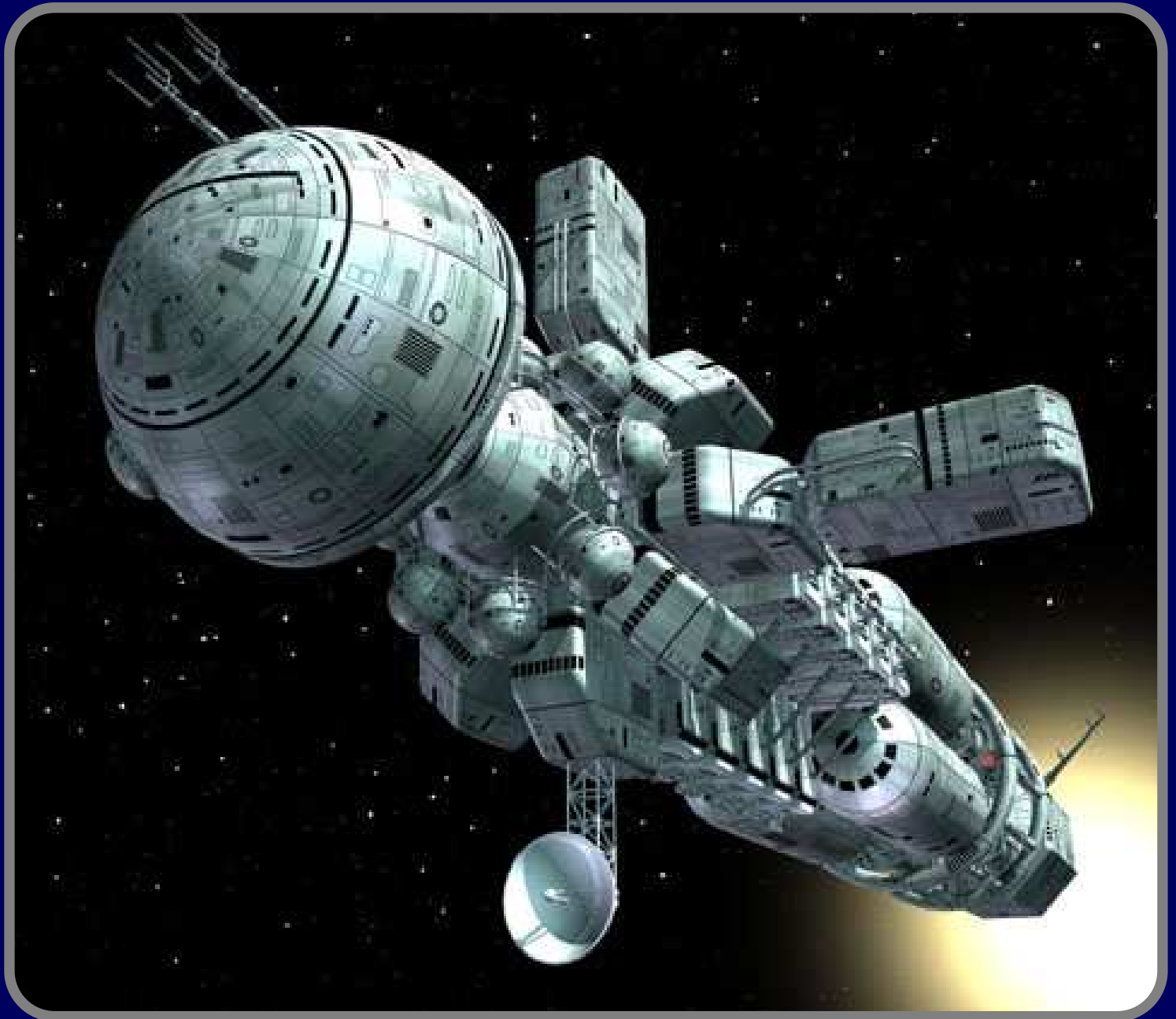


STAR FRONTIERS

Science Fiction Role-Playing Game



KNIGHT HAWKS QUICK-REFERENCE BOOKLET

Last Revision: 3.27.2007

Fighters

Hull Points	8
ADF	5
MR	5
Weapons	3 assault rockets
Defenses	reflective hull

Assault Scouts

Hull Points	15
ADF	5
MR	4
Weapons	4 assault rockets, laser battery
Defenses	reflective hull

Frigates

Hull Points	40
ADF	3
MR	3
Weapons	laser cannon, laser battery, 2 torpedos, 4 rocket batteries
Defenses	reflective hull, 1 masking screen, 4 ICMs

Destroyers

Hull Points	50
ADF	3
MR	2
Weapons	laser cannon, laser battery, 2 torpedos, 6 rocket batteries
Defenses	reflective hull, 2 masking screen, 4 ICMs

Heavy Cruisers

Hull Points	80
ADF	1
MR	1
Weapons	laser cannon, 3 laser batteries, 4 torpedos, 8 rocket batteries
Defenses	reflective hull, masking screen, 8 ICMs

Battleships

Hull Points	120
ADF	2
MR	2
Weapons	2 laser cannons, 4 laser batteries, 8 torpedos, 10 rocket batteries
Defenses	reflective hull, 4 masking screen, 20 ICMs

Assault Carriers

Hull Points	75
ADF	2
MR	1
Weapons	2 laser cannons, 6 laser batteries
Defenses	reflective hull, masking screen, 8 ICMs

Space Stations

Hull Points	20 to 200
ADF	0
MR	0
Weapons	1 to 3 laser batteries, 2 to 12 rocket batteries
Defenses	reflective hull, 1 to 4 masking screen, 2 to 8 ICMs

Explanation of Terms

FF	Forward-firing weapon
MPO	Moving Player Only. MPO weapons can be fired only during the attacking player's combat phase.
RD	Range Diffusion. The accuracy of RD weapons is reduced by 5% x the range to the target.
LTD	Limited Supply. A ship can carry only a limited supply of these weapons. They must be marked off the ship's record sheet as they are fired.
Range	# --- The weapon can be used only against targets within the listed range of hexes.
Damage	#d10-- - This is the number of 1 O-sided dice that are rolled to determine how many points of damage are caused by a successful attack.

1. Player A's Turn

a. Movement

Player A announces which of his ships are using masking screens. A masking screen counter is placed on top of each of these ship counters.

Ships and space stations in orbit are moved one hex, following the direction of their orbit.

Player A moves each of his ships, making sure that no ship moves a longer or shorter distance than its speed from the previous turn will allow. The player writes down each ship's new speed after it moves.

b. Combat

The non-moving player (player B, in this case) announces which of his ships will shoot at moving ships, and which weapons they will use. The non-moving player then resolves all of these attacks and their effects are applied immediately.

The moving player (player A, in this case) announces which of his ships will shoot at the non-moving player's ships, and which weapons they will use. He then resolves all of these attacks, and their results are applied.

2. Side B's Turn

The steps described above are repeated, but Side B becomes the moving side and Side A becomes the non-moving side.

COMBAT TABLE

Weapon	Reflective Hull	Masking Screen	ICM	Damage	Restrictions	Range (hexes)
Laser Cannon	60%	20%*	--	2d10	FF, RD	10
Laser Battery	50%	10%*	--	1d10	RD	9
Torpedo	70%	70%	-10%/ICM	4d10	MPO, LTD	4
Assault Rocket	60%	60%	-5%/ICM	2d10+4	MPO, LTD, FF	4
Rocket Battery	40%	40%	-3%/ICM	2d10	LTD	3

* The target ship takes only one-half damage (round fractions down) if it is hit.

ADVANCED GAME DAMAGE TABLE

Combat Turn Sequence

Side A's Turn

1. Movement Phase
 - activate screens
 - activate and move seekers
 - move ships in orbit
 - move other ships
2. Combat Phase
 - roll for fire damage
 - defensive fire
 - offensive fire

Side B's Turn

1. Movement Phase
 - activate screens
 - activate and move seekers
 - move ships in orbit
 - move other ships
2. Combat Phase
 - roll for fire damage
 - defensive fire
 - offensive fire

Repair Turn

- after every 3 turns

Abbreviations

FF	Forward Firing
RD	Range Diffusion
MPO	Moving Player Only
LTD	Limited Supply
RA	Range
DTM	Damage Table Modifier
HDR	Hull Damage Rating

D100 +DTM	Type of Damage
...-10	Hull hit: double normal damage
11-45	Hull hit: normal damage
46-49	Drive hit: lose 1 ADF point
50-52	Drive hit: lose ½ total ADF (round up)
53	Drive hit: lose entire ADF
54-58	Steering hit: lose 1 MR point
59-60	Steering hit: lose entire MR
61-62	Weapon hit: LC, LB, PB, EB, AR, RB
63-64	Weapon hit: PB, EB, LB, RB, T, AR
65-66	Weapon hit: DC, LC, AR, T, LB
67-68	Weapon hit: T, AR, EB, PB, LB, RB
69-70	Weapon hit: LB, RB, T, AR, PB, EB, LC
71-74	Power short circuit: lose all screens & ICMs
75-77	Defense hit: PS, ES, SS, MS, ICM
78-80	Defense hit: MS, ICM, SS, PS, ES
81-84	Defense hit: ICM, SS, PS, ES, MS
85-91	Combat Control Systems hit: -10 all attacks
92-97	Navigation hit: lose maneuvering control
98-105	Electrical fire: roll damage at DTM+20 each turn
106-116	Damage Control hit: DCR cut in half
117...	Disastrous fire: -10 on all attacks, lose entire ADF and MR, roll damage at DTM+20 each turn

Ship Type	HP	ADF	MR	DCR	Weapons	Defenses
Fighters	8	4	5	30	ARx3	RH
Assault Scouts	15	5	4	50	ARx4, LB	RH
Frigates	40	4	3	70	LC, RBx4, LB, Tx2	RH, MSx2, ICMx4
Destroyers	50	3	3	75	LC, RBx4, LB, Tx2, EB	RH, MSx2, ICMx5
Minelayers	50	1	2	75	Mx20, Sx4, LBx2	RH, ICMx4
Light Cruisers	70	3	2	100	DC, LB, EB, PB, RBx6, Tx4	RH, ES, SS, ICMx8
Heavy Cruisers	80	2	1	120	DC, LB, EB, PB, RBx6, Tx4	RH, ES, PS, SS, ICMx4
Assault Carrier	75	2	1	150	LB, PB, RBx8, FIGHTERx10	RH, MSx4, ICMx10
Battleship	120	2	2	200	DC, LBx3, PB, EBx2, Sx4, Tx8, RBx10	RH, ES, PS, SS, ICMx12
Space Station	20-200	0	0	½HP	1 [EB/LB/PB/RB] per 50 HP	RH, All Screens, ICMx[4-24]

ADVANCED COMBAT TABLE

Weapon	No Defense	Reflect. Hull	Proton Screen	Electron Screen	Stasis Screen	Masking Screen	ICM	Hull Damage	DTM
LC Laser Cannon	75 60	60 45	75 60	75 60	75 60	25* 10*	--	2d10	0
LB Laser Battery	65 55	50 40	65 55	65 55	65 55	20* 10*	--	1d10	0
PB Proton Beam	60 50	60 50	25* 15*	70 60	40 30	50 40	--	1d10	+10
EB Electron Beam	60 50	60 50	70 60	25* 15*	40 30	50 40	--	1d10	+10
DC Disruptor Cannon	60 45	60 45	50 35	50 35	40 25	50 35	--	3d10	+20
T Torpedo	50 45	50 45	50 45	50 45	75 65	50 40	-10/ICM	4d10	-10
AR Assault Rocket	60 50	60 50	60 50	60 50	60 50	60 50	-5/ICM	2d10+4	-10
RB Rocket Battery	40 30	40 30	40 30	40 30	40 30	40 30	-3/ICM	2d10	-20
M Mines	60	60	60	60	60	60	-5/ICM	3d10+5	-20
SM Seeker Missile	75	75	75	75	90	75	-8/ICM	5d10	-20

* Weapon causes half damage (rounded up) on all Hull Hits

Blue shaded areas are for use with characters that have gunnery skills.

Hull Size	Length/ Diameter*	Hatches	Engines	Base ADF/MR
1	10/2	1	1	5
2	30/5	1	1	4
3	50/8	1	2	4
4	75/12	2	1	4
5	100/15	2	3	3
6	130/20	2	3	3
7	150/25	2	2	3
8	180/30	3	2	3
9	210/35	3	2	3
10	240/40	3	3	3
11	270/45	3	3	3
12	300/50	4	4	3
13	340/55	4	4	3
14	380/60	5	6	3
15	420/70	5	4	2
16	450/75	5	6	2
17	475/80	6	6	2
18	500/85	6	6	2
19	540/90	6	4	2
20	600/100	8	8	2

Construction Center	Cost
Class I	50,000 Cr x Hull Size
Class II	60,000 Cr x Hull Size
Class III	75,000 Cr x Hull Size

Drive Programs

Engine Type	Size A Lvl (FP)	Size B Lvl (FP)	Size C Lvl (FP)
Chemical	1 (3)	2 (6)	3 (12)
Ion	3 (12)	4 (24)	4 (24)
Atomic	4 (32)	5 (64)	6 (128)

Drive Program Cost: 1,000Cr per Function Point.

Astrogation Program

Ship Type	Program Level	Function Points	Cost of Equipment	Cost of Program
Shuttle	1	3	1,000Cr	3,000Cr
System Ship	2	6	5,000Cr	6,000Cr
Starship	4	24	15,000Cr	24,000Cr
Deluxe	4	24	50,000Cr	24,000Cr

Life Support

Number Supported	Mass (kg) and Function Points	Cost of Equipment	Cost of Program
1-2	3 (1)	300 Cr	1,000 Cr
3-6	5 (2)	500 Cr	2,000 Cr
7-12	9 (2)	900 Cr	2,000 Cr
13-20	15 (2)	1,500 Cr	2,000 Cr
21-35	25 (3)	2,500 Cr	3,000 Cr
36-60	50 (3)	5,000 Cr	3,000 Cr
61-100	90 (3)	9,000 Cr	3,000 Cr
101-200	180 (4)	18,000 Cr	4,000 Cr
201-500	300 (4)	30,000 Cr	4,000 Cr
501-1,000	600 (4)	60,000 Cr	4,000 Cr

Engine Costs (price is per engine)

Hull Size	Engine Size	Chemical Drives Any Center	Ion Drives Class I Center	Ion Drives Class I Center	Atomic Drives Class I Center	Atomic Drives Class II Center
1 to 4	A	50,000 Cr	100,000 Cr	150,000 Cr	300,000 Cr	400,000 Cr
5 to 14	B	100,000 Cr	150,000 Cr	200,000 Cr	500,000 Cr	600,000 Cr
15 to 20	C	200,000 Cr	200,000 Cr	not available	750,000 Cr	not available

Programs

Alarm			Computer Lockout		Damage Control	
Level	FP	Cost	FP	Cost	FP	Cost
1	1	1,000Cr	1	1,000Cr	1	1,000Cr
2	2	2,000Cr	2	2,000Cr	4	4,000Cr
3	4	4,000Cr	4	4,000Cr	8	8,000Cr
4	8	8,000Cr	8	8,000Cr	16	16,000Cr
5	16	16,000Cr	16	16,000Cr	32	32,000Cr
6	32	32,000Cr	32	32,000Cr	64	64,000Cr

Other Programs	Level	Function Points	Cost
Mining Programs			
Excavation Program	2	4	4,000Cr
Processing Program (OPL)	4	12	12,000Cr
Processing Program (MR)	4	16	16,000Cr
Agricultural Program			
Agriculture Management	1	3	3,000Cr
Cargo Handling Program			
Cargo Arm Management	2	4	4,000Cr

Other Equipment	Cost	Space (Cubic Meters)
Communication & Detection		
Videocom Radio	1,000Cr	2
Videocom Screens	100Cr	0.5
Subspace Radio	20,000Cr	3
Intercom Panel	50Cr	1
Intercom Speaker / Mic	10Cr	0.5
Radar Unit	10,000Cr	5
Energy Sensor	200,000Cr	20
Porthole	50Cr	-
Camera System	25,000Cr	10
Camera Sys. (half-size)	15,000Cr	7
Skin Sensors*	1,000Cr	1
White Noise Broadcast	80,000Cr	10
WNB (deluxe)	400,000Cr	50
Decoy*	10,000Cr	4
Emergency Equipment		
Escape Pod	30,000Cr	16
Lifeboat	100,000Cr	80
Mining Equipment		
Digger Shuttle	8,000Cr + Shuttle	150
Orbital Processing Lab	100,000Cr	1,000
Mineral Refinery	200,000Cr	2,000
Agricultural Equipment		
Seeds	500 Cr	10xHS
Nutrient Solution	1,000 Cr	40xHS
Farming Robot	3,000 Cr	2xHS
Solar Collectors	4,000 Cr	10xHS
Cargo Handling Equipment		
Cargo Arms (per pair)	1,000Cr x HS	4xHS
Crew Accomodations		
First Class Cabin	1,000Cr	72
Journey Class Cabin	1,000Cr	32
Storage Class Berth	2,000Cr	4
Exploration/Research Equipment		
Atmoprobe	40,000Cr	3
Landing Drone	100,000Cr	25
Laboratory	100,000Cr	60
Remote Probe	100,000Cr	25

Weapon	Cost	MIN HS	Avail	Cubic Meter
Laser Cannon	15,000Cr	5	I,II	40
Laser Battery	10,000Cr	3	I,II	25
Proton Battery	15,000Cr	10	I	30
Electron Battery	15,000Cr	6	I	30
Disruptor Cannon	30,000Cr	12	I	60
Assault Rocket Launcher	20,000Cr	1	I,II	10
Assault Rocket (max HS 4)	10,000Cr	-	-	10
Rocket Battery Array	40,000Cr	5	I	40
Rocket Salvo	5,000Cr	-	-	10
Torpedo Launcher	40,000Cr	5	I	75
Torpedo	20,000Cr	-	-	20
Mine Spreader	50,000Cr	7	I	60
Mines	25,000Cr	-	-	20
Seeker Missile Rack	40,000Cr	7	I	40
Seeker Missile	30,000Cr	-	-	40
Grapples	25,000Cr	5	I	60
Laser Pod	8,000Cr	1	I,II	10

Weapon Programs	Program Level	Function Points	Cost
Laser Cannon	1	3	3,000Cr
Laser Battery	1	4	4,000Cr
Proton Beam Battery	2	8	8,000Cr
Electron Beam Battery	2	6	6,000Cr
Disruptor Beam Cannon	2	8	8,000Cr
Assault Rocket	1	4	4,000Cr
Rocket Battery	2	6	6,000Cr
Torpedo	1	3	3,000Cr
Mines	1	1	1,000Cr
Seeker Missile	3	9	9,000Cr
Laser Pod	1	3	3,000Cr

Defense	Cost (Cr)	MHS	Avail	Cubic Meters
Reflective Hull	500 Cr*	1	I,II,III	--
Masking Screen Launcher	10,000 Cr	4	I,II,III	10
Charge	1,000 Cr*	4	I,II,III	25
Electron Screen	2,000 Cr*	10	I	10xHS
Proton Screen	4,000 Cr*	12	I	12xHS
Stasis Screen	3,000 Cr*	10	I	10xHS
ICM Launcher	20,000 Cr	5	I,II	10
ICM	2,000 Cr	-	-	5

Defense Programs	Program Level	Function Points	Cost
Reflective Hull	NA	NA	--
Masking Screen	NA	NA	--
Electron Screen	2	6	6,000Cr
Proton Screen	2	8	8,000Cr
Stasis Screen	3	12	12,000Cr
Interceptor Missile	3	12	12,000Cr

* Multiply these costs times the ships Hull Size.

SPACE STATION TYPE CHART

Station Type	Ship Types
Type 1	1-6
Type 2	1-10
Type 3	1-14
Type 4	1-18
Type 5	Any
Type 6	Any

CONSTRUCTION CENTER LOCATION CHART

System (Planet)	Center Class	# of Type VI Hulls
Araks (Hentz)	Class II	3
Cassidine (Rupert's Hole)	Class III	1
Cassidine (Triad)	Class I	6
Dramune (Outer Reach)	Class III	1
Fromeltar (Terledrom)	Class II	4
Prenglar (Gran Quivera)	Class I	8
Theseus (Minotaur)	Class II	3
Truane's Star (Pale)	Class III	1
White Light (Gollywog)	Class III	1

STARSHIP BREAKDOWN CHART

Roll	Breakdown	Repair Time (Days)
2	Reactor meltdown; engines will explode in 1d10 minutes, must repair or be jettisoned.	No repair possible
3	Life support failure; characters must wear spacesuits until repaired.	1d10
4	Radar failure.	1d10
5	Drive program falters, all engines shut down.	1d10 per engine
6-7	One engine hyper-ignites; replace fuel pellet.	standard
8	Astrogation program fails, no jumps possible until repaired.	2d10
9-10	Computer burnout, cannot use drives or life support until repaired.	2d10
11-12	Communication system failure.	1d10
13	Maneuver jets clogged, lose entire MR.	1d10
14-15	Short circuit causes fire; roll on damage table with +20 modifier. DCR every 10 minutes until repaired.	DCR
16-20	Collision with meteor, roll on damage table with -20 modifier.	DCR*

* Any failed repair roll (not just 99 or 00) means that the damage must be repaired at an SCC.

Spaceship Skill	Basic Skill Level Required
Piloting	Technician 6, Computer 2
Astrogation	Computer 6
Engineering	Technician 4, Robotics 2
Rocket Weapons	Projectile Weapons 4, Gyrojet Weapons 2
Energy Weapons	Beam Weapons 6

SPACESHIP SKILL COST CHART

	Piloting	Astrogation	Engineering	Gunnery
Level 1	10	8	8	6
Level 2	20	16	16	12
Level 3	40	36	36	20
Level 4	70	60	60	30
Level 5	100	80	80	50
Level 6	150	120	120	75

Pilot's Level	Ship Types Qualified to Pilot
1	System Ships of all sizes
2	Starships of hull size 3 or smaller
3	Starships of hull size 6 or smaller
4	Starships of hull size 12 or smaller
5	Starships of hull size 15 or smaller
6	All starships

Engineer's Level	Ship Qualified to Design
1	Shuttles of all types
2	System ships of all types
3	Starships of hull size 3 or smaller
4	Starships of hull size 6 or smaller
5	Starships of hull size 15 or smaller
6	Starships of all sizes

GUNNERY SKILL COVERAGE CHART

Skill	Weapons Covered
Energy Weapons	Laser Cannons, Laser Batteries, Proton Beam Batteries, Electron Beam Batteries, Disruptor Beam Cannons
Rocket Weapons	Torpedoes, Assault Rockets, Rocket Batteries

SPACESHIP SKILL SUMMARY CHART

Skill	Success Rate
Piloting Skills	
Evasion	Modifier +3% per level
Increase Accuracy	Modifier +5% per level (to FF weapons only)
Increase Maneuverability	70% + level
Astrogation Skills	
Plot Interstellar Jumps	100%
Risk Jumping	10%xlevel + 10% per hour
Find Location	30% + level
Chart New Routes	50% + level - 5%xLYs
Engineering Skills	
Ship Design	100%
Damage Control	Modifier +10% per level
Stress Analysis	Modifier -5% per level to breakup chance
Gunnery Skills	
Energy Weapons	
Improve Accuracy	Modifier: +5% per level
Selective Targeting	Modifier -30%
Rocket Weapons	
Improve Accuracy	Modifier: +5% per level
Selective Targeting	Modifier -30%

SPACESUITS & ACCESSORIES

Item	Cost
Spacesuit (except Vrusk)	1,000Cr
Spacesuit (Vrusk)	1,500Cr
Spacesuit Life Support Refill	50Cr
Spacesuit Armor	1,000Cr
Rocket Pack (no fuel)	2,000Cr
Rocket Pack Fuel	50Cr
Magnetic Shoes (pair)	100Cr
Velcro Boots	50Cr
Additional Life Support Pack	500Cr
Extra Patches (2)	50Cr

TOOLS

Item	Cost
Engineer's Toolbox	2,500Cr
Laser Powertorch	5,000Cr
Laser Powertorch Powerpack	500Cr

SPACE VEHICLES

Item	Cost	Cubic Meters
Launch (4 passengers)	75,000Cr	20
Launch (10 passengers)	100,000Cr	50
Workpod	75,000Cr	30

SPACEFLEET RANK TABLE

Rank	Experience Points Needed	Daily Pay (Cr)
Junior Lt.	Graduate from Academy	75
Lieutenant	50	100
Fleet Lt.	100	140
Commander	150	180
Space Commander	200	250
Commodore	250	300
Rear Admiral	350	350
Admiral	500	400
Fleet Admiral	1,000	500

CHARACTER WAGES FOR SPACESHIP SKILLS

Skill	----- SKILL LEVEL -----					
	1	2	3	4	5	6
Piloting	150	175	200	225	250	300
Astrogation	120	140	160	180	210	240
Engineering	120	140	160	180	210	240
Rocket Weapons	100	120	150	175	200	225
Energy Weapons	100	120	150	175	200	225

Wages are in Credits Per Day

Crew	Skill Summary
Pilot:	Evasion = -3% \times Skill Level Improve FF Accuracy = +5% \times Skill Level Increase MR = 5% \times Skill Level per turn
Gunner	Increase Accuracy = 5% \times Skill Level
Engineer	Damage Control=DCR+10% \times Skill Level Stress Analysis = -5% \times Skill Level

WORKPOD FREQUENCY CHART

Ship Type	Likelihood of Pod aboard
Agriculture Ship	80% (25%)
Exploration Ship	50%
Freighter	80% (50%)
Militia Vessel	60%
Mining Ship	95% (80%)
Pirate Vessel	40% (5%)
Scientific Research Ship	95% (50%)
Space Station	100%*
Spaceliner	15%

* Space stations have 1d10 workpods

LAUNCH MALFUNCTION CHART

Die Roll	Occurrence
1-6	Engines fail to start, begin procedure again
7-9	Engines start but begin to sputter; land immediately within 10km of launch site.
0	Engines work for 2d10 turns and suddenly fail; bail out before ship crashes!*

* A ship that crashes is demolished.

SPACESUIT PUNCTURE DIAMETER CHART

Weapon	Diameter of puncture (cm)	Auto-seal
Electrostunner	0	--
Pistol bullet	1	100%
Needler weapon	1	100%
Fragmentation grenade	2 (=d10 holes)	75%
Gyrojet pistol	2	75%
Laser pistol	2	75%
Laser rifle	2	75%
Machine gun bullet	2	75%
Rifle bullet	2	75%
Gyrojet rifle	3	50%
Heavy laser	3	50%
Laser powertorch	3	50%
Knife	1d5	varies
Sword	1d5+2	varies
Spear	1d10	varies
Vibroknife	1d10	varies
Electric Sword	1d10+2	varies

CASTAWAY SURVIVAL CHART

Character is in:	Modifier to Survival Roll
Spacesuit Armor	+10%
Launch	+20%
Escape Pod	+20%
Lifeboat	+25%
Work Pod	+30%

STRUCTURAL POINTS OF SPACESHIPS CHART

Ship System Component	Structural Points
Hatch	200+1d100
Hull Sections	200+2d100
Control Panel	100+1d100
Battery Weapon	300+2d100
Cannon	500+2d100
Engine (Size A)	2d10x100
Engine (Size B)	5d10x100
Engine (Size C)	5d10x200

WEAPONS VS. ARMOR CHART

Weapon type	Effect of Armor
Axe, Knife, Club, etc.	Cannot penetrate armor
Gas Grenades	Cannot penetrate armor
Needlers	Cannot penetrate armor
Sonic Weapons	Cannot penetrate armor
Spear, Sword	70% protection
Bullets	65% protection
Laser Weapons	50% protection
Fragmentation Grenades	35% protection
Gyrojet Rockets	35% protection
Electric Sword	30% protection
Vibroknife	25% protection
Electrostunner	Full penetration
Shock Gloves	Full penetration
Stunstick	Full penetration
Tangler Grenade	Full penetration

SPACESHIP SECURITY CHART

Ship Type	Lock Level	Security System and Level
Spacefleet (1-14)	5	Heat Sensitive (5)
Spacefleet (15-20)	6	Heat Sensitive (5)
Militia	4	Sound Sensitive (3)
Pirate	5	Video (4)
Spaceliner (6-12)	3	Sound Sensitive (3)
Spaceliner (13-15)	5	Video (4)
Freighter	4	Sound Sensitive (3)
Shuttle	2	Mechanical (1)
Research Ships	2	Pressure Sensitive (2)
Agriculture Ships	1	Mechanical (1)
Mining (8-12)	5	Video (4)
Mining (13-20)	6	Heat Sensitive (5)
Exploration	3	Sound Sensitive (3)

AVERAGE NPC LEVELS

Organization	Pilot	Gunner	Engineer
UPF Spacefleet	4	3	4
Sathar Attack Vessels	2	1	1
Pirate and Planetary Militia Ships	3	2	2
Civilian Ships	4	0	3

SPACELINER BOOKINGS CHART

----- Destination Population -----				
Start Pop.	Heavy	Moderate	Light	Outpost
Heavy	80+2d10	70+3d10	60+4d10	10+4d10
Moderate	60+4d10	60+4d10	40+3d10	10+3d10
Light	40+6d10	30+6d10	20+4d10	10+1d10
Outpost	20+8d10	20+4d10	20+2d10	0+1d10

SPACELINER HAZARDS CHART

Roll	Hazard
01-02	Hijacking attempt by passengers
03	Pirates attack
04-05	Drive problems; repairs will take (2d10-engineer's skill level) days.
06	Renegade Sathar Frigate
07-00	Safe and pleasant voyage.

CARGO ACQUIRED AT INDUSTRIAL CENTERS

Roll	Type of Cargo	At Source	At Destination
01-07	Air Cars	20,000Cr	45,000Cr
08-16	Chemicals*	20,000Cr	40,000Cr
17-23	Computers*	60,000Cr	120,000Cr
24-27	Drones	35,000Cr	90,000Cr
28-30	Explorers	40,000Cr	100,000Cr
31-38	Farming Equipment	20,000Cr	35,000Cr
39-46	Generators	30,000Cr	80,000Cr
47-51	Ground Cars	20,000Cr	40,000Cr
52-54	Hand Weapons*	80,000Cr	120,000Cr
55-59	Hovercraft	30,000Cr	50,000Cr
60-64	Jetcopters	30,000Cr	75,000Cr
65-70	Lab Equipment	30,000Cr	75,000Cr
71-75	Medical Equipment	50,000Cr	75,000Cr
76-78	Parabatteries	25,000Cr	70,000Cr
79-87	Plastics	15,000Cr	25,000Cr
88-92	Robots*	40,000Cr	100,000Cr
93-96	Ship Drives*	50,000Cr	80,000Cr
97-00	Tools	25,000Cr	40,000Cr

CARGO ACQUIRED AT RESOURCE CENTERS

Roll	Type of Cargo	At Source	At Destination
01-07	Aluminum	50,000Cr	70,000Cr
08-11	Copper	15,000Cr	25,000Cr
12-13	Diamonds*	400,000Cr	600,000Cr
14-18	Gold*	200,000Cr	300,000Cr
19-28	Iron	20,000Cr	25,000Cr
29-33	Magnesium*	70,000Cr	100,000Cr
34-36	Mercury	40,000Cr	75,000Cr
37-39	Molybdenum	60,000Cr	75,000Cr
40-42	Nickel	40,000Cr	55,000Cr
43-44	Platinum*	80,000Cr	120,000Cr
45-46	Plutonium*	100,000Cr	150,000Cr
47-54	Quartz Crystals	40,000Cr	60,000Cr
55-56	Rubies*	250,000Cr	400,000Cr
57-66	Salt	20,000Cr	30,000Cr
67-70	Silver*	80,000Cr	120,000Cr
71-74	Titanium*	75,000Cr	100,000Cr
75-77	Tungsten	50,000Cr	75,000Cr
78-80	Uranium*	100,000Cr	150,000Cr
81-82	Vanadium	80,000Cr	100,000Cr
83-96	Water / Ice	30,000Cr	40,000Cr
97-00	Zircon	30,000Cr	45,000Cr

* This cargo is "high risk" material; see Risks.

FREIGHTER HAZARD CHART

Roll	Hazard Encountered
01-02	Attacked by pirates in frigate or two assault scouts
03	Crew mutinies unless captain passes Leadership check
04-05	Drive trouble; engineer needs 1d10 days to repair
06-08	Searched and harassed by local militia at destination
09-00	Save and uneventful voyage

MINERAL PRESENCE TABLE

Roll	Minable Resources
1-5	1
6-8	2
9-10	3

RAW MATERIAL CHART (MINERAL MINING)

Roll	Material	Ore/Unit	Process Time
01-10	Aluminum	4,000	4d10
11-18	Copper	1,500	1d10
19	Diamonds	20,000	12d10
20	Emeralds	25,000	14d10
21	Gold	1,000	2d10
22-36	Iron	1,000	1d10
37-43	Magnesium	5,000	4d10
44-48	Mercury	500	2d10
49-53	Molybdenum	4,000	5d10
54-59	Nickel	4,000	3d10
60-65	Platinum	3,000	4d10
66-67	Plutonium	2,000	4d10
68-75	Quartz Crystals	1,500	2d10
76-77	Rubies	25,000	12d10
78-79	Silver	1,000	2d10
80-87	Titanium*	8,000	6d10
88-90	Tungsten	4,000	2d10
91-92	Uranium*	1,500	3d10
93-94	Vanadium	5,000	2d10
95-00	Zircon	2,000	5d10

MINING HAZARD TABLE

Roll	Hazard
01-04	Pirates - One frigate or two assault scouts are used to attack the operation in an attempt to steal the concentrate.
05-10	Corporate thugs - Either Streel Corp. or the PGC sends two assault scouts with armed landing parties to disrupt the operation
11-19	Processing plant breakdown - technician needs 2d10 days minus skill level to repair
20-30	Wildcatters - independent miners set up an operation nearby; they will fight if their work is interfered with.
31-00	No event this week.