM	+6	+3	-	-3	-6
PEN* & DAM*	-6	-3	-	+3	+6

*Nuclear missiles ignore PEN & DAM mods

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 retain balance, fun or sanity.

Boarding (optional)

A ship may board another ship if it has docked with it or has landed near a tracked landed target, boardings take place during the Repairs phase. Both ships need to calculate their offensive and defensive boarding DMs, offensive is used by the boarders while defensive is used by the boarded. Boarding action then consist of the attacks from each side, in Initiative order, using their relative DMs to inflict damage on each other. If the boarders win they take over the ship and may commandeer it using a skeleton crew, avast ye mateys!

Boarding DMs

Regular crew and repair crew count as 1 each

Marines count as 5 each

Ignore crew in parenthesis (sensor ops or gunners)

Ignore passengers, frozen watch or low passage

Calculate Offensive DM by adding Repair Crew and any marines, count each marine s 5. Look up the number in the table and note as your Off. Add up all the other crewmembers to your previous total, ignore sensor ops or gunners in parenthesis as they are dual role crew, the same dude doing two jobs and should therefore not be counted twice.

Boarding resolution

Boarding attacks are during the Repairs phase for each ship

Boarder may attack enemy crew or Core, Power or Thrust locations

Defender may attack boarder or do repairs or power ups

Boarded ship may use dice pool to worsen attackers roll or improve own

Apply damage to Crew and Repair Crew, using cumulative damage

Boarding action is performed in Initiative order which usually but not always mean the boarder attacks first. *Boarder* decides wether to attack the *boarded* or attack core, power or thrust location. *Boarded* decides whether to attack the boarder or perform repairs or power ups instead. Yes, sometimes making your ship space-worthy again is more important than killing them scallywags.

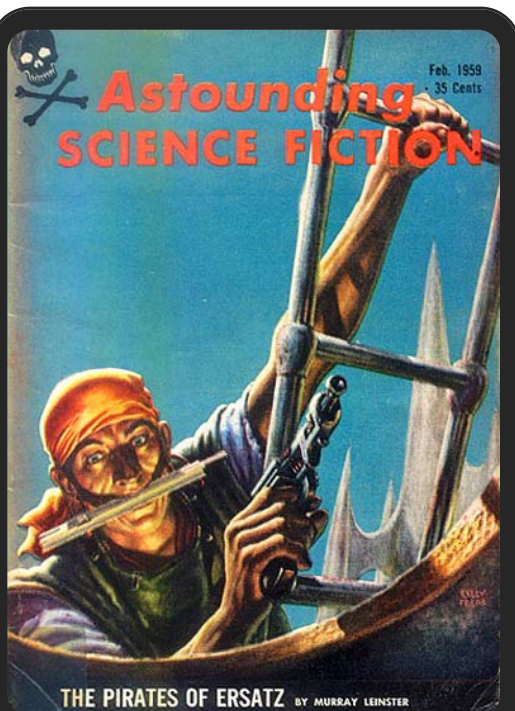
Roll 1D6 and add the applicable DMs from the table at right. Note that the boarder uses Offensive DM while the defender uses Defensive DM as the boarder only uses his Repair Crew and marines while the boarded uses everyone that can fight. The boarded ship may use dice pool to improve their own die roll or worsen the boarders die roll as they wish, security cameras, door locks, atmosphere controls and the floor field can be deadly adversaries on a hostile ship. Traveller Grogards can see this as the Anti-hijack software in action.

Apply damage to both Crew and Repair Crew for the boarded, the boarder only apply damage to their Repair Crew of course. If you t a Destr* result when attacking a ship location pass-on damage will give the Hull Critical damage, this way the boarders can destroy a ship completely including themselves.

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 vessel initiating the boarding if the boarders lost the boarding action. That ship as well as the originating ship suffer an extra -1 on all tasks. 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!



Others			
Low passage	6		
Frozen watch			
Boarding	Offence	Defence	
	+2/+4		

Boarding DM

Regular crew and repair crew count as 1

Marines count as 5

Passengers, low pass, frozen watch count as 0

Offensive DM

Repair Crew and marines.

Defensive DM

Repair Crew & marines plus rest of crew

Nbr	DM	Nbr	DM	Nbr	DM
1	+1	6	+4	60	+7
2	+2	9	+5	90	+8
3	+3	30	+6	300	+9 etc

Damage table

Roll on the table below in th respective ships Repair phase. *Boarder* can decide to attack Core, Power or Thrust instead. Boarded can attack or use the action to perform repairs or powerups instead.

Boarding is over if at the end of a turn one side has Critical or worse damage.

+ attacker Boarding DM - target boarding DM

+1 if target Light damage*

+3 if target has Severe or more damage*

-1 if attacker Light damage*

-3 if attacker has Severe or more damage*

*Use lowest damage of Crew and Repair Crew

Boarded ship Size					
1D6	5-	6-7	8-9	10-11	12+
7+	Destr*	Destr*	Destr*	Critical	Critical
6	Destr*	Destr*	Critical	Critical	Severe
5	Destr*	Critical	Critical	Severe	Severe
4	Critical	Critical	Severe	Severe	Light
3	Critical	Severe	Severe	Light	Light
2	Severe	Severe	Light	Light	-
1	Severe	Light	Light	-	-
0-	Light	Light	-	-	-

*Inflicting Dstr damage on a ship location also deals Severe Pass-on damage to the Hull

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 may do normal attacks or proximity attacks just as regular missiles, this is decided by the attacker.

Nukes ignore the PEN and DAM modifiers for Attack vector and all attacks use the Sprayfire rules for hitlocations and damage, see page 9. Nuke attacks cause Radiation damage which give one level extra damage to Crew and Repair crew , they also cause Nuke whiteout which may affect sensors on 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. The nuke option also vastly increases the missiles PEN & DAM, by +12 each. The values are for impacts but nukes may of course use the Proximity attack option if the controller choses to, just as for regular missiles.

Nuke attacks and defense

Attacker decide if the attack will be Proximity detonated or not

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

Missile attacks from aft centerline cannot be defended against

Nuke attacks work the same as for normal missiles but the target may defend using one laser group and one nuclear damper group. 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 Sprayfire 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 become 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 whiteout

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 signature

Nukes have small telltale Neutrino signatures whose strengths depend on the size of the nuke or whether it is armed or not. A nuke missile is armed as soon as it is launched but can be armed without launching if the situation arise.

Ships with missile magazines of TL 14+ use nuclear damper technology to stop the nuke warheads from decaying so they have no nuke Signature.



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)

Extra PEN and DAM

You may increase PEN & DAM by reducing Gs See page 13 for more missile options.

(-1G, +1 PEN & DAM)

Nuke whiteout

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.

Missile	DAM Radius (large scale)
Small missile	38+ Same square (-)
Medium missile	44+ 1 square (same)
Large missile	50+ 3 squares (1)
(Very large*)	56+ 10 squares(3)

**-4 G buys you +4 PEN & DAM, enough to increase the whiteout effects one level*

Nuke signature

Nukes have a small Neutrino signature before they are armed and a larger one when armed. Nukes stored in damper boxes have no discernable neutrino signature. Damper boxes are TL 14+.

Nuke size	Unarmed	Armed
Small nuke	+0	+2
Medium nuke	+2	+4
Large nuke	+4	+6
(Very large*)	+6	+8

**-4 G buys you +4 PEN & DAM, enough to increase the signatures one level*



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 the ship didn't turn

+1 if the ship rolled

Crew

-2 for Limited, Full or Bridge station

-5 for Limited tank station

-Floorfield Gs

Repair Crew

-Floorfield Gs if indoor*

*Crew, Core, Power and Thrust are indoor.

Core only if the floorfield cover cargo too. Hull and Surface never benefit from floorfield.

G-Loc

Roll 1D6 above G-Load to avoid G-Loc, rolling G-Load or less G-Loc, roll separately for Crew and RC. Failed rolls means no more task rolls for Crew or RC, and adds 1h Fatigue.

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

REDLINING

Determine if you can Thrust (roll for use if prior damage for example) and then simply say *Redline* to get x2 Thrust. After thrusting roll 1D6 damage to Thrust, and also Power for powered thrust, fuel use x2 too. A roll of 1 is CD and 6 is exploding dice. Don't forget to roll G-load.

1D6	Damage	Use roll
15+	Destroyed	No
12-14	Critical	No
9-11	Severe	4+
6-8	Light	2+
3-5	Scratch	Auto
1-2	(no effect)	

Redlining, G-Loc & Fatigue (optional)

Acceleration induced loss of consciousness or G-Loc occurs when the acceleration stress become too much to handle. 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 and G-Loc

Roll 1D6 above G-Load to avoid G-Loc stun, separate for Crew and RC

Treat thrust as -1G if the ship didn't turn

Treat thrust as +1G if the ship rolled

Failed G-Loc prohibit task rolls for Crew or RC for the rest of the turn

A miss by 3-5 also give Light damage, miss by 6+ give Severe damage.

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. 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 hull or surface for example).

Roll 1D6 above G-Load to avoid G-Loc, separately for Crew and RC. A failed roll means Crew or RC cannot do any tasks for the remainder of the turn.

Brace for impact (optional)

Use the lowest of 2D6 vs Thrust, decide separately for Crew and RC

Bracing prohibit any actions after Movement phase, by Crew and RC

Every submarine movie has the captain yelling 'brace for impact' and now you can too! At the end of movement, right before rolling for G-Loc you may opt to have the Crew or Repair Crew brace themselves. Bracing means the Crew cannot Scan, attack or defend and RC can't perform repairs or power ups. Bracing for impact ends at the end of the turn so you can thrust and turn or aerobrace while bracing for impact any number of times in a row.

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. Living space per crewmember give the maximum mission time before fatigue sets in, Limited life support limits this further to 24 hours however. Mission endurance is automatically calculated by the ship design system, consult the design system on page 56 for details.

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. Note that action does *not* start when you attack, an entire space battle can be fought and one without you ever starting the action clock.

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 you do to get extra thrust out of a drive you use Redlining. Simply say so when thrusting and your thrust is x2, fuel use is also x2. After thrusting you roll 1D6 damage to Thrust and if using Power thrust roll also for Power. If the Repair Crew is in a location that got damaged they too suffer the same damage.

Ship and fleet tactics (optional)

Ship tactics

All ships of a *group* must have the same position, vector, facing and roll

Ship tactician's Pilot roll against largest ship Size under command

May group weapons across ships to get larger volleys

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 volleys of weapons from different ships under your command, three fighters with one laser each can attack together as a three gun volley with a DM of +3 for example. Ship tactics skill level determine the max number of ships under your control, Ship tactics skill level also break Initiative ties.

The Pilot of the Ship tacticians 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 and turning. Ships that cannot maneuver from Hull damage cannot be included in a tacticians command.

A Ship tactician can be the pilot on his own ship but all the commanded ships must also have pilots - no one-man drone fighter squadrons here!

Fleet tactics

All *groups* must be within range of the Fleet tactician's ship

Share dice among commanded ships but no more dice than the best computer

Fleet tacticians allow multiple *groups* or *ships* within range to share computer dice pools. All ships pool their computer dice pool and use dice from the pool to improve their task roll. No task roll can use more dice than the best computer under command. The number of groups under command and the maximum range from the command ship is limited by Fleet tactics skill, see table at right, a *group* is either an individual ship or a group of ships commanded by a Ship tactician.

Computer boost

Computer boosting must be done before any dice from the pool are used

You cannot use dice from the pool to help the Computer boost task

If the ship has a skilled computer technician he can try to improve on the ships computer. This will increase the number of dice in the pool but no task can use more dice from the pool than the computers's model. Computer boost can be performed *once* during a turn, at any time in the turn as long as no dice from the pool has yet been spent, add computer operator as 'other' on the crew panel of the design system. If the computer technician has another job you must use the rules for multiple tasks on page 43.

Say a ship with a Model 2 computer decides to boost its computer and roll a Good result adding 2 dice to the pool for a total of 4 dice. The ship may use 2 dice to help a Pilot roll and then 2 dice to help a Sense roll but it can never add 3 or 4 dice to any task despite having them in the pool.



Ship tactics

A Ship tactician command multiple ships, all with the same position, vector, facing and roll, the ships commanded are called a *group*. The Pilot of the tactician's ship roll Pilot task using the *largest Size* under command, the result hold for all ships commanded.

All ships of a group move as one and attack as one big ship and same type weapons may combine in attacks between ships. The Ship tactician may, *without penalty*, be the same person as the Pilot of the ship. Ships defend individually however and may not group defenses across ships for defensive purposes.

Fleet tactics

A Fleet tacticians share computer dice between commanded ships but never more than the dice from the best computer commanded. The number of ships or groups under command and the maximum range from the command ship is limited by the Fleet tactics skill.

Skill level	Ship tactics ships	Fleet tactics groups*	range
No skill	Own ship	Own ship	-
+1	2 ships	2 groups	2
+2	3 ships	3 groups	3
+3	6 ships	6 groups	1 box
+4	9 ships	9 groups	2 boxes(1)
+5	20 ships	20 groups	3 boxes(2)
+6+	30 ships	30 groups	5 boxes(3)

*Ships or groups commanded by Ship tacticians

Computer boost 8+

The computer technician try to add more dice to the computer pool, at considerable risk. Roll 8+ at any time during the turn but before you have used any dice from the pool.

Modifier	DM
Computer skill	+DM
Computer tech Light / Severe	-1 / -2

VGood Add 3 dice to the pool

Good Add 2 dice to the pool

Fair Add 1 die to the pool

Miss No dice added

Bad The computer pool is empty for the turn

VBad Pool is empty and Core increase damage

Other scales

	4m	15m	1h	4h
Movement				
Pilot task ¹	-1	±0	+1	+2
Fuel use	x1/2	x1	x2	x4
Missile fuel use	x1/2	x1	x2	x4
Battery energy use	x1/2	x1	x2	x4
Skimming				
Aerobraking %	1.25	5	20	-
Hovering %	0.3	1.25	5	-
¹ As task DM or rows for Pilot default				
Speed	x1/2	x1	x2	x4
Aerobrake	x1/2	x1	x2	x4
Scans				
Visual, IR, Neutr	+4	±0	-4	-8
Radar, Mass	+9	±0	-9	-18
Beam Attacks	+3	±0	-3	-6
Effective range	x10	x1	/10	/100
Attack vector	x1/2	x1	x2	x4
Repairs or Power up	-3	±0	+3	+6
Small asteroid (SA)	SP	SA	-	-
Large asteroid (LA)	LP	LA	-	-
Small planet (SP)	SGG	SP	SA	-
Large planet (LP)	LGG	LP	LA	-
Small gasgiant (SGG)	No	SGG	SP	SA
Large gasgiant (LGG)	No	LGG	LP	LA

Other scales (optional)

All Intercept rules assume the normal scale but some situations may call for playing at different scales, all scales below have 1 G of thrust equal 1 square.

Small scale 4 minute turns, 1 000 km squares Small scale is mainly useful for lower tech ships where engine fuel use and the shorter ranged sensors, beam and missile weapons cannot handle the normal scale.

Normal scale 15 minute turns, 10 000 km squares This is the default scale of Intercept and the one all rules assume. Do not change scale unless needed.

Large scale 1 hour turns, 100 000 km squares Large scale is useful for engagements with larger warships or when modeling a gas giant with moons. Radar becomes next to useless because of its steep falloff.

Huge scale 4 hours turns, 1 000 000 km squares Huge scale is mostly useful to play out system travel for M class stars with their tiny solar systems. See page 44 for details on system travel.

Scale changes

Changed scales affect aspects many aspects of playing Intercept. Below is a brief outline following the sequence of play.

Pilot task and Pilot default has a modifier used when rolling Pilot task or modifies the row used on the Pilot defaults table. Larger scales make ships easier to handle, small scale makes them harder to handle.

Drift & Gravity works the same as usual, but asteroids and planets are treated differently depending on scale. The table at left shows how asteroids and planets are affected by changes in scale, larger scales treat them smaller while smaller scale make them effectively larger.

Aerobraking work the same but the aerobrake speed and brake is multiplied by a factor depending on scale.

Tracked and Untracked movement work the same but ships using fuel (fission and fusion) has a multiplier, larger scales use more fuel per G of thrust.

Missiles movement work the same but there is a multiplier on the fuel use. In order to be treated a Snap missile the missile must have an endurance covering the entire turn length. If a missile doesn't have enough endurance for a full turn the missile cannot be used at that scale.

Sensors work the same but there are modifiers affecting their Scan strength. The modifier is different Visual/IR/Neutrino and Radar/Mass. Integration bonus apply the same as before, +1 Scan strength for 4 identical continuous scans.

Beams work the same in different scales but there is a hit modifier on the to hit roll. More importantly the effective ranges are strongly affected. A beam laser with an effective range of 3 squares at 15 min scale will be 30 squares at the 4 min range and only 0.3 squares (same square) at 1 hour scale.

Missiles work the same except that a Snap missile must have a fuel endurance of the turn length and fuel consumption has a multiplier. When attacking using anything but nukes the attack vector is multiplied based on scale.

Repairs and powerups work the same but have a task modifier based on scale. This implicitly makes VGood results more likely on larger scales so the RC can continue on, doing multiple repairs.

Continuing damage works the same albeit not quite realistic.

Switching scales

Normally you start playing in normal or large scale and keep doing that for the entire game. If you want to switch from one scale to another mid play you should follow these following rules

The entire normal scale mapsheet corresponds to an area on the Large scale sheet 3x5 squares in size. Going from normal to large scale you must determine where the 3x5 squares should be on the large sheet and going from large to normal scale you must determine what 3x5 squares of the large sheet should represent the entire normal scale mapsheet, the 3x5 area cannot have any gasgiants and must hold all ships and missile volleys.

Normal -> Large

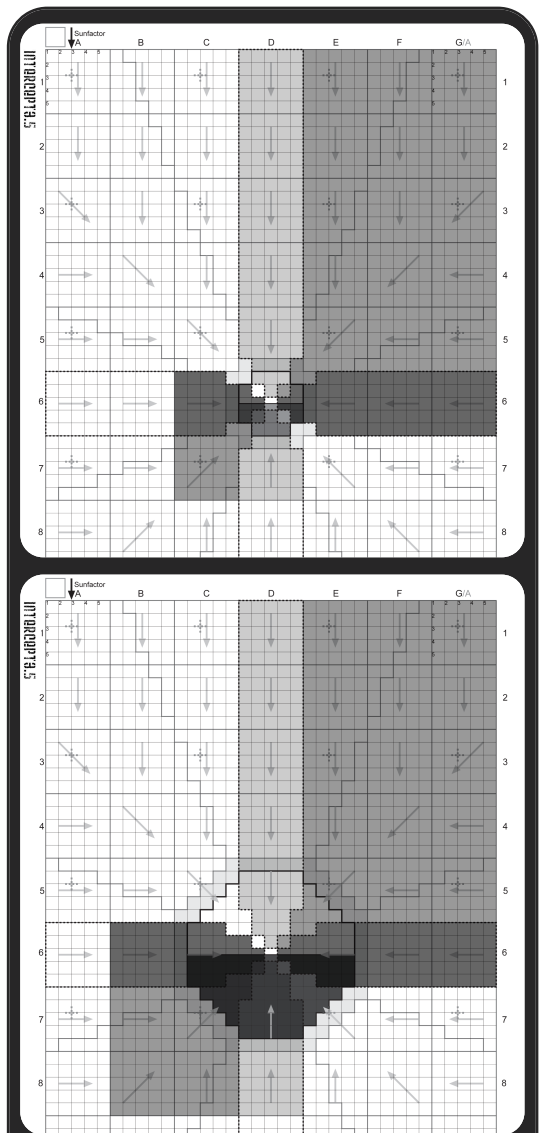
Switching to large scale can only take place on turns divisible by four, each block of four turns represent one turn in the new scale.

Determine where the 3x5 square area representing the normal mapsheet resides. Determine for each ship and missile volley what their current position in the new scale is; each 2x2 boxes become one square in Large scale, keep the same facing. Now measure the vector from current to past for each and divide by 3 rounded down; this is the ships vector in the new scale.

Large -> Normal

Switching to normal scale can be done on any turn. Each turn represents four turns in normal scale and should be kept track of for Fatigue tracking.

Determine for each ship and missile volley what their current position in the new scale is; Decide where in the 2x2 boxes each ship and missile volley is, 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.



Simplified damage (optional)

These rules cover penetration and damage of your attacks at a fairly low level of detail. Damage is tracked as a single score for the entire ship and varying levels of armor is handled abstractly and we don't care what direction the attack came from, except that Fixed firing weapons must have their target in the Front firing arc and being blind to attacks from your Aft centerline.

The rules are compatible with the normal damage rules so one side can use the basic while the other use normal or in a roleplaying scenario the players ship can use the normal damage rules while NPC ships use the basic, you decide.

Simplified damage is not compatible with Arcs damage on page 38.

What weapons bear?

Fixed weapons can only attack targets in their Forward arc

Turret and bay can only fire half (round up) at a target*

Targets in the Aft centerline of a thrusting ship cannot be attacked

***Weapons attack once in a turn, lasers attack or defend but not both**

Fixed mounts only fire inside their arc, turrets and bays can only fire half (rounded up) at a target and never attack more than once in a turn.

Penetration

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

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

Beams may also modify PEN & DAM by +3 from Cooked shots

Missiles may also modify PEN & DAM by -6 from Proximity attacks

Meson beam attacks always penetrate

To determine if a hit penetrated calculate PEN-ARM and consult the table at left. There are three columns, one for each degree of success, these degrees are limited if the target is popped in and/or powered down.

Damage The ship suffers the full effect of the hit. Roll damage and look up the result using the table on the next page.

Blocked The armor blocked all damage from the attack, no further effects.

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 Continuing Damage, Scratch damage also removes any Jury-rigs.

Light All tasks are -1 to perform, roll 2+ for any location to be used.

Severe All tasks are -2 to perform, roll 4+ for any location to be used.

Critical The ship longer work but may still be repaired.

Destroyed The ship is destroyed.

See the more detailed damage descriptions on page 16.

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 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.

Let's say an undamaged ship suffers Light damage. The ship now has Light damage level as this is higher than what it already held. Next the ship suffers another Light damage and as this is the same level as it already held, the new damage becomes Severe. Then the ship suffers Light damage a third time but as this is lower than the already held damage nothing happens.

Damage that has been jury-rigged, is treated as if one level less severe for damage effect purposes only, a ship with Light damage that has JR marked is treated as undamaged for effects but if it suffers another Light damage the damage level still goes to Severe. Any damage suffered including Scratch damage removes any JR done. See page 17 for details.

RC	1 Hull	CD JR S L S C D	ARM 18	DAB 20
	3 Crew		18	
	4 Core		18	
	2 Surface		12/18	
	5 Power		12/18	
	6 Thrust		15	
	Repair crew			

WHAT WEAPONS BEAR?

Mount	What weapon bear?
Fixed	Targets in the Forward arc
Turret	1/2 of each weapon, round up*
Bay	1/2 of each weapon, round up*

*Each weapon can only attack once in a turn and lasers can only attack or defend not both

PENETRATION

Determine PEN-ARM, use the left column when the ship is Popped out and the right when Popped in.

Pop-out	Pop-in	Penetration result
0+	3+	All hits penetrate
-1	2	Good & VGood hits penetrate
-2	1	VGood hits penetrate
-3-	0-	No hits penetrate

Situation	PEN & DAM
Beyond effective range*	-3
Cooked shot	+3
Attack vector modifier	+Modifier
Proximity attack (missiles)	-6

*Attacks beyond 3x effective are impossible

Effective range - Beams only

Beam weapons beyond effective cause less damage and far enough give no damage.

Range	Damage table
Inside Effective range	Full damage
Inside 3 x Effective range	PEN & DAM -3
Beyond 3 x Effective range	No damage
Cooked shots	One row up

ATTACK VECTOR MISSILES ONLY

Attack vector is the separation from the missile and target in the previous turn, or from the launching ship and target if launched this turn.

Attack vector	0	1	2-4	5-9	10+
Vector DM	+6	+3	-	-3	-6
PEN* & DAM*	-6	-3	-	+3	+6

*Nukes ignore PEN & DAM modifiers

Damage roll

Damage is based on DAM-DAB plus a die roll depending on hit degree

Meson beam attacks always penetrate

VGood attacks roll 2D6 and use the highest D6

Good attacks roll 1D6 and use the result as rolled

Fair attacks use roll 2D6 and use the lowest D6

A die roll of 6 causes exploding dice, see below

A die roll of 1 causes continuing damage, see below

Use DAM-DAB + roll to get your damage result on the table at right, one row down if Partial or Potential penetration.

A result of 6 cause exploding dice. Add 1D6 / 2 rounded down, keep rolling as long as you get a 6. If the die roll turned up a 1 the target also suffers Continuing Damage. Determine the actual damage based on the rules for cumulative damage on the previous page and note it on the Hull row of the ship data sheet. Check the CD box if your hit caused Continuing Damage.

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

Exploding dice on an damage roll of 6

Any damage die roll of 6 gives Exploding Dice (ED)

Exploding dice add 1D6/2 to roll, rounded down, reroll again on a 6

If the damage roll turned up a 6 you add 1D6/2 rounded down to the result, and keep doing so as long as you keep rolling 6.

Continuing damage on a damage roll of 1

A Scratch+ damage roll of 1 gives Continuing Damage (CD)

Any successful repairs remove the CD (Jury-rig a Scratch CD as if Light)

Continuing damage is rolled *after* the repairs, 1-2 increase, 6 fizzle out

Continuing damage is also caused by Cooked shots and Redlining

If the damage roll is a 1 your hit started fires, leaks, rips or tears that may get worse over time, note it as Continuing Damage (CD) on the datacard. This kind of damage if ignored will either fizzle out on its own grow larger and harder to contain, possibly destroying the entire ship over time. CD are removed if they fizzle out or you successfully Jury-rig the location. Stopping a CD with no damage you roll as if a Jury-rig of a Light damage.

At the end of the Repairs phase if no successful Jury-rig was made roll 1D6:

If you roll 6 the CD fizzles out, remove it, if you roll 1 or 2 the location gets one damage level worse. Keep rolling at the end of each turn as long as the CD remains. If there is yet no damage simply roll as if it had Light damage and if you succeed the CD is removed.

ROLL+DAM-DAB

Roll damage if DAM-DAB is -2 or higher

A modified roll of 6 cause ED

A modified Scratch+ roll of 1 cause CD

Sprayfire hits are always treated as Fair hits

DAM-DAB +roll*	Damage result
18+	Destroyed
15-17	Destroyed
12-14	Critical
9-11	Severe
6-8	Light
3-5	(Scratch)
0-2	No effect

*Fair Roll 2D6 and pick the lowest D6

*Good Roll 1D6 and use the roll as rolled

*VGood Roll 2D6 and pick the highest D6

A roll of 1 is CD, a roll of 6 is ED

DAMAGE EFFECTS

No effect The hit has absolutely no effect. Any Jury-rig repairs remain, there is no Continuing Damage, nothing.

(Scratch)

The minimum damage for CD and any previous Jury-rigs are removed, aside from that the hit has no further effects.

Light

Pilot, Sense, Attack, Defense, Repairs -1

Dice pool on turns 1,2,3 but not on 4

Turning on turns 1,2,3 but not on 4

Thrust on turns 1,2,3 but not on 4

Scans on turns 1,2,3 but not on 4

Attacks on turns 1,2,3 but not on 4

Repairs attempts 6+

Severe

Pilot, Sense, Attack, Defense, Repairs -3

Dice pool on turns 1,2 but not on 3,4

Turning on turns 1,2 but not on 3,4

Thrust on turns 1,2 but not on 3,4

Scans on turns 1,2 but not on 3,4

Attacks on turns 1,2 but not on 3,4

Repairs attempts 6+

Critical

No dice pool

No turning

No thrusting

No Scans or Sense tasks

No attack or defense

Repairs attempts 9+

Destroyed

The ship is destroyed

Arcs damage (optional)

Arcs damage makes damage to the Surface location more detailed by tracking not only the Surface location but also the damage to individual weapons. Arcs damage rules does not affect hits other than Surface location and unless you are well versed in how damage work I suggest you skip this until you know the damage rules better. Arcs damage is incompatible with simplified damage rules on page 36-37.

Marking damage to Surface location

Surface location damage isn't marked

Visual/IR and Radar damage effects use lowest damage T & B

Surface location damage is marked on each mount that the attack (or attacker Drift if missile) can 'see', the rest are spared, this time. Don't forget the Visual/IR & Radar T & B mounts at the lower right column, use the lowest damage of the two to determine sensors damage.

So, if the attacker (or attacker Drift for missile attacks) is in your top and Right arcs you mark the damage for all mounts with L or T for Loc. Cumulative damage is handled on a per mount basis.

Cumulative damage

Cumulative damage is handled per mount

Surface location and each separate weapon and defense row handle cumulative damage separately, a Jury-rig at the Surface location also affect every mount of course. So, getting a Severe hit from top and left arcs mark S on Surface location and all T and R mounts. Another hit, this time from fixed, top and right will increase Surface location and T mounts to C and mark F and L mounts with S, B mounts are still unmarked.

Weapons and defense damage effects

Light Roll 2+ on 1D6 to use the weapon, roll per mount

Severe Roll 4+ on 1D6 to use the weapon, roll per mount

Critical Weapon cannot be used but may be Jury-Rigged.

Destroyed Weapons and defenses with their arc crossed out cannot be used even if the Surface location has been Jury-rigged.

Visual/IR and Radar damage effects

Visual/IR and Radar damage effects use lowest damage T & B

Visual/IR and Radar sensors are also mounted on the Surface of the ship and therefore subject to Surface damage. Sensors use the lowest damage of all mounts, including T & B Sensors mounts added to unarmed ships.

Light Roll 2+ on 1D6 to use the Visual/IR or Radar

Severe Roll 4+ on 1D6 to use the Visual/IR or Radar

Critical Visual/IR or Radar cannot be used but may be Jury-Rigged.

Destroyed Cannot use Visual/IR or Radar, and they cannot be Jury-rigged

Combat roll (optional)

You must save 3 steps of turn in the Final turn step of Turning after thrusting

This rule is even more optional than the rest of the Arcs damage rules, just a bit of chrome really. Reserve 3 steps of turning from the Final turn step of the Turning after thrusting rules, declare Combat roll and then roll once during your combat phase. You are not required to perform the Combat roll and if the ship cannot turn from damage the Combat roll may not be performed.

Initial turn - No more than half your steps may be used, rounded up

Initial thrust - No more than half of your thrust may be used, rounded up

Final turn - No more than half your steps may be used, rounded down, *save at least 3 steps and declare that you wish to do a Combat roll later.*

Final thrust - No more than half of your thrust may be used, rounded down

RC <input type="checkbox"/>	1 Hull	CD JR S L S C D	ARM 18	DAB 20
<input type="checkbox"/>	3 Crew	<input type="checkbox"/>	ARM 18	Ship destr. 18+
<input type="checkbox"/>	Frozen watch	<input type="checkbox"/>	18	Destroyed* 15-17
<input type="checkbox"/>	4 Core	<input type="checkbox"/>	12/18	Critical 12-14
<input checked="" type="checkbox"/>	2 Surface	<input type="checkbox"/>	12/18	Severe 9-11
<input type="checkbox"/>	5 Power	<input type="checkbox"/>	15	Light 6-8
<input type="checkbox"/>	6 Thrust	<input type="checkbox"/>		(Scratch) 3-5
↑	Repair crew	<input type="checkbox"/>		No effect 0-2
				*Pass on damage

If the attacker is within the white or light gray area of an arc mounts in that arc are hit, including the Sensor mounts.

Arcs damage example

Let's use the combat example on page 18-19 but change it to showcase Arcs damage. The positions are the same, Grant have Jamison in the overlapping front centerline so both his left and right arc bear, the top arc also bear but Grant has nothing mounted top. Jamison has Grant in his top arc so his top mounted turret and defenses bear while his bottom turret doesn't. Jamison's left arc also bear but Jamison has nothing mounted there.

Grant attack with his Far trader

Grant fires at Jamison rolling 6+ for his two lasers. He is firing from the front centerline of the target so he hits F, L, R and T, only B is unharmed. The free trader marks Critical to his laser (T), missile launcher (T) and sandcaster (T), he also marks Critical to his sensors (T) but not his sensors (B).

Grant doesn't have any missiles so his attacks are over, it is now Jamisons turn to retaliate. Jamison can Jury-rig his (T) mounts into action again but currently he has nothing to shoot with that bear.

Grant over the intercom "You're toast!"

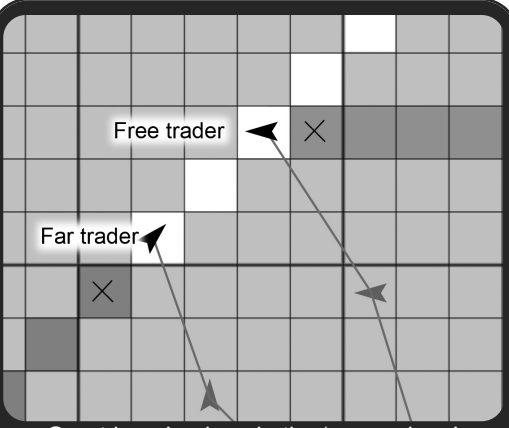
Jamison retaliate with his Free trader

Jamison has all his Top mounts Critical damage but he can still track his enemy and he does have an ace up his sleeve. Jamison did a Combat roll during movement (by reserving 3 steps of turn from the Final turn part of Turning after thrusting). Jamison roll his ship and when rolled the Left and Right arcs are reversed as are the Top and Bottom. Jamison's bottom turret now bear on Grant and he can use both his laser and missile. This exposes his undamaged remaining sensors but Jamison plans to change that in the next turn.

Jamison fires his laser from his bottom turret but Grant uses both his sandcasters and easily block the attack. Had the laser attack hit home the damage would hit the Fixed, Left, Top and Right arcs potentially damaging all of Grants weapons and defenses.

Jamison now fires a missile from his bottom turret against Grant and that attack is unopposed as Grant has already used all his lasers in his earlier attack. This attack would hit the Fixed, Top and Right but not the left arcs as missile attacks come from Drift. Jamison does not hit the Surface location however but the power location, and for Critical damage! As Grant only have lasers at his disposal his Repair Crew must Jury-rig the powerplant for him to attack or defend against missiles the next turn, in fact the RC must succeed or he won't even be able to thrust next turn as his thrust uses power.

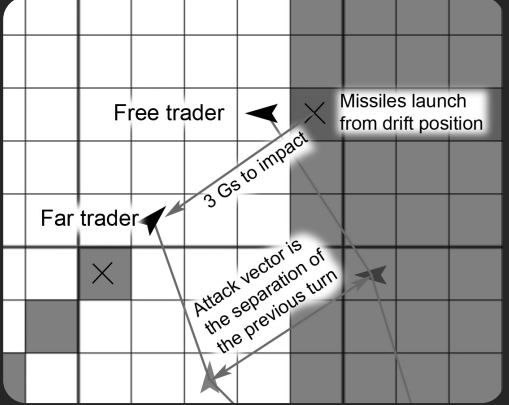
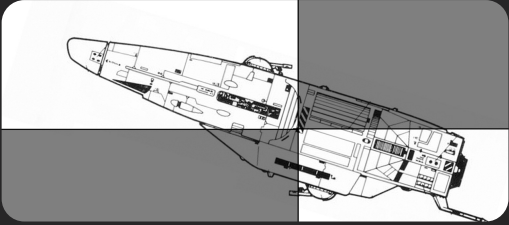
Jamison over the intercom "Who's toast you say?"



Grant has Jamison in the 'money lane'
Both his left and right turrets bear

FREE TRADER - JAMISON

#	Loc	Weapon	s	L	S	C	D	PEN	DAM	RNG
1	T	10 MW UV laser						24	24	1
1	T	Small missile 5G15min						28	28	30
1	T	UV sandcaster						25		
1	B	10 MW UV laser						24	24	1
1	B	Small missile 5G15min						28	28	30
1	B	UV sandcaster						25		



Free trader

Far trader

Missiles launch from drift position

3 Gs to impact

Attack vector is the separation of the previous turn

Jamison does a 'combat roll'
L and R, T and B arcs become reversed

FAR TRADER - GRANT

1	L	20 MW UV laser						26	26	1
1	L	UV sandcaster						25		
1	R	20 MW UV laser						26	26	1
1	R	UV sandcaster						25		

Jump distances

The table below determine the safe distance from various objects to jump. You may of course instead calculate the safe range based on object measurements:

'100 diameter' = 1 million km x $M_e^{(1/3)}$
 M_e in earth masses

'100 diameter' = 0.5 AU x $M_s^{(1/3)}$
 M_s is solar masses

Object	'100 diam'	Squares*
Small ship 7-	< 1 km	Same
Regular ship 8-13	~3 km	Same
Huge ship 14+	~10 km	Same
Small asteroid	10 000 km	1
Large asteroid	100 000 km	10
Small planet	300 000 km	30 ¹
Large planet	1 000 000 km	100 ²
Small gas giant	3 million km	300 ³
Large gas giant	10 million km	1000 ⁴

*Standard 10 000 km squares

¹ 3 squares using the 100 000 km 1 h maps

² 10 squares using the 100 000 km 1 h maps

³ 30 squares using the 100 000 km 1 h maps

³ 3 squares using the 1000 000 km 4 h maps

⁴ 10 squares using the 1000 000 km 4 h maps

Jump prep time

Ships need power when consuming 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.

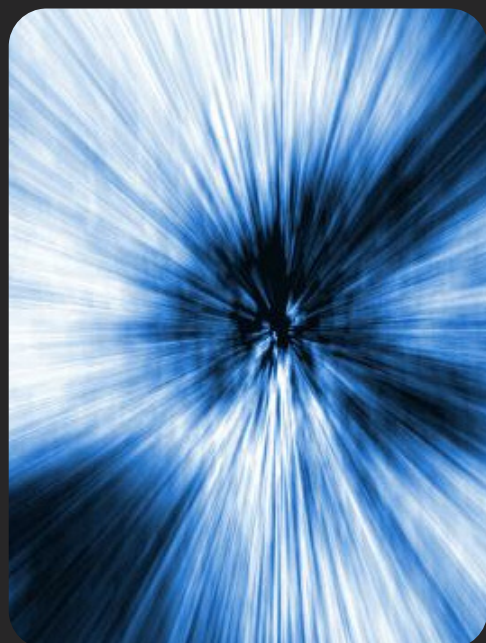
Jump prep

J1 30 min

Dim ☐

Drift ☐ ☐ ☐

-2 -4 No



Hyperspace (optional)

Jump ranges

Traveller ships must travel at least 100 diameters away from the asteroid, planet or star in order to jump. Ships jumping closer than 100 diameters do so at increasing risk, up to the absolute limit of 10 diameters, such jumps are called welljumps for being deep within the gravity well.

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. Jump prep duration can be found on the ship datacard, half the prep time if you are jumping half or less of your ships max jump. At the end of the turn where jump prep ends you will roll an Astrogation task. All eligible jump attempts have the ship disappearing into hyperspace for a week, effectively out of the game.

Jump prep, power and fuel

Ships cannot thrust, turn or roll during the entire jump prep

Ships must only pop in for the entire final jump turn

Jump is based on the worst jump distance during the entire jump prep

Jump prep takes 30 minutes to 2 hours, 1/2 if jumping 1/2 or less of max

Jump fuel needed is 10% per Jn (or 5% if a J0), smaller ships 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. Jumping half or less of max Jump range halves Jump prep time.

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 sources 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 26 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 the sidebar on page 54 for details on alternative fuel sources.

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 disappear 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.

Welljump

When the jump takes place inside 100 diameters it is called a Welljump. A ship cannot jump at all if closer than 10 diameters, but from 10 on jumps are possible but dangerous.

Relative jump vector

Your ship must be drifting during the entire jump prep

Your ship may not run or roll during the entire jump prep

If any part of jump prep was inside gravity the jump will fail. Typically you jump stationary but if not the vector when jumping will be retained upon exiting, relative the planet. A vector 1 square away and 1 square clockwise vs the origin will still be 1 away from and 1 clockwise vs the destination.

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.

Good or VGood Jump takes 144 hours or 6 days, exactly.

Fair or Miss Jump takes 144 hours or 6 days, plus 1-6 hours.

Bad or VBad Jump takes 144 hours and 6 days, plus 1-36 hours.

Jump task rolls are secret task rolls, the player roll 1D6 and the referee roll the other D6, in secret. If the player roll a 6 he should roll for exploding dice but the added points only apply if the referee's roll also rolled 6. So, the player has an inkling on how the jump went, but won't know for sure until exiting jump, the jump exit delay gives a hint but the players cannot be sure until they scan where they are with the sensors. Then roll for damage to the jumpdrive because this too, happen at jump exit.

Jump exit damage

Roll Jump-exit-damage separately for Hull and Thrust

Exiting jump must always roll for Jump exit damage, roll separately for Hull and as Thrust, yes you must roll even for Good and VGood jumps. Rolling 6 means exploding dice and rolling 1 means Continuing damage, just as usual!

15+	Destroyed, there is no Pass on damage
12-14	Critical
9-11	Severe
6-8	Light
3-5	(Scratch)
0-2	No effect

VGood or Good Roll 2D6 and use the lowest, don't forget CD on 1 and ED on 6

Fair or Miss Roll 1D6, Continuing Damage on 1 and Exploding dice on 6.

Bad or VBad Treat as if a 6 was rolled, with Exploding Dice.

ASTROGATION 5+

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 5+ to Astrogate

Situation	DM
Using refined jump fuel*	+1
Worst of Thrust / Hull Light /Severe	-1 / -2
Welljump 10-29 diameters	-6
Welljump 30-99 diameters	-3
Intentional deepspace jump**	-3
Per speed when jumping***	-1/sq

*Fuel bought at a starport or which has gone through a fuel purifier.

**Jumping to an 'empty' hex exiting near a rogue planet, comet or asteroid.

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

Astrogation result

VGood Your jump exit in the exact square of your choosing based on your ships facing when entering jump.

Good Your jump exit in the right arc and distance but in a random square within the arc, based on your ships facing when entering jump.

Fair Your jump exit at the opposite arc at the right distance but in a random square, based on your ships facing when entering jump.

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 Fair or worse.

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

Fair or Miss 6 days + 1D6 hours

Bad or VBad 6 days + 1D6 x 1D6 hours

Random exit location

The exit location will be the same number of diameters from the destination as the jump was from the origin. Roll 2D6-7 for steps CW around the destination.

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

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 gotten inside the aft centerline of a thrusting enemy.

Sensors

The ship must have gotten a tracked result on a previously unknown enemy ship or missile 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, stopped a Continuing Damage or restarted a powerplant from Silent running.

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

Campaign (optional)

If you want to play a series of scenarios using Intercept where players get 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

Pick one eligible skill to improve if you lost and two if you won

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 may either give skill improvements globally or to a particular crew. Global skills are lost based on the worst Crew or Repair Crew damage while ship skills losses are based on that ship's Crew or Repair Crew damage. You may have more than one individual ship's tracking skills if you like, you decide.

If all your ships were destroyed in the battle, all accumulated 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. Use *Maptemplate earth and moon.pdf* and chose between *Free trader*, *Far 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. First to land on the moon win. Fly off the map and you lose.

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 the mechanics from the Moongoose Traveller rules which is the same as the classic rules from GDW.

Task rolls and degree of success or failure

Tasks Intercept task system either roll against ship Size or roll one of the standardized task difficulties Easy(5+), Routine(8+), Hard(11+) etc.

Simply roll against the given number adding your Skill level.

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 both have spans of 3. 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 1-2 Miss result

Fail by 3-5 Bad result

Fail by 6+ 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. Radiation hits from nukes, particle weapons or meson guns give one degree more severe damage to Crew location. If you use my system for radiation damage don't increase the damage but also give characters in the hit area use these dosages, don't modify for hull absorption but do modify for vacsuits or body armor absorption:

Scratch damage gives 30 RAD of accumulated dosage.

Light damage gives 100 RAD of accumulated dosage.

Severe damage gives 300 RAD of accumulated dosage.

Critical damage gives 1000 RAD of accumulated dosage.

Destroyed damage gives 3000 RAD of accumulated dosage.

Dual role

Players typically want to do as much as possible during ship action so why not let them, at a penalty of course. The order of things during a turn; movement, sensors, combat, repairs and for each additional action incurs a -2 DM and if performed in the same location or -3 if having to switch location. VGood results on Power up and Jury-rigs will not incur a negative DM, well done sir!

Note that ships of less than 100 dTon let the pilot also handle weapons at no penalty and ships less than 10 dTon let them handle sensors too at no penalty. Also note that ships less than 25 dTon all but Crew hitlocation as outdoor for Jury-rigs, maintenance and repairs.

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	Position	Track
Hitmargin 6+	VGood	8	0+	0+
Hitmargin 3-5	Good	6	0+	3+
Hitmargin 0-2	Fair	4	3+	6+
Fail by 1-2	Miss	3	6+	12+
Fail by 3-5	Bad	2	6+	12+
Fail by 6+	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.

Hitlocation and repairs

Different hitlocations use different skills to Jury-rig or repair. Hull and Surface are outdoor* meaning they must be Jury-rigged or repaired outside of the ship.

Location	Skill	indoor/outdoor
Hull	Mechanic	outdoor repairs
Crew	Mechanic	indoor repairs
Core	Electronic	indoor* repairs
Surface	Electronic	outdoor repairs
Power	Engineer	indoor* repairs
Thrust	Engineer	indoor* repairs

**Ships less than 25 dTon treat Core, Power and Thrust as outdoor*

Solar system

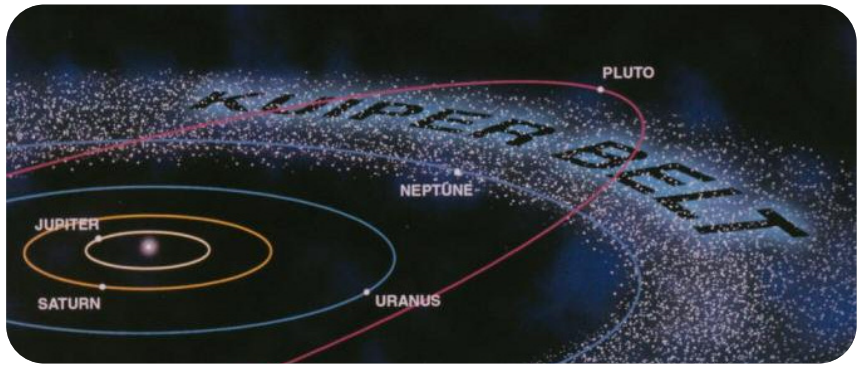
Orbit numbers and corresponding radius from the sun, with our solar system as an example. For other systems you determine the hospitable zone orbit number and Heat rises by +1 per orbit inwards.

Orbit	Sun	Heat	Sol example	AU
Inner 5	+11	+1	Parker probe	0.05
Inner 4	+10	0	None	0.1
Inner 3	+9	-1	None	0.2
Inner 2	+8	-2	Mercury	0.4
Inner 1	+7	-3	Venus	0.7
Habitable	+6*	-	Earth	1.0
Outer 1	+5	-	Mars	1.6
Outer 2	+4	-	Belt	2.8
Outer 3	+3	-	Jupiter	5.2
Outer 4	+2	-	Saturn	10
Outer 5	+1	-	Uranus	20
Outer 6	-	-	Neptune	40
Outer 7	-	-	Kuiper belt**	80

Each orbit beyond outer 7 double the radius...

*The habitable zone has Sun factor 6

**Pluto is not a planet and its orbit is both eccentric and highly inclined, treat Pluto as just another Kuiper belt object



System travel maps

There are 4 system travel maps for use to move ships between planets, the reason is that star systems vary enormously in scale from the tiny solar systems of M stars to the Kuiper belts and Oort clouds.

M system map has 1 million km squares with 4 hour turns and 1 G of thrust equals 1 square, ships roll Pilot tasks or use Pilot Default but with a +2 DM. These maps are used for M class stars where the lifezone is ~0.1 AU.

Inner system map has 15 million km squares (0.1 AU) with 12 hour turns and 1 G of thrust equals 1 square, ships can turn and roll however they like.

Outer system map has 150 million km squares (1 AU) with 2 day turns and 1 G equals 1 square and ships turn and roll however they like.

Remote system map has 1500 million km squares (10 AU) with 1 week turns and 1 G equals 1 square and ships turn and roll however they like

Movement

Use the system travel system maps the same way you do regular Intercept movement with some exceptions; movement, roll malfunctions and then repairs basically. Ships can roll and turn as they wish on all but the M system maps which use a +4 DM to Pilot rolls and Defaults. Ships with fractional thrust may only thrust on certain turns using the Fractional thrust rules from page 5.

Planets on or inside an orbital track uses that tracks Sun and Heat factors. A ship moving from Earth to Venus would have Sun 6 and no heat until they entered the 0.7 AU Venus orbit where they would get Sun 7 and Heat +1. Traveling out to Mars would give a Sun of 5 as soon as the ship was outside the 1.0 AU Earth orbit and keep it all the way to Mars, with no heat of course.

Landing on planets

You need to move your ship onto the planet square and then, on the next turn, thrust to put your ship onto the planet too. If you need to know how the landing went roll a Pilot task and treat as a speed 1 aerobrake if the planet has atmosphere and a speed 0 landing after that. Hitting the planet square does not mean oblige you to land as the planet occupy a minuscule part of the square.

Hitting a planet square (optional)

If you hit a planet square itself you might want to use it for a gravity assist maneuvering according to the following, there is no risk of colliding. Note that real aren't gravity assists nearly as efficient as these rules imply.

Map scale	1G gravity assist	2-3G gravity assist
M system map	Small planet	Large planet or larger
Inner system map	Large planet	Small gas giant or larger
Outer system map	Small gas giant	Large gas giant or brown dwarf
Remote system map	Large gas giant	Brown dwarf

Long range tracking

Long range tracking

Sunglare if you and target is in the same arc and within $\pm 45^\circ$ of the sun

If a ship dedicates a sensor and operator to only tracking a single target (no scans, just one target, operator busy) they may track a target farther than what is given from the table on page 7. The operator roll the task below and the result determine how much better the tracking range gets, the result is rerolled if a lower skilled operator or fewer computer dice are allocated.

Max tracking range

The maximum tracking is found by adding the tracking sensor Sensitivity and the tracked ships Signature and looking the sum up on the table at right. A Visual/IR sensor of +0 and a ship with Visual(Hull) +6 can be tracked out to 50 boxes (500 000 km).

Sunglare

Targets in the same arc or opposite and closer to the sun may suffer from Sun glare which reduces the Max tracking range sum by the *highest* Sun factor of the tracker or the target. Target must be within $\pm 45^\circ$ of towards the target to have Sun glare, see the picture at right. Radar and Mass sensors are *unaffected* by Sun glare but their range falloff is so steep that they are rarely useful for long range tracking. Radar used to scan passively for Radio transmissions are *affected* by Sun glare.

Long range tracking task

Roll 11+ to start tracking

Roll 11+ again if lower skill or fewer computer dice allocated to tracking

Result	Signal
Very good	+6 (3 rows down, range x30)
Good	+4 (2 rows down, range x10)
Fair	+2 (1 row down, range x3)
Miss or worse	<i>Regular tracking ranges</i>

If the target is farther away than the max tracking range the track is lost.

Lost tracking targets that thrust are lost for good and cannot be reacquired.

Lost tracking targets that drift are lost but can be reacquired if the sensor keep tracking along its last vector and hope the Signal will improve or the range shorten, or both, this is called Dead reckoning tracking.

If given highly accurate vectors of a drifting target a Dead reckon reacquire may be performed without ever having tracked the target. Launches, ships boats, fighters and escape pods routinely store accurate vectors of the launching craft, to be able find the launching ship again as long as it doesn't thrust.

Max tracked range (Sensor+Sig)

Visual, IR Neutrino	Radar Mass	Max range
-7-	-13-	No track
-6	-12	1 square
-4	-8	3 squares
-2	-4	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
+18	+36	15 AU ³
+20	+40	50 AU
+22	+44	150 AU
+24	+48	500 AU
+26	+52	5000 AU
+28	+56	15 000 AU
+30	+60	50 000 AU ⁴
+32	+64	1 Parsec ⁵
+34	+68	3 Parsec
+36	+72	10 Parsec

There are 500 Ls in an AU

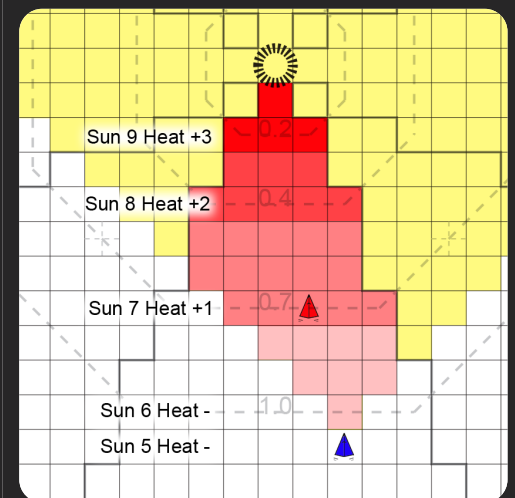
1 ~1 lightsecond (Ls)

2 ~1 lightminute (Lm)

3 ~2 lighthours (Lh)

4 ~1 lighyear (Ly) is about 63 000 AU

5 ~1 Parsec is about 200 000 AU



Solar system

Orbit numbers and radius from the sun, with our solar system as an example. For other systems you determine the hospitable zone orbit number and Heat rises by +1 per orbit inwards.

Orbit	Sun	Heat	Sol example	AU
Inner 5	+11	+1	Parker probe	0.05
Inner 4	+10	+0	None	0.1
Inner 3	+9	-1	None	0.2
Inner 2	+8	-2	Mercury	0.4
Inner 1	+7	-3	Venus	0.7
Habitable	+6*	-	Earth	1.0
Outer 1	+5	-	Mars	1.6
Outer 2	+4	-	Belt	2.8
Outer 3	+3	-	Jupiter	5.2
Outer 4	+2	-	Saturn	10
Outer 5	+1	-	Uranus	20
Outer 6	-	-	Neptune	40
Outer 7	-	-	Kuiper belt**	80

Each orbit beyond outer 7 double the radius...

*The habitable zone has Sun factor 6

**Pluto is not a planet and its orbit is both eccentric and highly inclined, treat Pluto as just another Kuiper belt object

Situation	Heat DM
Planetary shadow	No heat damage
Darkside	No heat damage
Power off - radiators out with power off	
- Fragile	-2
- Vulnerable	-1
- Protected	-
Sunstance - facing the sun	
- Airframe	-1
- Streamlined	-1
- Normal	-
- Open frame	-
Surface - surface location popped in	
- Surface location only	-1
Turn length (scale)	Heat DM
4 min (1000 km)	-1
15 min (10 000 km)	-
1 hour (100 000 km)	+1
4 hours (1 million km)	+2
12 hours (0.1 AU)	+3
2 days (1 AU)	+4
1 week (10 AU)	+5

Heat damage

A roll of 6 cause ED, a 1 cause CD as usual

A Scratch+ roll of 1 cause CD

Heat +roll*	Damage result	
Pass-on-damage - two rows down		
18+	Ship destroyed	
15+	Destroyed & Pass-on	
12-14	Critical	
9-11	Severe	
6-8	Light	
3-5	(Scratch)	
0-2	No effect	
Maintenance	Inside am	Past am
Normal	1D6	2D6 high
Extra effort	2D6 low	1D6

Heat damage

Our solar system has the hospitable range at orbit 3 where Earth lies, other star systems may have the hospitable range at a different orbit numbers but for all star systems the Sun factor is 6 at the hospitable orbit and there's is no heat damage, each orbit further in increase the Sun factor by one and each orbit farther out decrease the Sunfactor by one down to 0, at the orbit of Neptune at about 40 Au in the solar system. Inner orbits, those with a Sun factor of 7 or more, may damage the ship from heat, this damage increase the closer you get to the central star.

Rolling heat damage

Roll heat damage only if on or inside an orbit of Sun factor 7+ or higher

Basic heat damage is Sun-10 which is -3 at Sun 7

Roll heat damage at the end of the Combat phase, even if no combat took place

Modify heat for turn length unless the normal 15 min turn length is used

Ships on or inside an inner orbit, with a Sun factor of 7 or more, may roll heat damage, do not roll if the ship is in Shadow or Darkside. The basic heat damage is Sun-10, -3 for Sun 7, -2 for Sun 6 and so on, if the ship is in planetary shadow the Sun factor is 0 of course so no heat damage then.

Hitlocation for heat damage is based on the ships facing versus the sun, 2D6 use low if facing the sun, 2D6 use high if facing away from the sun and 1D6 in the rare case having the sun directly left or right.

Planetary shadow Heat is only applied if the Sun factor is 7+ and when you are in planetary shadow (asteroid shadow too) you roll no heat damage. When using the system travel maps ships inside a planet square are in shadow.

Power off radiators out Ships with large power plants have large cooling radiators and if the powerplant is off they are typically popped in for protection. Ships may fly with radiators out when the powerplant is off reducing heat if the radiators are vulnerable and even more so with fragile radiators, ships with protected radiators cannot reduce heat this way.

Sunstance Ships facing the sun present less surface towards the sun and get less heat that way, this method depends heavily on how streamlined a ship is, normal and open frame gain nothing from Sunstance.

Surface location popped in Surface location consist of sensitive weapons and sensors, if they are popped in they suffer less heat damage, this method only apply to the Surface location damage roll.

Sum up the modifier from distance to the sun, turn length and any of the ways to reduce heat, then roll damage based on the ships maintenance and whether or not she is past annual maintenance.

Damage is rolled and applied at the end of the combat phase and after that it's time for the Repair Crew to do their magic.

System travel maps and heat damage

When moving on the System travel maps and your ships is on a planet square your ship doesn't suffer heat damage as it is assumed that you'll use the planet shadow to avoid the heat. If for some reason you *want to be affected by Sun as well as heat* you simply state the fact, as low no as you have control over your ship you decide.

Repairs

Jury-Rigs

Jur-Rigs revert on Scratch+ damage or rolling same on both D6 on tasks

Jury-Rigs are hasty makeshift fixes using no spare parts. A Jury-Rigged location is treated as *one level less damaged*, Light becomes Scratch, Severe becomes Light and Critical becomes Severe, Destroyed cannot be Jury-Rigged down to Critical.

Whenever a location suffer Scratch or worse damage for whatever reason or a task roll using the part rolls the same on both D6 the Jury-Rig is removed. See pages 16-17 for details on Jury-Rigs.

Malfunctions and maintenace

A ship needs one full time Repair-Crew per 50 MCr of price. If there are not enough RC they suffer a negative DM from the table at right, this DM affect Malfunctions severity but also Jury-Rig and Permanent repair tasks of course.

Permanent repairs

Permanent repairs depend on how much the damaged part cost (these rules are applicable to all repairs, not just starships). Use these tables to determine time requires, spares required as a percentage of the cost of the part and difficulty. Use the hitlocation table at right to determine what skill to use or if the repairs must be done outside of the ship or not.

Price of part	Spares:	Scratch 0.1 %	Light 0.1 %	Severe 1 %	Critical 10 %
< 1000 Cr		1 min	1 min	1 min	1 hour
≥ 1000 Cr		1 hour	1 hour	1 hour	1 day
≥ 100 KCr		1 day	1 day	1 day	1 week
≥ 10 MCr		1 week	1 week	1 week	4 weeks
≥ 1000 MCr		4 week	4 week	4 week	13 weeks

Repair facility	1 m	1 h	1 d	1 w	4 w	13 w
Improvised (knife, paperclip etc)	8+	11+	14+	No	No	No
Pocket tools (0.5 kg) 100 Cr	5+	8+	11+	14+	No	No
Toolbox (5 kg) 1 KCr, D-port	5+	5+	8+	11+	14+	No
Small shop (2x3m) 10 KCr or, D-port	5+	5+	5+	8+	11+	14+
Large shop (50m²) 100 KCr, C-port	5+	5+	5+	5+	8+	11+
Yard B-port or Naval base	5+	5+	5+	5+	5+	8+

One degree easier if using x10 parts, swap out entire assembly, 5+ easiest

One degree harder if you want to do the repairs in one level shorter time

Extra repairers

Divide repair time by number of repairers

You may speed up repair attempts on 'large' (costing more than 10 MCr) items by having more than one help in the repair, one repairer per 10 MCr or fraction up to five, assign each repairer a number with the highest skill to the highest number.

Extra care

Voluntarily deciding to do *Extra care* on a particular location to make malfunction rolls less severe for the next 2, 4 or 13 weeks. Extra care takes 1 man-hour per MCr of location cost and lasts for 2-13 weeks depending on the task result. A location must not be in use when Extra care is app to it:

Hull Ship should be landed, or at least drifting in space*

Crew Life support and floorfield must be off to receive extra care

Core Computer and floorfield must be off and cargo space must be emptied

Surface Ship should be landed, or at least drifting in space*

Power Powerplant must be off to receive extra care

Thrust Thrust must be off to receive extra care

**Use lowest of repair skill and Vaccsuit, and if thrusting roll for falling off*

Repair task

Roll the indicated task if you have the required spare parts.

Task result

VGood Success, half of spares used!

Good Part repaired, spares used.

Fair Part repaired one degree, spares used

Miss Failed, no spares used

Bad Failed, spares used

VBad Failed, spares used, part one degree more damaged!

Hitlocation and repairs

Different locations require different skill to repair and some require outside repairs which in space means donning a space suit and rolling for falling off, see page 32.

Location	Skill	Where
Hull	Mechanic	Outside repairs
Crew	Mechanic	Indoor repairs
Core	Electronic	Indoor repairs*
Surface	Electronic	Outside repairs
Power	Engineer	Indoor repairs*
Thrust	Engineer	Indoor repairs*

**Outside repairs if Size < 50 dTon*

Repair crew

A ship needs one full time repair crew or repair robot per 50 MCr of new price, lower than the required Repair Crew Jury-Rigs and Permanent repair task rolls harder to perform. Permanent repairs require 1 repairer per 50 MCr of part price, or fraction thereof.

Amount of crew	Task DM
100% crew	No DM
At least 30% crew	-3
At least 10% crew	-6
Less than 10% crew	No skill

Extra repairers

For each 10 MCr or fraction of repaired part price you may use one repairer up to 5.

If more than 1 repairer assign each repairer a number and roll 1D6; use the assign number and if rolling higher than the number involved use the highest skilled.

Extra care

If the performance of a particular location is important one can do Extra care maintenance. Extra care takes 1 man-hour per MCr of cost.

Roll 8+ +Repair skill

Task result

VGood Roll 2D6 use low, lasts 13 weeks!

Good Roll 2D6 use low, lasts 4 weeks

Fair Roll 2D6 use low, lasts 2 weeks

Miss Roll 1D6

Bad Roll 1D6, also apply Scratch damage

VBad Roll 1D6, also apply Light damage

Laser comm ranges

All TL 7+ ships come with a laser communicator that allow for communication without eavesdropping. The ranges can be extended by using the ship's Visual sensor as receiver. Ranges are in 10 000 km squares.

Missile launchers

TL	Basic*	Small*	Medium*	Large*
7	1	10	30	100
8-9	5	15	50	150
10-11	7	20	70	200
12-13	10	30	100	300
14-15	10	30	100	300
16+	10	30	100	300

*Ranges are in 10 000 km squares

Initiate laser comm range x1/3

Unencrypted text or audio only comm x3

Sunglare 1-2 divide range by 3

Sunglare 3-4 divide range by 10

Sunglare 5-6 divide range by 30 and so on

Visual sensor range multiplier

The receiver of a laser communication link may use its Visual sensor to increase range. The sensor cannot Scan or track while receiving laser comm and it must be Popped out.

Sensitivity	Range	Sensitivity	Range
-8 to -7	x10	+0 to +1	x1000
-6 to -5	x30	+2 to +3	x3000
-4 to -3	x100	+4 to +5	x10 000
-2 to -1	x300	+6 to +7	x30 000

Radio comm ranges

For establishing radio comm add sender and receiver Radar sensitivity and use this table. Note that Sunglare does not affect radio communication ranges the way it affects lasers. Ranges are in real world units, value in parenthesis are in 10 000 km squares.

Sum of Radar sens.	Establish radio contact Broadcast*	Known pos
-8 or worse	1 000 km (0)	1 million km
-6	3 000 km (0)	3 million km
-4	10 000 km (1)	10 million km
-2	30 000 km (3)	0.15 AU ²
+0	100 000 km (10)	0.5 AU
+2	300 000 km (30) ¹	1.5 AU
+4	1 million km	5 AU
+6	3 million km	15 AU ³
+8	10 million km	50 AU
+10	0.15 AU ²	150 AU
+12	0.5 AU	500 AU
+14	1.5 AU	1 500 AU
+16	5 AU	5 000 AU
+18	15 AU ³	15 000 AU
+20	50 AU	50 000 AU ⁴
+22	150 AU	1 Parsec
+24	500 AU	3 Parsec
+26	1 500 AU	10 Parsec
+28	5 000 AU	30 Parsec

*Value in parenthesis is in 10 000 km squares

1 ~1 lightsecond (Ls)

2 ~1 lightminute (Lm)

3 ~2 lighthours (Lh), (500 lightseconds / AU)

4 ~1 lightyear (0.9 lightyear)

Maintain radio comm is range x3

Unencrypted text or audio only comm x3

Sunglare does not affect radio communication

Communication

Ships can communicate using tightbeam laser for shorter distances or radio for much longer distances but with higher risk of eavesdropping. Both laser and radio communication can opt to run unencrypted for longer range or to make sure everyone can read the communication.

Laser

Laser communicators *can* be used when Popped in

Visual/IR sensors must be Popped out to improve range

Visual/IR sensors may not improve range if used for scans or tracking

All TL 7+ ships come with basic laser communicators, ships with missile launchers have better ones, even more so as for larger missiles. Look up the ranges in the table at left. In order to establish a laser comm link the target must be tracked and be within 1/3 range of the communicator, after a link has been established the full range can be used and the target need not be tracked anymore (presumably each side send along positional updates).

Laser communication ranges may be improved with Visual sensors from the receiver, multiply the ranges by the table at left, this is only beneficial for the receiving end and the sensor cannot then also be used for scanning or tracking targets. Laser communication for missiles is two-way and the weakest link is always the missile receiver so you to increase range you must add Visual sensor on the missile, with a Sensitivity of at least -6 to improve range.

Radio

Radio communication *can* be used when Popped in, broadcast range

Use the sum of sender and receiver Radar sensitivity on the table at left

Radio communication is *not* affected by Sunglare

Sending radio has a radio Signature of Radar sensitivity + 6

Radio communication has much better ranges and is also much better when you don't know where your target is, such as emergency broadcasts and the like. Sum the sender and receiver Radar sensitivities and look up the range in the table at left. If at least one of the ships is popped in or the receiver position is unknown the *Broadcast* column should be used, only when both are popped out and the position of the receiver is know can the *Known pos* column be used.

Radio detection To detect a ship that is sending radio the scanning ship must declare a *radio scan* using your regular Radar sensitivity but use the left column (Visual, IR and Neutrino) for Scan sizes and Sunglare works the same as for the other passive sensors, the sender's Radio signature is Radar sensitivity + 6. You cannot listen in on a radio conversation unless you have a the sending ship Tracked, but unencrypted radio may give you some parts of it:

Contact You may get a single word perhaps, less than 1% of the message.

Position You will get about half of the message, garbled images etc.

Tracked No more than 1% of the message is missing, encrypted communication may be real time decrypted or recorded for later decrypting.

Communication procedure

To establish radio communication with an unknown, a distress signal, a warning to people in the area etc, you add your Radar sensitivity to the targets Radar sensitivity and look in the Radio comm ranges table at left. Use the Broadcast column if at least one is popped in or the receiver location is unknown, use the Known pos column when both are popped out and the receiver position is known. The table will give you the maximum range. Note that communication range is x3 for voice only communication and x1/3 for encrypted communication.

Laser comm cannot be broadcasted and therefore can only be sent to a tracked or otherwise known target. Simply determine the max comm range from the tables at right, note in particular the x3 for voice only and x1/3 for encrypted.

A common practice is to hail someone using radio and then switch to laser, encrypted or not, to keep the hailing frequency free. Encryption, decryption and eavesdropping is detailed on the following page.

Eavesdropping

Eavesdropping on radio or laser must be within range of course

For known pos radio you must also be within 10% along line of communication

For laser you must also be within 1% along line of communication

Ships commonly fly in straight lines between planets or in straight lines between jump point and planet, this means that ships often will be able to listen in on communications. To eavesdrop on communication you only need to be within range for broadcast radio but for directed communication you must also be within a certain distance from the line of communication, max 10% off for radio and 1% off the line for laser.

Encrypting

Bandwidth (BW) determine the min computer# to encrypt and decrypt

Bandwidth is 1 higher to encrypt or decrypt in realtime

Encrypted missile control require Computer 1

Encryption isn't universally applied to communication in Intercept, as public-private key systems are proven inherently breakable from the Ikara-Grubbs theorem and one time pads are usually deemed impractical, the details are outside of the scope of these rules, encrypted communication also suffers from shorter communication ranges.

The Bandwidth of the data sent determine the minimum Computer# to send or receive. Sending or receiving real-time adds 1 to Bandwidth and sending unencrypted subtracts 1 from Bandwidth. If the data sent has too high Bandwidth for your computer to read you will not know what kind of content, only that it is unreadable to you. Real time data can be recorded of course and read later, if the receiver Computer# is one less than required for real time it can still decrypt at 1 minute per page/image or second of video or holo, ROV and ROB data is meaningless if not real-time.

Quality of crypto

Quality of crypto determine how hard it is to crack. Automated encryption has Baseline quality, the sender can try to raise the quality at the risk of garbling the data. Legit decrypting (by knowing the decrypt key) is automatic regardless of quality. as long as you have a good enough computer (Bandwidth or better).

Raise crypto quality

Raise crypto quality roll (6+BW) +Computer takes 1 hour*, -1 per try

Raise crypto quality roll (8+BW) +Computer takes 4 min*, -1 per try

Improving the quality of the encryption from the automatic Baseline you roll the task above, decide on the duration of the attempt, retries are -1 per cumulative attempt. The task result determines the quality of the crypto, Miss becomes Baseline. Roll the task in the sidebar.

Crack crypto

Crack crypto roll (6+BW) +Computer for a 1 week* attempt, -1 per try

Crack crypto roll (8+BW) +Computer for a 12 hour* attempt, -1 per try

Crack crypto roll (10+BW) +Computer for a 1 hour* attempt, -1 per try

Crack crypto roll (12+BW) +Computer for a 4 min* attempt, -1 per try

Eavesdroppers who don't have the decode key may try to hack through the message anyway. Decrypting this way does *not* require a Computer# matching the Bandwidth of the crypto, decide on the duration of the attempt, retries are -1 per cumulative attempt. The task result when compared to the Quality of the crypto determines the result, as seen in the table at right, the results give the amount of a message decrypted, the referee is encouraged to come up with what is missing or what is deciphered, be creative.

Bandwidth

Each type of data sent has a minimum Bandwidth (BW) which also happens to be the Computer# required to send or receive.

Data type	BW*	Real time
Text or images	-2	-1
Audio	-1	0
Video	0	1
Holo	1	2
High fidelity holo	2	3
Missile or ROV	No**	1
ROR	No**	2

**-1 if sent unencrypted*

***Missiles, ROV and ROR must be real time*

ROV

ROV stands for Remotely Operated Vehicle such as a vehicle or a missile. ROV communication must be real-time, for obvious reasons. This means Computer 0 cannot operate missiles with encryption.

ROR

ROR stands for Remotely Operated Robot, where the robot and the brain are in separate locations. The communication must be real-time, or the robot will be very slow to act.

Raise crypto quality

Roll to increase the crypto quality of the message, -1 per retry as long as the data remain. You may and probably should add dice from computer dice pool to the die roll.

1 hour Roll (6+BW) +Computer, -1 per try

4 min Roll (8+BW) +Computer, -1 per try

(there is only one try for real time)

Result

VGood VGood quality encryption

Good Good quality encryption

Fair Fair quality encryption

Miss (automated) Baseline quality encryption

Bad 50% of the message was garbled, the rest went out unencrypted if real-time sent.

VBad 90% of the message was garbled, the rest went out unencrypted if real-time sent.

Crack crypto

Roll to decrypt a message without having the read key. You find the result by comparing the Decrypt task result with the Encrypt task result. You may and probably should add dice from computer dice pool to the die roll.

1 week Roll (6+BW) +Computer, -1 per try

12 hours Roll (8+BW) +Computer, -1 per try

1 hour Roll (10+BW) +Computer, -1 per try

4 min Roll (12+BW) +Computer, -1 per try

Result

Crack >> Quality All of message decrypted

Crack > Quality 90% of message decrypted

Crack = Quality 10% of message decrypted

Crack < Quality Nothing was decrypted

Crack << Quality Nothing was decrypted



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

Detailed beam to hit table

Range	To hit
0*	13+
1	16+
2	18+**
3	19+
5	20+
7	21+
10	22+
15	23+
20	24+
30	25+
50	26+
70	27+
100	28+ etc

*Must be co-vector, high initiative aft centerline

**The 1.5 square range is missing here, thus the sudden jump by +2 rather than +1

Tech relative beam defenses

If the ARM of your defense is lower than the PEN of the attack there is a -1 per point DM, there is no positive DM if your ARM is higher than the PEN however.

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

Sunstance

When facing the Sun direction while being popped in reduces the effective Sun factor.

Hull type*	Sun
Airframe	-2
Streamlined	-1
Normal & Open frame	-

*Hull damage also affects Sunstance

Minor optional rules

Four moves one scan (optional)

This rule will greatly speed up play and also make the game more realistic as a ship should not be aware of his opponent tracking them. Both side plot four complete turns. Each player decides on up to two scans in secret and reveal them simultaneously. Then, the scan results are determined for all four moves individually and the scanner roll Scan tasks if he wants.

If a side gets a Contact, Position or Tracked that side can start doing individual turns and individual Scans but a side that didn't even get a Contact will continue doing four moves one scan. 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.

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 beam defenses

It is reasonable to assume there is an arms race between beam technology and the screens that stop them. This optional rule use PEN and ARM values for sandcasters vs lasers and meson screens vs meson guns. If the ARM of your defense is lower than the PEN of the attack there is a -1 per point DM, there is no positive DM if your ARM is higher than the PEN however.

This DM rarely occur except in situations when high the tech level of the forces differ substantially.

Sunstance

A streamlined or airframed ship facing the sun while popped in has considerably less Visual(Hull) signature because so little of its surface area is facing the sun, this is called the Sunstance. As less light is actually hitting the ship when in Sunstance it also helps considerably against the heat of the sun when closer to the sun than the green zone (when the Sunfactor is or higher).

Sunstance may also affect heat when close to the sun, see page 46.

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, this but one example on how to do it: 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 performance 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 acorobraking 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 value actually 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

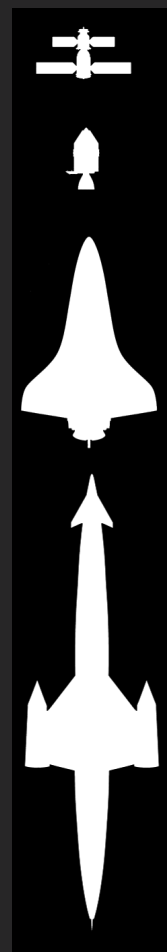
TL 15 Jump-6,

TL 16 Soft X-ray lasers



Streamlining

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



Open frame

Landing on a planet with atmosphere is nearly impossible, think the International Space Station.

Normal

Landing on a planet with atmosphere is dangerous, think car or plane.

Streamlined

Landing on a planet with atmosphere is safe at speed 1, think space shuttle.

Airframe

Landing on a planet with atmosphere is safe at speed 3 or less, think space plane or hypersonic jet.

Wings

A ship can change course or slow down using its wings, larger wings increase the maximum allowed aerobrace Gs. See page 25-26 for details.

Atmosphere	Drag
Vacuum	No aerobrace
Trace	1*
Very thin to thin	2*
Standard	3*
Dense or gasgiant	4*
Wings 5% or more	1**
Wings 10% or more	2**
Wings 20% or more	3**
Forced facing	+1**

*Airdrag can never be more than speed

**Wingdrag can never be more than Airdrag

Fuel scoops

Fuel scoops are used for skimming hydrogen from gas-giants and by way of air-breathing ignore reaction mass consumption for fission and fusion thrusters when in an atmosphere, eligible ships have *air-breathing* noted.

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 DM reduce damage on landing damage rolls.

All ships have at least an airlock but better docking gear give better DM on docking damage rolls. Docking gear DM reduce damage on docking damage rolls, only use DMs from participating dockers and never when ramming.

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 aerobreaking and operating in an atmosphere. Better airframe means less surface area available for 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 aerobreaking 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 may survive a landing in an atmosphere or aerobreaking but will take some damage if they try.

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

Airframe is the best hull type 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 Impulse drive to negate gravity, see page 26 for details. 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 aerobreaking 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 aerobrace Gs, see table at left.

Frame

Input the number of Gs the hull must be able to withstand which is typically the same as the Thrust Gs used, load scales actual thrust Gs the same as actual frame Gs.

Note that aerobraking may expose your ship to more Gs than what your drive can deliver. If your ship is intended to do high speed aerobrakes make sure you give it a frame that can at least withstand as many Gs as your intended aerobrace speeds, typically 1G for Streamlined ships, 3Gs for Airframe ships.

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 ARM <= PEN you are safe, if PEN is 1 higher than ARM only VGood hits penetrate, if PEN is 2 higher than ARM VGood and Good penetrate and if PEN is 3 or more higher than ARM no hits penetrate.

Meson attacks ignore armor, use Meson screens is your only defense.

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 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 the planets shadow 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 turn off your powerplant for Silent running radically lowering 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. Don't forget to pop in 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 ship-scale 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. Don't forget to turn the floorfield off for reduced Mass signature, silent running has no effect on Mass(Hull) for ships lacking floorfield.

Hull size table

dTon	Size	DAB	Lightlag	SA*	Frame**
3	+4	12	7	0.03	0.3%
5	+4	13	7	0.05	0.3%
7	+4	14	7	0.07	0.3%
10	+5	15	10	0.10 ¹	0.5%
15	+5	16	10	0.15	0.5%
20	+5	17	10	0.2	0.5%
30	+6	18	10	0.3	0.7%
50	+6	19	10	0.5	0.7%
70	+6	20	10	0.7	0.7%
100	+7	21	15	1.0 ²	1%
150	+7	22	15	1.5	1%
200	+7	23	15	2	1%
300	+8	24	15	3	1.5%
500	+8	25	15	5	1.5%
700	+8	26	15	7	1.5%
1000	+9	27	20	10 ³	2%
1500	+9	28	20	15	2%
2000	+9	29	20	20 ⁴	2%
3 K	+10	30	20	30	3%
5 K	+10	31	20	50	3%
7 K	+10	32	20	70	3%
10 K	+11	33	30	100	5%
15 K	+11	34	30	150	5%
20 K	+11	35	30	200	5%
30 K	+12	36	30	300	7%
50 K	+12	37	30	500	7%
70 K	+12	38	30	700	7%
100 K	+13	39	50	1000	10%
150 K	+13	40	50	1500	10%
200 K	+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 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 NH3/CH4 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 NH3/CH4 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

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 and Impulse drives expand no fuel so there's no need to track fuel expenditure like Fission and Fusion drives must, they are also harder to detect except by Mass scans.

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. Floater thrust is always opposite of gravity and belly-landers can thrust left or right while tail-landers thrust forward, see page 20 for details.

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 will also be a sitting duck in combat.

Remass, fuel and fuel processing

Ships use fuel for three things; jumpfuel, fusion reacto fuel and reaction mass for fission and fusion rocket engine, the hydrogen must in all 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 hyper-space jumping are covered on pages 38-39.

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

Each powerplant come with built in fuel supply for the power plant, lasting 2 weeks for fusion plants or 1 year for fission plants. It may seem that the fission plants are far superior given their lower fuel consumption but they are much bigger and denser because of all the shielding required, fusion plants also use regular liquid hydrogen, the same used as jump displacement fuel and reaction mass for fission and fusion rockets while fission plants need fission fuel that must be manufactured. You may add extra fuel to your design if you want the powerplant to last longer than 14 days for fusion or 1 year for fission. See the sidebar for refueling powerplants and the opposite page for sources of hydrogen for powerplants.

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 large powerplants to volume ratios will have more vulnerable radiators, as calculated by ship.xls. Better streamlining means less area useable to radiators so this will too make radiators more vulnerable but all ships get the full protection of their armor if the powerplant is off.

Batteries

You may add batteries to your designs to power your ship, battery power is measured in MWh, 1 MW for 1 hour or 2 MW for 30 min etc. Running on batteries has the same IR(Power) there is no Neutrino(Power) Signature. 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.

Fission and fusion powerplants have built in batteries with enough power to try to start them four times ie full power for 4 minutes. Lifesupport has built in batteries for 4 weeks (1 kW per person), freezers have built in power for 1 year (100 W per person).

Core

Core covers cargo, hangars, computers and the neutrino and mass sensors. Neutrino and mass sensors are not Surface location as 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 or network.

See the sidebar for how the computer dice pool work.

Powerplant refueling

Fission and fusion plants come with enough fuel to last 14 days in the case of fusion and 1 year in the case of fission plants. Fusion plants use liquid hydrogen for fuel, the same as used for hyperspace jumps and rocket reaction mass. Fusion plants can be refueled at D+ ports taking an hour or so and fission plants can be refueled at C+ ports taking a day or so.

Underpower

Ships may not have enough power for all its beam weapons and will suffer a DM when attacking. If power is less than 10% of what is required the ship cannot fire at all, not even defensively. Underpower ratings for Drift, Thrust and Jump prep is calculated automatically by the design system.

Power to beam weapons	Underpower
Beam power 100%+	Full
Beam power 50%+	-2
Beam power 10%+	-4
Beam power < 10%	No fire

Batteries

TL	m3 / MWh	Ton / m3	Cr / MWh
6	10	2	10 000
7	7	2	20 000
8-9	3	2	50 000
10-11	1	2	100 000
12-13	0.5	2	100 000
15-15	0.25	2	100 000
16+	0.25	2	100 000

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# each turn, 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. Crewless tasks (crew is G-Loc stunned, critically damaged etc) can be performed by paying 2 pool dice to do the task.

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*	Tactics**
Limited station	4h	-2G	-1
Limited tank	4h	-5G	-1
Full station	8h	-2G	-
Bridge station	12h	-2G	+1

*Used by the G-Load and Fatigue rules

**Treat no skill as -1 here

Living space

Living space is only needed on ships with mission times in excess of their crew-stations 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 *that* volume as living space too.

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 Sensor Ops or Gunners are in parenthesis they may not perform Sense task in the turn after one where they attacked or defended.

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 revival, 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. Frozen watch has no effect on Repair Crew but then again, the Repair Crew can 'jury-rig' both themselves as well as the regular Crew.

Stations

Stations are needed by all crewmembers except technicians. Screens, joy-sticks, buttons and levers and 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 occupy 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 necessary 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 generate a homogenous gravity field. They are rated in how many Gs of thrust they compensate away and you decide if the field only cover stations and living space or extends to the cargo space too.

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.

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 per weapon type. Large and Very large spinals require 5 or 10 gunners, meson guns twice that. 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.

Defenses have the same gunner requirements. Lasers turrets can be used for attacks or missile defense but not both. Ships often combine the role of sensor operator with that of gunners (indicated by Sensor operators or Gunners in parenthesis) called Dual role gunners.

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

Dual role gunners may not do a Sense task after a turn attacking / defending

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. If dual role crew attacked or defended in the last turn they cannot roll a Sense task, they may still Scan however. Dual role isn't very important but can be a serious drawback when fighting multiple ships or using regular missiles.

Intercept calculates the number of gunners and sensor operators as dual role ie in parenthesis. If you want dedicated crew positions edit their numbers.

Example

The picture to the right show a ship with 5 gunners, 4 of which also serve as dual role sensor operators. In the yellow box to the right of the crew box (not shown) enter the number of dedicated sensor ops and make sure they also have crew stations and life support. Dual roles sensor ops may not Scan if they attacked or defended during the last turn.

Pilots and Astrogators

Larger ships require more than one Pilot or Astrogator to operate properly. Lacking Pilots or Astrogators suffer -3/-6 from 1/2 missing.

Pilots, Astrogators & Tacticians		
Size	Volume	
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 volley 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.

Undermanning

Lower than required Crew make task rolls harder to perform.

Amount of crew	Task DM
100% crew	No DM
At least 30% crew	-3
At least 10% crew	-6
Less than 10% crew	No task allowed

Pilots	1
Astrogators	0
Sensor ops	(4)
Gunners	5
Technicians	5
Total crew	11

Sensors tables

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).

Visual / Infrared

TL	Small	Medium	Large	VLarge
6	-7	-5	-3	-1
7	-6	-4	-2	+0
8-9	-5	-3	-1	+1
10-11	-4	-2	+0	+2
12-13	-3	-1	+1	+3
14-15	-2	+0	+2	+4
16+	-1	+1	+3	+5
m3(dTon)	0.5(1)	5(1)	50(10)	500(100)
Surface area	0.1	1	10	100
Price(MCr)	0.1	1	10	100

Radar

TL	Small	Medium	Large	VLarge
6	-5	-1	+3	+7
7	-4	+0	+4	+8
8-9	-3	+1	+5	+9
10-11	-2	+2	+6	+10
12-13	-1	+3	+7	+11
14-15	+0	+4	+8	+12
16+	+1	+5	+9	+13
m3(dTon)	0.5(1)	5(1)	50(10)	500(100)
Surface area	0.1	1	10	100
Power(MW)	0.5	5	50	500
Price(MCr)	0.1	1	10	100

Neutrino

TL	Medium	Large	VLarge
11	-4	-2	+0
12-13	-3	-1	+1
14-15	-2	+0	+2
16+	-1	+1	+3
m3(dTon)	50(10)	500(100)	5000(1000)
Surface area	-	-	-
Power(MW)	5	50	500
Price(MCr)	50	500	5000

Mass

TL	Medium	Large	VLarge
13	-4	-2	+0
14-15	-3	-1	+1
16+	-2	+0	+2
m3(dTon)	50(10)	500(100)	5000(1000)
Surface area	-	-	-
Power(MW)	5	50	500
Price(MCr)	50	500	5000

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.

Normally your Visual/IR sensor can scan either Visual or IR but not both in the same turn, there are however some modification options available. You can make it Visual only, IR only or dual which means allowing both Visual and IR scans in the same turn given enough sensor operators.

Radar

Planet LOS

Contact or better 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 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

Mass detectors detect gravitational gradient from ships mass, floorfields and Impulse drives and these fall off much faster than passive sensors so Mass sensors use the same column as Radar for scan size modifiers. Mass detectors are unaffected by the Sun and can see though planets. Mass detectors are located in the Core section and see right through the ships hull. Mass masking consist of graviton shielding devices.

Visual only or IR only option

There is an option to have your optical sensors only capable of Visual or IR scans, this option is rarely used and only here for completeness. Visual only means it can only do Visual scans and IR only means it can only do IR scans.

This increases the Sensitivity by +1, make sure that you don't use the sensor in a mode it doesn't support.

Radar only or radio only option

Radar can be used for radar or to passively scan for radio transmissions, or to improve the range of radio transmissions. There is an option to make your sensor capable of only Radar or only Radio.

Either option increases the Sensitivity by +1, make sure that you don't use the sensor in a mode it doesn't support. Radio only scans does not require power and csn thefore be used when the ship uses Silent running.

Weapons

Ship weaponry are divided in beams and missiles which uses different 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. All weapons of a turret must attack the same target. Fixed mounted lasers may not defend against missile attacks, only turrets may do so.

Bays Bays are much larger and can hold 30 m3(6 dTon), 300 m3(60 dTon) or 3000 m3(600 dTon) of weaponry, for small, medium or large bays. 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 groups and volleys

Weapons inside a mount fire together at a single target with a single roll. The number of weapons instead gives a DM from the Volley table. All weapons of the exact same type that bear on a target should be grouped together to form even larger volley groups. Volley grouping is rearranged at whim but requires the same number of gunnery crew regardless of the arrangement.

Only the ship being attacked may defend against the attack

A single* defense group may defend against each and every attack volley

The above is a very good reason to group your defenses into as large groups as possible but remember that one can only group units of the exact same type.

**Nuke missile attacks may be defended against using both lasers and nuclear dampers, a Good nuke attack will be stopped by a Fair damper and a Fair laser defense for example.*

Underpower

All beam weapons have storage banks to allow firing at full rate of fire (ROF) for an entire turn. Firing requires the powerplant to refill these banks and if the powerplant cannot deliver the power requirement to do that the weapons will have to fire at a lower ROF with a negative DM as a consequence, this is called Underpower. Ship DataCards has Underpower listed for Thrusting, Drifting or Jump prepping, use the best value from the current and previous turn to determine current Underpower. Ships using the optional Hyperspace rules use the Jump prepping Underpower, see page 40-41.

Full You have enough power to attack and defend at no penalty.

-2 or -4 Your beam attacks suffer a -2 or -4, your defense is still unaffected.

No fire You may only use missiles to attack and only sandcasters to defend.

The very first time a ship attack with beams in a game it can always fire without considering Underpower, this even includes beam equipped ships with no power at all, one turn of attacking is always allowed (presumably the storage banks were charged up before the start of the game).

Dualrole gunners

Sensor operators or Gunners in parenthesis are termed dual role, they share two jobs and thus cannot do both. If they attacked or defended they cannot Sense in the next turn, if they Sensed in a turn they may still attack defend however. Most civilian ships have dual role gunners if they are armed at all, most military ships have dedicated gunners.

Weapon mounts

TBD Some text about mounts and their 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	3	30 (6)	2
Medium bay	10	300 (60)	3
Large bay	30	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.*

Volley table

Number of units in volley	DM
Volley members 2	+2
Volley members 3-8	+3
Volley members 9-29	+4
Volley members 30-69	+5
Volley members 90+	+6

Underpower

Use the best modifier from the current and previous turn. *No fire* prohibits using defenses too, except sandcasters.

Power to beam weapons	Underpower
Beam power 100%+	Full
Beam power 50%+	-2
Beam power 10%+	-4
Beam power < 10%	No fire



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

Underpower

Underpower is only applied if the ship attacked with beam weapons last turn, except *No fire* which prohibits any fire including defensive fire

Power to beam weapons Underpower

Beam power 100%+	-
Beam power 50%+	-2
Beam power 20%+	-4
Beam power < 20%	No fire

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 defenses 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 light speed while the particles move at just below light speed 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 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.

Snap missiles Missiles with only one turn of endurance are called Snap missiles. They are launched and attack during the combat phase and only if the launching ship is tracked can they be defended against. If they miss they are spent and removed from play, they will never be on the map itself.

Regular missiles Missiles with longer endurance than one turn are called regular missiles to avoid confusion. They launch at the end of the movement phase. They always use their full G rating each turn and are removed from play when their endurance (measured in turns) is used up.

Cruise missiles Regular missiles that behave like ships in that they can vary their thrust and even drift are called Cruise missiles. Calculate their performance in G turns by multiplying their G rating with the number of turns of endurance. A 4G30min Cruise missile would have a rating of 4G8 for example. They may use from 0 up to their full G rating each turn (using as many GTurns as the thrust used) and are removed from play when their endurance (measured in GTurns) is used up. When drifting they use the right side Signatures below.

Magazine

Missile launchers normally hold three missiles per tube, individually selectable, but after those the launcher cannot be reloaded during a game. 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

Missiles must be inside launcher range at the end of the movement phase

Missiles are operator guided and have a maximum range that depends on the missile type and TL of the launcher. Missiles must be inside launcher arc only when attacking or using their sensors.

TL	Thrust			Launcher ranges		
	Small	Medium	Large	Small*	Medium*	Large*
7	2G15m	2G30m	2G1h	10(1)	30(3)	100(10)
8-9	3G15m	3G30m	3G1h	15(1)	50(5)	150(15)
10-11	4G15m	4G30m	4G1h	20(2)	70(7)	200(20)
12-13	5G15m	5G30m	5G1h	30(3)	100(10)	300(30)
14-15	6G15m	6G30m	6G1h	30(3)	100(10)	300(30)
16+	7G15m	7G30m	7G1h	30(3)	100(10)	300(30)

*10 000 km squares (100 000 km squares)

Small missile

10 KCr base cost

Small missiles mass 50 kg and are all powered by fission thrusters.

PEN	DAM	Vis	IR	Radar	Neutrino	Mass
28	28	+6/-6+Sun	+6/-6	+2	+6/-	-6

Left value is thrusting, right value is drifting (cruise missiles only)

Medium missile TL

100 KCr base cost

Medium missiles mass 500 kg, TL 9- use fission and 10+ use fusion thrust.

PEN	DAM	Vis	IR	Radar	Neutrino	Mass
34	34	+8/-4+Sun	+8/-4	+4	+8/-	-4

Left value is thrusting, right value is drifting (cruise missiles only)

Large missile

1 MCr base cost

Large missiles mass 5 ton, TL 9- use fission and 10+ use fusion thrust.

PEN	DAM	Vis	IR	Radar	Neutrino	Mass
40	40	+10/-2+Sun	+10/-2	+6	+10/-	-2

Left value is thrusting, right value is drifting (cruise missiles only)

Missile options (cumulative)

Endurance

Increase or decrease the missile's endurance using these modifiers.

Double / triple / quad endurance

(-2G/-3G/-4G, x2/x3/x4 endurance)

Half / quarter endurance

(+2G/+4G half/quarter endurance)

Cruise and Cold-start missiles

Cruise missiles move as regular ships and can turn and drift in any combination as long as GTurns remain. Calculate G-turns (Gs x endurance in 15 min turns) keep track of its use. Cold-start are regular that start drifting.

(Cruise missile -2G, price x3)

(Cold start missile -1G, price x2)

Extra PEN and DAM

You may increase PEN & DAM by reducing Gs (for nukes too, see page 31)

(-1G per +1 PEN & DAM)

Airframe or Hypersonic

Missiles may be *airframe* or *hypersonic* to perform aerobrakes using the wings and allows launches to and from planets with atmospheres. Hypersonic missiles use no fuel when aerobraking or are launched from an atmosphere thanks to their air breathing thruster. No onboard Sensors can be used when aerobraking or taking off.

(Airframe -1G, price x2, 10% wings, TL 6+)

(Hypersonic -2G, price x3, 20% wings, TL 8+)

Decoy missiles

You can increase the signatures of your missiles to create decoys, if performance become 0G there will be no Neutrino signature. Decoys still work after the endurance of the missile is up.

Vis(Hull) & Radar(Hull) signature increases

(-1G per +1, +2 or +3)

Sensors

Visual/IR or Radar sensors may be added to your missiles, radar signature increase by +2 if the missile is scanning. You may also increase Sensitivity by +1 per 1G spent.

(Visual/IR sensor -1G, Price x2)

TL	Small	Medium	Large
Radar sig	+2/+4	+4/+6	+6/+8
7	-8	-6	-4
8-9	-7	-5	-3
10-11	-6	-4	-2
12-13	-5	-3	-1
14-15	-4	-2	+0
16+	-3	-1	+1

(Radar sensor -2G, Price x3)

TL	Small	Medium	Large
Radar sig	+2/+4	+4/+6	+6/+8
7	-12	-8	-4
8-9	-11	-7	-3
10-11	-10	-6	-2
12-13	-9	-5	-1
14-15	-8	-4	+0
16+	-7	-3	+1

Screen ARM values(optional)

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. Only use the rules when using the optional Tech relative beam defenses on page 50.

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 weapon type 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 the ship being attacked may defend against the attack

A single* defense group may defend against each and every attack volley

The above is a very good reason to group your defenses into as large groups as possible but remember that one can only group units of the exact same type.

**Nuke missile attacks may be defended against using both lasers and nuclear dampers, a Good nuke attack will be stopped by a Fair damper and a Fair laser defense for example.*

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 Sprayfire 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) in sunlight = Size-6+Sun

Visual(Hull) in shadow = Size-6+0

Visual(Thrust) = Thrust signature table

Basic/advanced/extreme Visual masking -3 / -6 / -9

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 -3 / -6 / -9

Radar signature

The radar signature comes from radar reflected off the hull.

Radar(Hull) = Size

Openframe +2

Pop in openframe No effect

Pop in normal -3

Pop in streamlined -6

Pop in airframe -6

Basic/advanced/extreme Radar masking -3 / -6 / -9

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 -3 / -6 / -9

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(Hull) no floorfield) = Size-6

Mass(Hull) with floorfield) = Size

Mass(Thrust) = Thrust signature table

Basic/advanced/extreme Mass masking -3 / -6 / -9

Thrust and density

Thrust input is measured in Gs but the ending G rating may be a lower, value. Thrust input assumes a ship with about 0.25 ton per m3 in density, higher densities and the actual thrust Gs will be lower. Adjust the input Gs until it fit what you want, don't forget to adjust the frame Gs to the same value.

You may reduce the mass of your ship and thus increase your thrust Gs by choosing a more advanced build material but this is very costly and won't affect every component on your ship, 'every gram counts' as the say.

Hull size table

dTon	Size	DAB	Lightlag	SA*	Frame**
3	+5	12	7	0.03	0.3%
5	+5	13	7	0.05	0.3%
7	+5	14	7	0.07	0.3%
10	+6	15	10	0.10 ¹	0.5%
15	+6	16	10	0.15	0.5%
20	+6	17	10	0.2	0.5%
30	+7	18	10	0.3	0.7%
50	+7	19	10	0.5	0.7%
70	+7	20	10	0.7	0.7%
100	+8	21	15	1.0 ²	1%
150	+8	22	15	1.5	1%
200	+8	23	15	2	1%
300	+9	24	15	3	1.5%
500	+9	25	15	5	1.5%
700	+9	26	15	7	1.5%
1000	+10	27	20	10 ³	2%
1500	+10	28	20	15	2%
2000	+10	29	20	20 ⁴	2%
3 K	+11	30	20	30	3%
5 K	+11	31	20	50	3%
7 K	+11	32	20	70	3%
10 K	+12	33	30	100	5%
15 K	+12	34	30	150	5%
20 K	+12	35	30	200	5%
30 K	+13	36	30	300	7%
50 K	+13	37	30	500	7%
70 K	+13	38	30	700	7%
100 K	+14	39	50	1000	10%
150 K	+14	40	50	1500	10%
200 K	+14	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	-	-
50 kW	+0	-2	+0
150 kW	+1	-1	+1
500 kW	+2	+0	+2
1.5 MW	+3	+1	+3
5 MW	+4	+2	+4
15 MW	+5	+3	+5
50 MW	+6	+4	+6
150 MW	+7	+5	+7
500 MW	+8	+6	+8
1.5 GW	+9	+7	+9

Thrust signature table

Thrust sig depends on drive type and thrust. Drives have several different signatures

	Vis	IR	Neutr	Mass
Fission	Size+6	Size+6	Size+4	-
Fusion	Size+6	Size+6	Size+6	-
Floater	Size	-	-	Size
Grav	Size	-	-	Size
Impulse	Size	-	-	Size

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 volley 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 hit points, 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 sectors all contribute to give the thinking 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 at 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. Update: this is no longer true, fixed it!

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.

The current version has seen a lot of plays with Marie Sörensen and occasionally with her cat Chester. I have played lots of combats and speed races using Intercept against my girlfriend Kaarina Ringstad, I usually lose against her, her one-shot-kill from the blind rear aft using Split movement in a fight between my Close escort and her SDB is legendary!

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

Pilot task Size+

Task	Steps of turning
VGood (6+)	8
Good (3-5)	6
Fair (0-2)	4
Miss (1-2)	3
Bad (3-5)	2
VBad (6+)	1

+Pilot skill

Crew damage Light/Severe -1/-2

Hull damage Light/Severe -1/-2

Pilot default

Size*	Steps of turn (Pilot degree)			
0-	6(G)	6(G)	6(G)	6(G)
1	6(G)	6(G)	6(G)	4(F)
2	6(G)	4(F)	6(G)	4(F)
3	4(F)	4(F)	4(F)	4(F)
4	4(F)	4(F)	4(F)	3(M)
5	4(F)	3(M)	4(F)	3(M)
6	3(M)	3(M)	3(M)	3(M)
7	3(M)	3(M)	3(M)	2(B)
8	3(M)	2(B)	3(M)	2(B)
9	2(B)	2(B)	2(B)	2(B)
10	2(B)	2(B)	2(B)	1(VB)
11	2(B)	1(VB)	2(B)	1(VB)
12	1(VB)	1(VB)	1(VB)	1(VB)

*Up 1 row per Pilot skill level

*Crew Light/Severe 1/2 rows down

*Hull Light/Severe 1/2 rows down

6 steps is Good 3 steps is Miss
4 steps is Fair 2 steps is Bad
1 step is VBad

Aerobrake & takeoff

Atmosphere	Airdrag*
Vacuum	-
Trace	1
Very thin to thin	2
Standard	3
Dense or gas giant	4

*Airdrag can never exceed Speed

Wings	Wingdrag*
Less than 5%	0
5% or more	1
10% or more	2
20% or more	3
Facing vs Drift is off	+1

*Wingdrag can never exceed Airdrag

Speed + Brake Gs DAM

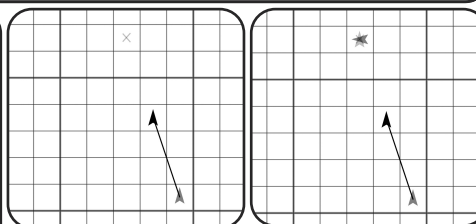
Hull	1-2	3-4	5-6	7-8	9-10	11+
Open fr.	6	9	12	Dstr	Dstr	Dstr
Normal	0	3	6	9	12	Dstr
Streaml.	Safe	0	3	6	9	Dstr
Airframe	Safe	Safe	0	3	6	Dstr

Forced facing use 1 row up

Face new vector after aerobrake

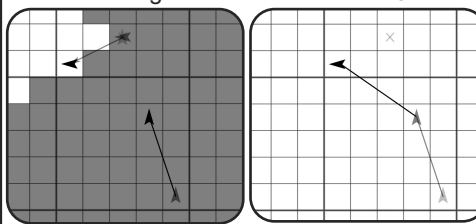
Impact speed DAM

Hull	0	1	2-4	5-9	10-19	20+
Damage	3	6	9	12	15	18



Drifting

Turning



Thrusting

Move completed

Movement steps

1 Drift

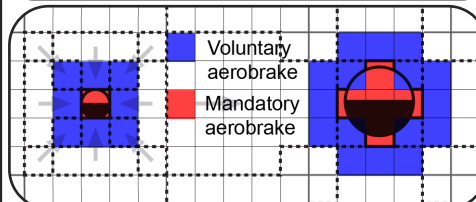
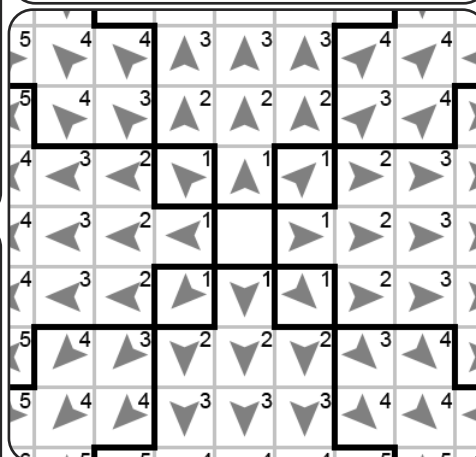
Repeat the ships last move and note the position, apply gravity if applicable.

2 Turns and rolls

Turn and/or roll depending on Pilot task result or Pilot default table

3 Thrust

Apply thrust in the direction the ship is facing using the facing diagram above



Land, dock or ram

Damage modifiers (where applicable)

Landing gear & port DMs (land only)

Docking gear DMs (cooperative dock only)

+1 if Gs or speed > FrameGs

+2/+3 if Gs or speed ≥ x2/x3 FrameGs

+1 if 3+ lower ARM* (dock & ram)

-1 if 3+ higher ARM* (dock & ram)

+1 if lower DAB (dock & ram)

-1 per higher DAB (dock & ram)

*Dock/rammer use Hull, target use hitloc

Sequence of play

Drift & gravity

Tracked movement (reverse Initiative)

Untracked movement (plotted)

Missiles movement (reverse Initiative)

Sensors (A/B order)

Beams & missiles (Initiative)

Docking & ramming (Initiative)

Repair Crew & Continuing damage

Initiative

Untracked win initiative over tracked and thereafter there's a list of tie breakers:

Initiative descending priority

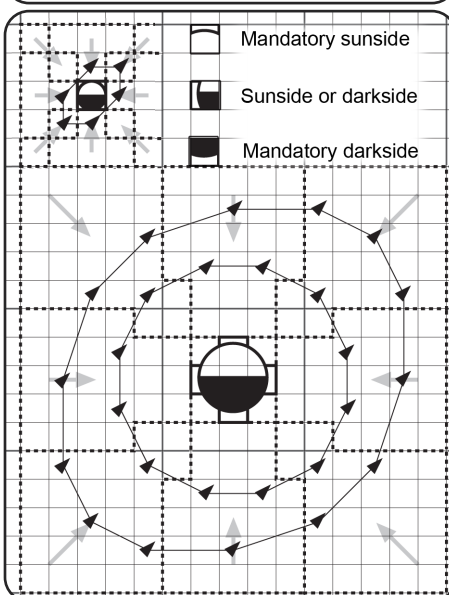
1 Untracked ships win

2 Highest Pilot task result win

3 Higher Ship tactics win

4 Crew station (Bridge>Full>Limited)

5 Side A win on odd, B on even turns



Stable orbits and landing zones

Roll + modifiers

Roll damage if modifiers are -2 or higher

A roll of 6 cause ED

A Scratch+ roll of 1 cause CD

One row up if Surface, Power or Thrust

Two rows down if pass-on damage

Roll+modifiers	Damage result
18+	Ship destroyed
15-17	Destroyed & pass-on
12-14	Critical
9-11	Severe
6-8	Light
3-5	(Scratch)
0-2	No effect

Pilot*	Hitlocation	Damage roll
VGood**	Hull	6, no CD
Good**	Hull	3D6 low, no CD
Fair**	Hull	2D6 low, no CD
Miss**	2D6 low	1D6
Bad**	1D6	2D6 high
VBad**	2D6 high	6, ED

*No thrust on both improve task 1 lvl

*No turn / roll on both improve task 1 lvl

SENSORS

Scan = Sensor + Scan modifiers, Signal = Scan + Signature

Scan = Sensor + Scan modifiers
(calculated by scanner)

Signal = Scan + Signature
(calculated by target)

Scan radius table

Radius	Vis, IR Neutrino	Radar Mass	Max range
Square 1x1	+3	+6	1 box
Square 2x2	+2	+4	2 boxes
Square 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
Same sensor	-2	-2	-

Integration bonus

Four consecutive Same Size, Pos, Type and ship grants +1 on Scan, 16 such scans give a bonus of +2.

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) use right value of datacard

Silent running (S)

Ignore IR(Power)

Ignore Neutrino(Power)

Mass(Hull) -6 if Floorfield

Asteroid same square or adj. -1

Planet same square or adj. -2

Gas giant same square or adj. -3

Questions for scanner

Does your Scan touch your ships Sunglare?

If yes subtract Sun from the Scan strength

Always ask this question

Does the planet block parts of your Scan?

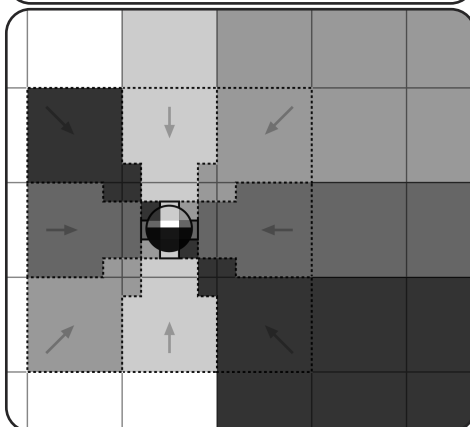
If yes show what parts of the scan that are blocked, if any.

Only ask if there are planets on the map

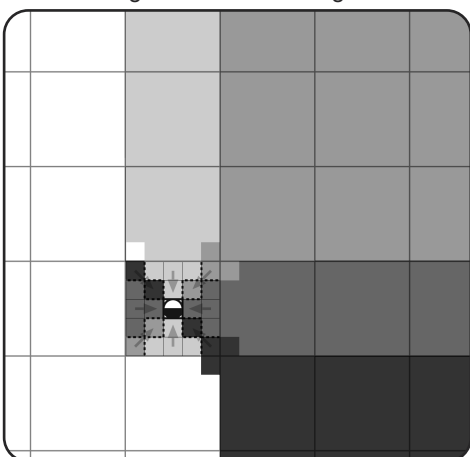
Do you scan the planet squares?

If a scan touches a planet or asteroid the scanner may omit them.

Only ask if the scan touches a planet



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 & missiles (Initiative)

Docking & ramming (Initiative)

Repair Crew & Continuing damage

Initiative

Untracked win initiative over tracked and thereafter there's a list of tie breakers:

Initiative descending priority

1 Untracked ships win

2 Highest Pilot task result win

3 Higher Ship tactics win

4 Crew station (Bridge>Full>Limited)

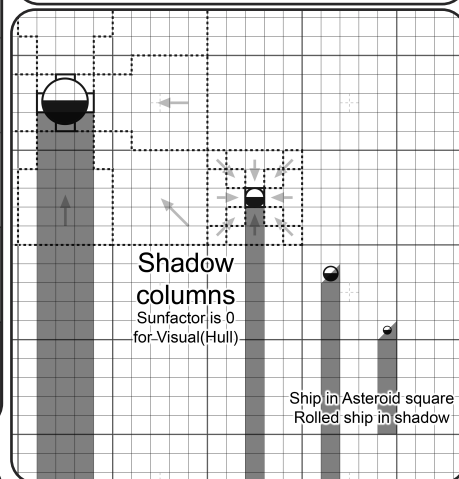
5 Side A win on odd, B on even turns

Max tracked range table

Visual, IR Neutrino	Radar Mass	Max range
-7-	-13-	No track
-6	-12	1 square
-5	-10	2 squares
-4	-8	3 squares
-3	-6	5 squares
-2	-4	7 squares
-1	-2	2 boxes
+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

1 ~1 lightsecond (Ls) (500 Ls per AU)

2 ~1 lightminute (Lm)



Shadows

Sense task 8+

Dual role gunners may not Sense if they attacked or defended last turn.

Roll 6+

DMs

Pilot skill +DM

Crew damage Light / Severe -1 / -2

Signal Contact Position Tracked

12+ Auto Auto Auto

6-11 Auto Auto Fair

3-5 Auto Fair Good

0-2 Auto Good VGood

-1- Nothing Nothing Nothing

Near or Landed Signatures

Near is on or adjacent, Neutrino ignore this

Landed Near Landed

Docked to 2+ larger - -1

Asteroid small/large -1 -2/-3

Planet small / large -2 -4/-5

Gasgiant small / large -3 -6/-7

Atmosphere Visual IR

Trace -1 -2

Very thin to thin -2 -4

Standard -3 -6

Dense or gasgiant -4 -8

Landed ambience

Landed side	Visual	IR
Sunside	-Sun/2*	-Sun/2*
Darkside	-2	-Sun/4*

*Round down

Missile signatures

Type	Vis*	IR*	Radar	Neutr* Mass
Small missile	+6/-6+Sun	+6/-6	+2	+6/-6 -6
Medium missile	+8/-4+Sun	+8/-4	+4	+8/-4 -4
Large missile	+10/-2+Sun	+10/-2	+6	+10/-2 -2

*Thrusting/Drifting

Scans to/from atmosphere

Atmosphere	Visual	IR
Trace	-1	-2
Very thin to thin	-2	-4
Standard	-3	-6
Dense or gas giant	-4	-8
Scan from Sunside	-Sun	-Sun
Scan from Darkside	-	-

COMBAT

Beam to hit, Beam defense, Missile to hit, Missile defense

Volley table

Number of units in battery	DM
Volley members 2	+2
Volley members 3+	+3
Volley members 6+	+4
Volley members 9+	+5
Volley members 30+	+6

Sprayfire

Mandatory for Proximity missiles
Voluntary for 3+ Impact missiles
Voluntary for beams

Result	Sprayfire
VGood	3 Fair: 1 picked, 2 adjacent
Good	2 Fair: 1 random, 1 adjacent
Fair	1 Fair: 1 random

Beam attack table

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

Range	0*	1	2-3	4-10	11-30	31+
Target nbr	13+	16+	19+	22+	25+	28+
*Must have same vector or use range 1						
*Use Same square attack rules, page 9						

Beam attack modifiers	DM
Target Size	+Size
Target drifting	+2
Gunner skill	+DM
Crew damage Light / Severe	-1 / -2
Surface damage Light / Severe	-1 / -2
Power damage Light / Severe	-1 / -2
Underpower	-DM
Volley units	+DM
Cooked shot (PEN & DAM +3)*	-3

*CD on attacker Surface location

*Roll for CD effects before the shot

Beam defense 11+

Beam defense modifiers	DM
Gunner skill	+DM
Crew damage Light / Severe	-1 / -2
Surface damage Light / Severe	-1 / -2
Volley units	+DM
Defender drifting	+2

Defense vs attack

Def Result	Effect on attack
VGood	Attack stopped
Good	Attack two steps worse
Fair	Attack one step worse
Miss or worse	No effect on attack

Each ship in Initiative order:

All Beam attacks, then Missiles

For each beam volley attack:

Roll to hit from each attack

Roll defense if any

Check defense vs attack

Roll penetration (PEN-ARM)

Roll damage (DAM-DAB)

For each missile volley attack:

Roll to hit from each attack

Roll defense if any.

Check defense vs attack

Roll penetration (PEN-ARM)

Roll damage (DAM-DAB)

Sequence of play

Drift & gravity

Tracked movement (reverse Initiative)

Untracked movement (plotted)

Missiles movement (reverse Initiative)

Sensors (A/B order)

Beams & missiles (Initiative)

Docking & ramming (Initiative)

Repair Crew & Continuing damage

Initiative

Untracked win initiative over tracked and thereafter there's a list of tie breakers:

Initiative descending priority

1 Untracked ships win

2 Highest Pilot task result win

3 Higher Ship tactics win

4 Crew station (Bridge>Full>Limited)

5 Side A win on odd, B on even turns

Missile attack 19+

Missed volleys may continue moving if fuel and launcher range permits.

Attack arc is from missile Drift, same square use Top (Bottom if rolled)

Attack vector is separation from last turn

Attack vector					
Separation	0	1	2-4	5-9	10+
Vector DM	+6	+3	-	-3	-6
PEN & DAM*	-6	-3	-	+3	+6

*Nukes ignore PEN & DAM modifiers

Missile to hit modifiers	DM
Target Size	+DM
Target drifting	+2
Gunner skill	+DM
Crew damage Light / Severe	-1 / -2
Vector DM	+DM
Remaining thrust Gs 1/2/3+	+1/2/3
Volley units	+DM
Proximity attack	+3

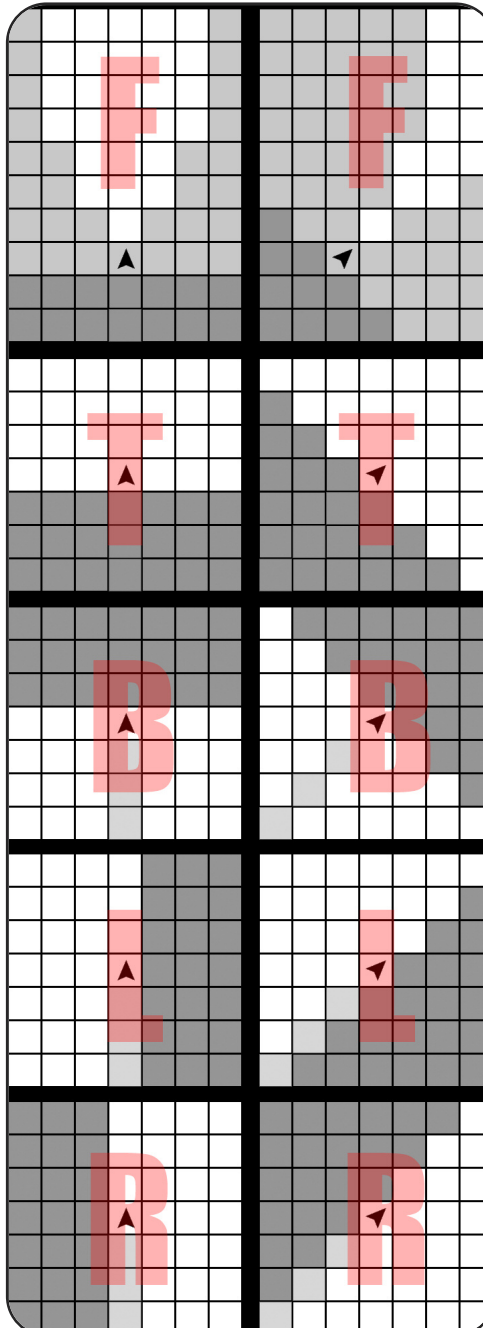
Missile defense 11+

Missile defense roll is based on the Attack vector from the table above. Lasers may attack or defend but not both in a turn. One laser and one damper group may defend against each volley. Attack sector is based on Drift square.

Missile defense modifiers	DM
Small/Medium/Large missile	+0/+2/+4
Gunner skill	+DM
Crew damage Light / Severe	-1 / -2
Vector DM	+DM
Volley units	+DM
Defender drifting	+2

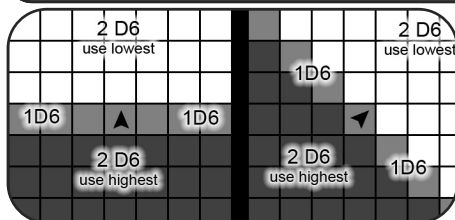
Defense vs attack

Def Result	Effect on attack
VGood	Attack stopped
Good	Attack two steps worse
Fair	Attack one step worse
Miss or worse	No effect on attack



DAMAGE

Penetration, Damage, Repairs & Powering up, Continuing damage



Hitlocation table

Fair Roll hitlocation

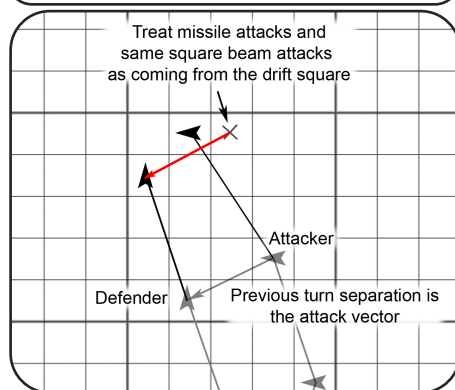
Good Roll hitlocation, may pick adjacent

VGood Pick hitlocation

1D6*	Location	Where (skill)
1	Hull	Outside (mechanic)
2	Crew	Inside (mechanic)
3	Core	Inside (electronic)
4	Surface*	Outside (electronic)
5	Power**	Inside (engineer)
6	Thrust	Inside (engineer)

*Left / right ARM when Popped out / in

**Left / right ARM when Power on / off



Beam Effective range

Beam weapons have an effective range, inside this they can focus, beyond that range damage fall off.

Range	Damage
Inside Effective range	Full damage
Inside 3 x EffRng	PEN & DAM -3
Beyond 3 x EffRng	No damage

Missile Attack vector

Attack vector is separation of last turn

Effect	0	1	2-4	5-9	10+
Vector DM	+6	+3	-	-3	-6
PEN & DAM*	-6	-3	-	+3	+6

*Nukes ignore PEN & DAM modifiers

Beam Cooked shots

Gives CD in Surface location

To hit -3, PEN & DAM +3

Missile Proximity attack

Any 3+ missile volley and all nuke attacks may use Proximity attacks, Sprayfire is mandatory for proximity attacks

To hit +3, PEN & DAM -6

Penetration

Meson hits always penetrate.

PEN-ARM	Penetration
3+	All hits penetrate
2	Good & VGood penetrate
1	VGood hits penetrate
0-	All hits penetrate

Damage table

A roll of 6 cause Exploding Dice

A Scratch+ roll of 1 cause CD

Sprayfire hits are rolled as Fair hits

DAM-DAB+Roll	Damage result
Surface, Power or Thrust - one row up	
Pass-on-damage - two rows down	
18+	Ship destroyed
15-17	Destroyed**
12-14	Critical
9-11	Severe
6-8	Light
3-5	(Scratch)
0-2	No effect

CD on a roll of 1, ED on a roll of 6

*Fair Roll 2D6 and use the lowest D6

*Good Roll 2D6 and use the highest D6

*VGood Treat as if you rolled a 6, roll ED

**Pass-on-damage to Hull

Exploding Dice, ED, on a roll of 6

Add 1D6/2 round down to roll, reroll on 6

Continuing Damage, CD, on a roll of 1

1-2: Increase damage

3-5: No effect but CD remain

6: CD Fizzles out and stops

Jury-rig and Power up

Scratch No Jury-rig possible

Light Roll 8+ to Jury-rig

Severe Roll 8+ to Jury-rig

Critical Roll 11+ to Jury-rig

VGood Jury-rig success, remove CD, continue

Fair Jury-rig success, remove CD, adjacent

Good Jury-rig success, remove CD, stay

Miss or worse Jury-rig failed

Important modifiers

Power damage -1 or -2

Repair crew damage -1 or -2

Thrust Gs above Floorfield* -1/G

-1 G if no turn or roll, +1 G if roll

Undermanning -DM

*FF is 0 for Hull & Surface

*FF is 0 for Power & Thrust if < 50 dTon

*FF is 0 for Core if FF is crew only

Powering up Roll Size+

Result

VGood Power is on next turn, RC continue

Fair & Good Power is on next turn

Miss Power is on the turn after the next

Bad No power

VBad No power and CD in Power location

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)

Repair Crew & Continuing damage

Damage effects

Hull

Light Max Streamlined, Pilot task -1

Severe Max Normal, Pilot task -2

Critical Max Open frame, No turning or rolling, Pilot task automatically VBad

Destroyed Ship is destroyed.

Crew

Particle, meson & nuke hits one level higher damage to Crew from radiation.

Light All task rolls -1

Severe All task rolls -2

Critical Cannot perform any task rolls

Destroyed As Critical but no 'jury-rig'

Core

Light Computer pool -1

Mass or Neutrino Scans -1 Sensitivity

Severe Computer pool / 2 round down

Mass or Neutrino Scans -2 Sensitivity

Critical No Computer pool dice

No Mass/Neutrino Scans

Destroyed As Critical but no jury-rig

Surface

Light Attacks & defense -1, Sense -1

Severe Attacks & defense -2, Sense -2

Critical No Scans, Attacks or Defenses

Any launched missiles are lost

Destroyed As Critical but no jury-rig

*Mass and Neutrino unaffected

Power

Light Powered thrust 75%, remass 75%

Beam attacks -1

Severe Powered thrust 50%, remass 50%

Beam attacks -2

Jump prep time x2

Critical No powered thrust

No Beam attack or defense, no jumps

Destroyed As Critical but no jury-rig

Fission and fusion thrust unaffected

Missiles and Sandcasters unaffected

Thrust

Light Thrust 75%, remass 75%

Jump task -1, Jump rating -1

Severe Thrust 50%, remass 50%

Jump task -2, Jump rating / 2 round down

Critical No thrust, remass 50%, no jump

Destroyed As Critical but no jury-rig

Repair crew

Same as Crew damage