

PLAYERS' CHARTS AND TABLES

This set of Charts and Tables for use with *Universe* is provided for the use of the players. A complete set of all Charts and Tables, for the exclusive use of the gamesmaster, can be found beginning on page 48 of this book.

To use this set of Charts and Tables, players may make photocopies for their personal use (only), either directly from the book, or after cutting carefully along the dashed lines.

[5.1] CHARACTER HERITAGE Potential Multiplier and Study Points

DIE	POTENTIAL MULTIPLIER	SUM OF POTENTIAL MULTIPLIERS	STUDY POINTS RECEIVED
1	½ (Poor)	4 or fewer	6
2-3	1 (Below Average)	4½ to 6½	5
4-6	2 (Average)	7 to 9½	4
7-9	3 (Above Average)	10 to 11½	3
10	4 (Exceptional)	12 or more	2

To determine potential multiplier for physique, coordination, intellect, and social background, roll one die and locate the result under "Potential Multiplier." After all four potentials are determined, add all four multipliers together to determine how many Study Points the character receives under the "Study Points Received" column.

[5.3] HABITAT TABLE

SECOND DIE ROLL
PLUS PHYSIQUE POTENTIAL
MINUS COORDINATION POTENTIAL

	FIRST DIE RESULT									
	1	2	3	4	5	6	7	8	9	10
-3	4:HL-VO NW-HO	6:SF HY-NL	4:FL-CR LT-NL	4:HL-IC NW-NL/1	2:HL-CR NW-NL/2	2:HL-CR HY-NL/2	3:FL-CR LT-NL/1	2:HL-BN HY-CD/2	4:FL-MA HY-NL/1	3:HL-IC NW-NL/3
-2	3:HL-WD LT-NL/1	4:HL-LV NW-NL	4:FL-CR NW-CD/1	3:FL-BN LT-HO/1	4:SF LT-NL/4	2:HL-CR HY-NL/1	3:HL-FT LT-NL/1	4:MN-VO NW-HO/1	3:HL-VO LT-HO/1	2:HL-WD LT-HO/4
-1	4:HL-JU EX-NL	6:FL-LV NW-HO	3:HL-WD LT-NL	3:HL-LV HY-NL/1	4:HL-IC HY-CD/1	2:HL-WD LT-NL/1	4:FL-BN LT-CD	3:PK-WD LT-NL/1	3:MN-LV LT-NL/1	5:SF LT-NL/2
0	5:FL-IC HY-NL	3:HL-CR HY-NL/1	3:FL-JU LT-HO/1	3:HL-VO NW-CD/1	2:MN-LV NW-NL/2	3:MN-CR HY-NL/1	3:MN-WD HY-NL/1	3:FL-WD LT-NL/1	3:MN-VO HY-NL/2	3:HL-VO LT-NL/2
1	4:MN-WD HY-NL	3:MN-LV HY-NL/1	4:PK-FT HY-HO	5:FL-IC HY-CD	2:HL-BN EX-NL/2	4:FL-WD EX-NL	3:HL-BN LT-HO	3:HL-JU LT-NL/2	3:MN-FT LT-NL/1	2:FL-JU HY-NL/3
2	4:MN-WD HY-NL	6:SB HY-NL	3:HL-LV HY-HO/1	2:MN-BN LT-HO/1	4:FL-BN LT-NL/1	2:FL-LV LT-NL/1	2:FL-LV LT-NL/1	3:MN-FT HY-NL/1	4:FL-WD HY-CD/1	3:MN-CR NW-HO/3
3	5:MN-JU EX-NL	4:HL-LV LT-NL	4:HL-JU HY-HO	3:HL-BN NW-NL/1	6:FL-IC EX-CD	5:IN HY-NL	4:FL-MA HY-NL/2	2:MN-LV LT-NL/1	4:FL-IC HY-NL/1	2:HL-CR LT-NL/2
4	5:HL-IC LT-NL	4:FL-WD HY-HO	2:MN-BN LT-NL/1	4:HL-WD LT-NL	3:FL-CR LT-NL/1	3:FL-WD HY-NL/1	2:HL-BN LT-HO/2	3:HL-LV LT-NL/1	4:MN-VO EX-CD/2	2:HL-LV HY-NL/1
5	4:HL-LV HY-NL	4:FL-BN HY-NL	3:HL-WD LT-NL/1	5:FL-IC HY-NL	3:HL-CR HY-CD/1	5:IN LT-NL/1	3:HL-VO HY-NL/1	2:FL-LV EX-HO/3	3:MN-WD EX-NL/2	1:HL-WD HY-NL/4
6	4:FL-LV HY-CD	4:FL-LV LT-HO	4:PK-LV HY-NL	4:IN LT-NL/1	3:PK-BN HY-HO/1	3:FL-FT LT-CD/2	3:MN-VO EX-NL/1	3:FL-JU HY-HO/1	5:FL-MA EX-HO/2	2:FL-LV NW-HO/4
7	4:MN-WD LT-HO	3:HL-VO LT-NL/1	4:MN-FT HY-NL	2:FL-WD HY-HO/1	3:SB EX-NL/3	3:HL-FT HY-NL/1	3:MN-FT LT-NL/2	3:PK-LV HY-NL/1	3:HL-JU LT-HO/2	2:HL-CR LT-HO/4
8	4:FL-BN HY-NL	4:MN-FT HY-NL	3:FL-FT HY-NL/1	3:MN-FT HY-NL/1	4:HL-WD EX-HO	3:FL-FT LT-CD/1	4:FL-IC HY-NL/1	4:HL-FT EX-CD/1	2:HL-CR HY-NL/1	1:HL-LV HY-NL/2
9	5:SB EX-NL	3:HL-WD HY-NL	4:HL-LV LT-HO	3:HL-LV HY-HO/1	4:FL-IC HY-NL/1	4:FL-IC LT-NL/1	4:SF HY-NL/1	4:MN-JU EX-NL/1	3:HL-VO HY-HO/1	3:HL-FT HY-NL/1
10	5:FL-MA EX-NL	4:FL-JU LT-NL	4:HL-JU LT-HO	4:HL-LV LT-HO	3:FL-WD LT-NL/1	2:MN-LV LT-NL/1	3:HL-WD LT-HO	3:MN-FT NW-NL/1	4:HL-FT EX-HO/2	2:MN-BN HY-NL/2
11	4:FL-JU LT-NL	4:FL-WD HY-CD	3:HL-BN LT-CD/1	4:FL-BN HY-CD	3:HL-FT EX-NL/1	4:MN-LV HY-NL	3:PK-BN LT-NL/1	3:FL-WD LT-CD/1	2:HL-CR EX-NL/2	1:FL-LV LT-CD/3
12	3:HL-BN HY-NL	5:MN-FT EX-CD	3:HL-CR HY-NL/1	3:MN-CR HY-HO/1	5:FL-CR EX-CD	4:FL-WD LT-NL	3:FL-FT HY-HO/1	3:HL-FT LT-CD/1	4:HL-FT EX-HO/1	2:FL-CR LY-CD/3
13	4:MN-CR HY-NL	3:MN-BN LT-NL	3:PK-CR LT-CD/1	3:FL-BN EX-NL/1	4:FL-MA EX-NL/1	3:PK-CR HY-HO/1	2:MN-BN EX-NL/2	4:MN-JU HY-NL/1	2:HL-BN HY-NL/1	3:FL-MA HY-HO/4
14	3:MN-LV EX-NL/1	4:MN-BN EX-NL	4:MN-FT EX-NL	3:MN-VO EX-NL/1	2:HL-WD HY-HO/1	3:HL-LV EX-NL/1	4:HL-VO EX-NL/1	2:FL-LV LT-NL/1	3:FL-WD HY-NL/2	3:FL-LV EX-HO/1

Environ Skill Level: Contour-Feature
Gravity-Temperature/Urban Skill Level (if any)

All abbreviations are explained in the Environ, Gravity, and Temperature sections of Character Record. See 5.2 for explanation of use.

[5.7] SOCIAL STANDING TABLE

MODIFIED DIE RESULT	SOCIAL STANDING	WEALTH: ONE DIE TIMES...	INITIAL SKILL POINT MODIFIER
-1 or less	Unfostered orphan	1 Mil	+3
0	Oppressed minority	10 Mils	0
1-2	Poor colonist family	10 Mils	+1
3	Family fallen on hard times	100 Mils	+1
4	Communal colony	10 Mils	+2
5-7	Lower middle class family	100 Mils	0
8-10	Skilled tech family	1 Tran	+1
11-13	Local establishment (business or farm run by family)	1 Tran	-1
14-15	Independent trading family	10 Trans	+2
16-17	Family runs planetary corp	10 Trans	-1
18	Family dominates planet	100 Trans	-2
19	Family dominates star system	100 Trans	-2
20	Family influences entire federation	200 Trans	-3
21	Wealthy dilettante	200 Trans	-4

See 5.6 for explanation of use.

**[6.6] CHARACTERISTIC
GENERATION TABLE**

PERCENTILE DICE RESULT + MODIFIER	CHARACTERISTIC RATING
7 or less	1
8-15	2
16-24	3
25-34	4
35-57	5
58-83	6
84-96	7
97-108	8
109-119	9
120-129	10
130-139	11
140 or more	12

When generating the Mental Power Rating, divide rating by 2 (rounding fractions down). An Agility Rating of less than 5 is considered a 5. See 6.4 for explanation of use.

[5.8] INITIAL SKILL POINTS

IF THE MODIFIED RESULT IS...	THE CHARACTER RECEIVES...
0 or less	1 Initial Skill Point
1-3	2 Initial Skill Points
4-6	3 Initial Skill Points
7-9	4 Initial Skill Points
10 or more	5 Initial Skill Points

Roll one die and add the Initial Skill Point Modifier (listed with character's social standing on the Social Standing Table) to the die result.

**[7.8] PROFESSION
TABLES****Employment Table**

DIE	DECLARED YEARS OF EMPLOYMENT				
	4	8	12	16	20
1-2	4	4	8	12	12
3-5	4	8	8	12	16
6-8	4	8	12	12	16
9-10	4	8	12	16	20

A character in the thinker or colonist profession does not use this table. See 7.3 for explanation.

Effects of Age Table

DIE + AGE	PHYSICAL CHARACTERISTIC POINTS LOST
34 or less	0
35, 36	1
37, 38	2
39, 40	3
41, 42	4
43, 44	5
45, 46	6
47 or more	7

See 7.4 for explanation.

**[6.5] CHARACTERISTIC
MODIFIER CHART**

CHARACTERISTIC► FIELD OF STUDY	STRENGTH	ENDURANCE	DEXTERITY	AGILITY	INTELLIGENCE	MENTAL POWER	LEADERSHIP	EMPATHY	AGGRESSION
Theoretical Science	0	0	0	0	8	2	0	0	0
Applied Science	0	0	4	0	8	0	0	0	0
Business	0	0	0	0	0	0	2	4	0
Humanities	0	0	0	0	6	2	0	4	-15
The Mind	0	2	0	0	4	6	0	0	-25
The Body	8	4	4	4	0	0	0	0	+15
The Military	4	5	0	4	0	0	5	0	+25
General	1	1	1	1	1	1	1	1	0
TOTAL CALCULATED IN ABOVE COLUMN IS MULTIPLIED BY THESE POTENTIALS►	PHYSIQUE COORDINATION	PHYSIQUE COORDINATION	INTELLECT	PHYSIQUE COORDINATION	INTELLECT	INTELLECT	INTELLECT, SOCIAL BACKGROUND	INTELLECT	

Modifiers are applied to the percentile dice roll for the listed characteristic if the character studied the listed field. All applicable modifiers for a single characteristic are added together. Then the total is multiplied by the Potential Multipliers that apply to that characteristic. See 6.4 for further explanation.

Skill Point Table

MODIFIED DIE RESULT	YEARS OF EMPLOYMENT				
	4	8	12	16	20
2-5	1	4	6	7	7
6-9	2	5	7	8	8
10-13	2	6	8	9	10
14-17	3	6	8	10	11
18-21	3	7	9	11	12
22-26	4	7	10	12	14
27-32	4	8	11	13	15

Roll one die and add the character's Intelligence Rating and the Skill Point Modifier for his profession to the die result. See 7.5 for explanation of use.

Benefits Table

1 DIE + ACTIVE YEARS IN PROFESSION	BENEFIT LEVEL
5-10	A
11-14	B
15-18	C
19-23	D
24-28	E
29-30	F

Explanation of each result is listed in appropriate profession. See 7.7 for explanation of use.

SKILL SUMMARY

Skill: How the skill is used. *Related equipment/EP gain.*

MILITARY SKILLS

Ambush: BC + AY + Battlefield SL + Environ SL + SL² – (enemy Environ SL + enemy Battlefield SL²).

T► Move secretly, enemy unaware: (15 × Terrain Value)%

T► Move secretly, enemy aware: (5 × Terrain Value)%

T► Close combat, enemy unaware: 30%

T► Ranged fire, enemy unaware: 50%

None/0, 1.

Artillery: BC – 1 per 100 meters distance from target + IN + SL².

Mounted Gun/0, 1.

Battlefield: Initiative = Die Roll + SL (doubled if NPC);

Willpower Check = May use SL instead of Mental Power;

Encounter = SL modifies Awareness Check (see 28.2).

None/0 (Initiative roll only), GM assigns point for successful battle plan.

Blades: Close Combat Strength = DX or AY + SL² + Weapon Hit Strength
Thrown Weapon BC + DX + SL².

Dagger or sword/0.

Body Armor: All EVA attributes included in this skill; ability to use

augmented body armor (see 29.2);

Close Combat Strength = ST + Hit Strength of Armor + SL².

Protective Attire/0, 1 (accident); 0 (close attack).

Demolitions: BC + DX + SL². *Explosives*/0, 1, 2.

EVA: Encumbrance Rating of attire is reduced by SL (26.4, 29.2);

Avoid a Suit/Armor Accident = BC + AY + SL².

Protective Attire/0, 1 (accident).

Jet Pack: Avoid a Jet Pack Accident = BC + AY + SL² (27.8, 29.3).

Jet Pack/0, 1 (accident).

Unarmed Combat: Close Combat Strength = DX or AY + SL²

(reduce Level by 1 when fighting a creature). *None*/9, 0.

Arc Gun: BC + DX + SL². *Arc Gun*/0.

Bows: BC + DX + SL².

Short Bow, Long Bow, or Cross Bow/0.

Handguns: BC + DX + SL².

Pistol, Needle Pistol, Laser Pistol, or Stun Pistol/0

Grenades: BC + DX + SL² + (ST, when throwing great distance).

Any grenade type/0.

Laser/Stun Pistol: BC + DX + SL². *Laser or Stun Pistol*/0.

Longarms: BC + DX + SL².

Musket, Carbine, or Needle Rifle/0.

Machine Guns: BC + DX + SL².

Submachine Gun or Emplaced Machine Gun/0.

Paint Gun: BC + DX + SL². *Paint Gun*/0.

Gunnery: See 9.2.

Burster, Hunter Pod, Weapon Pod, or Arsenal Pod/1.

Missile Guidance: See 9.2.

Hunter Pod, Weapon Pod, or Arsenal Pod/see 9.2.

Pilot: See 9.2.

Spaceship, Shuttle, or Battlecraft/see 9.2.

Space Tactics: See 9.2.

Spaceship/see 9.2.

PSIONIC SKILLS

Life Sense: SL subtracted from awareness chance during encounter.

T► Perception of a creature's IN is 20% + SL².

None/9 (awareness), 0 (perception).

Mind Control: 10% + MP + SL² – target's MP².

Psionic Rig increases range/0, 1.

Navigation: Successful Jump Chance = SL² + MP² + (10 × Starport Class)
– distance in Light Years.

Spaceship with hyperjump engine; Standard Jump Pod (+1);

Augmented Jump Pod (+2)/0, 1, 2, 3.

Psionic Communications: Communication Chance = 10% +
MP + SL² + receiver's MP + receiver's SL².

Psionic Rig increases range/0.

Psionic Boost: 25% + MP + SL². *Psionic Rig (+2)*/0.

Psychokinesis: BC = 10% – World Size + MP + SL².

Psionic Rig increases effectiveness/0.

Psion Tech: BC + IN² + SL².

Electrokit (increases Skill Level; see 22.0)/0, 1, 2.

ALL VEHICLE SKILLS

BC to avoid accident (25%, 50%, or 75%) + Vehicle Performance
Modifier + DX + Sub-SL².

See 11.0/0, 1 (accident check or after 30 hours driving).

SCIENTIFIC SKILLS

All: BC + IN + SL².

Astronomy:

T► Locate unexplored planet (when in system space): 90%.

T► Locate uncharted planet (when in system space): 70%.

T► Locate own position after minor jump error: 60%; after major

jump error: 40%; after randomized jump: 20%.

Spaceship, Civ Level 8 Spaceship (+8), Explorer Pod (+1), Survey Pod

(+2)/0, 1, 2, 3.

Biology: SL is reduced by 2 when dealing with non-carbon based
life (to a minimum of 1).

T► Perceive during a creature encounter: 10%.

T► Perceive with a bioscanner: 20%.

T► Examine with a bioscanner (requires one hour): 30%.

Civ Level 7 Bioscanner, Civ Level 8 Bioscanner (+1), Medical Pod (+1),

Explorer Pod (+2), Robot Biosystem (+2), Bio Research Pod (+3)/0, 1.

Chemistry:

T► Find abundant chemicals: 70%.

T► Find abundant and trace chemicals and complex compounds: 25%.

T► Synthesize simple compound: 20%.

T► Synthesize complex compound: –5%.

Civ Level 5 Chem Lab, Civ Level 6 Chem Synthesizer, Explorer Pod,

Civ Level 7 Chem Lab (+1), Bio Research Pod (+1), Civ Level 8 Chem

Synthesizer (+2), Robot Chemical System (+2)/0, 1.

Diagnosis:

T► Diagnose ailing being: 90% – (3 × number of hits patient received).

If result is above Chance, diagnosis has failed; 0 to 20 less, successful

diagnosis; 21 to 40 less, successful and treatment SL +1; 41 to 70 less,

successful and treatment SL +2; 71 or more less, successful

and treatment SL +3.

First Aid Kit, Spaceship, Civ Level 6 Mediscanner (+1), Bio Research

Pod (+1), Civ Level 8 Mediscanner (+2), Medical Pod (+3), Robot

Medical System (+3)/0, 1, 2.

Geology:

T► Find abundant minerals and resources: 70%.

T► Find abundant and trace minerals and resources: 30%.

T► Scan for three minerals or resources with a geoscanner: 60%.

T► Scan for all tunnels and fissures 3 meters or more wide: 50%.

T► Scan for volcanic activity: 60%.

T► Scan for all tunnels and fissures: 20%.

Geo Lab, Civ Level 6 Geoscanner, Explorer Pod, Bio Research Pod

(+1), Civ Level 8 Geoscanner (+2), Robot Geo System (+2)/0, 1.

Physics:

T► Determine type, intensity, danger of energy with energy scanner: 80%.

T► Determine energy powering device or non-protein creature: 70%.

T► Determine energy or force type which caused result: 50%.

T► Determine possible effect of energy or force beforehand: 40%.

T► Tap an energy source: 20% (use lower of Physics or Energy Tech SL).

Energy Scanner, Explorer Pod, Bio Research Pod (+1)/0, 1, 2.

Planetology:

T► Determine hydrograph % and locate land and liquid masses: 85%.

T► Determine temperature of environs: 75%.

T▶ Determine atmosphere: 65%.
T▶ Determine general resources: 50%.
T▶ Determine contours: 40%.
T▶ Determine dominant feature by environ: 20%.
T▶ Determine general resources of environs: 10%.
T▶ Determine detailed geography and geology of all environs including sites: -5%.
 Survey or Explorer Pod needed for task with 40% or less BC.
 Survey Pod needed for task with 10% or less BC. A single dice roll applies to the chosen task and all tasks with a higher %.
Spaceship with at least 4 pod capacity, or with Explorer Pod (+1), or with Survey Pod (+3)/0, 1, 2, 3.

Programming: Skill reduced by 2 with a robot (to a minimum of 1).

T▶ Gain control of robot without controller: 30% (requires Electrokit or Robot Kit).
T▶ Call up unrestricted information in a computer: 90%.
T▶ Call up restricted information in a computer: 30%.
T▶ Call up top-level secrets in a computer: 10%.
T▶ Alter protected computer information: 10%.
Computer or Robot/0, 1, 2.

Treatment:

T▶ Treat an ailing being: 1%.
See Diagnosis and 12.3/0, 1, 2.

TECHNICAL SKILLS

All: BC+IN²+SL²/0, 1, 2.

Compu/Robot Tech: -2 to Skill Level when repairing robots.
Basic Repair Kit, Civ Level 7 Electrokit (for computers, +1), Civ Level 8 Electrokit (for computers, +2), Robot Kit (+1), Robot and Equipment Pod (+3).

Construction: See 13.0.

Electro Tech: -2 to Skill Level when repairing Civ Level 8 item.
Basic Repair Kit, Civ Level 7 Electrokit (+1), Civ Level 8 Electrokit (+2), Robot and Equipment Pod (+3), Radio.

Energy Tech: See 13.0.

Spaceship Tech: -2 to Skill Level when repairing spaceship engine or armor.
Civ Level 6 Spaceship Kit (superficial damage), Civ Level 7 Spaceship Kit (light damage, +1), Civ Level 8 Spaceship Kit (heavy damage, +2).

Suit Tech: -2 to Skill Level when repairing armor.
Basic Repair Kit, Suit Kit, Civ Level 7 Armor Kit (+1), Civ Level 8 Armor Kit (+2), Robot and Equipment Pod (+3).

Vehicle Tech: -2 to Skill Level when repairing military or air vehicle, or armor on any vehicle.
Basic Repair Kit, Civ Level 6 Vehicle Kit (+1), Civ Level 7 Armor Kit (+1), Civ Level 8 Vehicle Kit (+2), Civ Level 8 Armor Kit (+2), Robot and Equipment Pod (+3).

Weapon Tech: -2 to Skill Level when repairing artillery and spaceship weapons.
Basic Repair Kit, Civ Level 6 Weapon Kit (+1), Civ Level 8 Weapon Kit (+2), Robot and Equipment Pod (+3), Spaceship Kit required to repair spaceship weapons.

INTERPERSONAL SKILLS

Diplomacy: Used for communications tasks; see 14.0.
None/0, 1, 2.

Disguise: BC+DX+SL².

T▶ Disguise to gain anonymity: 60%.
T▶ Disguise to resemble extensively observed person: 40%.
T▶ Disguise to resemble person briefly seen or in pictures only: 25%.
Disguise materials/0, 1, 2.

Economics: Price prediction requires 12 hours.

T▶ Determine price of an item: 35% - number of future weeks predicted +IN+SL².

Business Computer, Computer time, Interstellar Commlink/0, 1, 2.

Forgery/Counterfeiting: BC+DX+SL².

T▶ Forge commercial document: 50%.
T▶ Forge world or local government document: 30%.
T▶ Forge Federal document: 10%.
T▶ Counterfeit 100 Mil note: 10%.

T▶ Counterfeit 1 Tran note: 0%.
None/0, 1, 2, 3.

Gambling: BC+IN+SL².

T▶ Gamble at casino/gambling house: 35%, minimum bet 1 Mil, maximum bet 1 Tran.

T▶ Gamble at informal gathering in public place: 40%, minimum bet 1 Mil, maximum bet 100 Mils.

See 14.0 for betting and payoff procedures.

None/0, 1.

Law: BC+IN+SL².

T▶ Bribe authority to ignore criminal act: 20% + (1×every 100 Mils offered) - (10×Law Level) - (secret GM reduction for loyalty).

T▶ Convince authority that a criminal act is legal or that party is exempt: 10% - authority's Intelligence - (10×Law Level).

T▶ Successfully defend innocent party: 35% + (10×Law Level).

T▶ Successfully defend guilty party: 35% - (10×Law Level).
None/0, 1, 2.

Linguistics: Knows number of languages equal to Skill Level. Chance to communicate during an NPC encounter is NPC's IN+character's IN+SL².

See 28.6, Procedure CC for communications with creatures.
Civ Level 7 Translator (+1), Civ Level 8 Translator (+2)/0, 1.

Recruiting: BC+EM+SL².

T▶ Hire NPC's in spaceport or urban: 50%.

T▶ Hire NPC's in suburban or town: 30%.

Minimum time is 6 hours. See 14.0 for NPC pay and attributes.
None/0, 1, 2, 3.

Streetwise: Use for communications tasks; see Diplomacy, 14.0.
None/0, 1, 2.

Teaching: BC+EM+SL² + student's IN.
 See 14.0 for procedure.
None/0, 1, 2.

Trading: Chance of a successful bargaining: 20% + Empathy + SL².
None/0, 1.

ENVIRONMENTAL SKILLS

Agriculture: BC+IN+SL² (-2 when working with hydroponics).
Robot Agriculture System (+2)/0, 1, 2.

Asteroid Mining: BC+IN+SL².

Rock Blaster (+1), Robot Miner System (+2), Robot Geo System (+2)/0, 1, 2.

Environs/Urban: Twice SL is subtracted from awareness chance during creature or NPC encounter. SL is added to initiative die roll. SL used in Ambush task.

None/1 SL increase per 8 weeks in environ.

Gravity: SL added to Action Round Movement Rate (see 29.2) and affects gravity-related accident (see 38.0).
None/1 SL increase per 8 weeks in gravity type.

Mining: BC+IN+SL².

T▶ Mine raw ore from an identified source: 25%.

T▶ Refine raw ore: 0%.

Rock Blaster (+1), Robot Miner System (+2), Robot Geo System (+2)/0, 1, 2.

Survival: BC+IN+(Survival SL+Environ SL)². Survive in environs with the following:

T▶ Edible game and/or plants: 90%.

T▶ Arable land: 60%.

T▶ Any type of vegetation: 30%.

T▶ Water in environ: 0%.

T▶ On world with water: -50%.

T▶ On world with no water: -150%.

None/0, 1, 2.

Key: Skill: How the skill is used. *Related Equipment/EP Gain:* BC: Base Chance. SL: Skill Level. This summary does not take precedence over sections 8.0-15.0. **Related Equipment:** Devices that are required to use the skill and/or that aid in using the skill are listed. Skill Level increases provided by various items of equipment are listed in parentheses. **EP (Experience Point) Gain:** If a die or dice roll conducted when using the skill shows the listed digit on either die, one Experience Point is gained.

[19.0] WEAPON CHART

RATE OF FIRE	HIT STRENGTH	CIV LEVEL	TERRAIN MULTIPLIER ²		RANGE IN HEXES ³		WEAPON		WEIGHT IN KILOGRAMS		PRICE IN TRANS	
			0	2	4	6	8	10	12	14	16	18
2	8	6	0	1-4	5-13	14-25	26-40	41-55	56-70	71-85	86-100	101-115
6	8	8	35	25	10	-10	-25	12	7			
4	10	8	35	25	10	-10	-25	3	9			
4	10	8	20	15	5	-10	-25	4	12			
4	5	5	60	40	0	P	P	2	.08			
4	5	6	60	40	0	P	P	1	.2			
2	1	8	55	35	-10	P	P	2	2			
1	6	6	60	40	20	0	-20	4	1			
3	6	8	60	40	20	0	-20	2	2			
1	8	7	65	30	P	P	P	2	1			
2	9	8	65	30	P	P	P	1	2			
15	7	5	P	40	20	0	-20	12	3			
10	5	6	40	35	10	0	P	5	2			
2	4	2	P	0	-20	-40	P	5	.3			
6	7	6	30	35	20	0	-15	3	.8			
4	6	5	45	35	15	-5	-25	3	.6			
1	1	5	40	30	10	-20	P	5	2			
2	1	7	40	30	10	-20	P	3	3			
3	4	1	15	25	0 ¹¹	P	P	1	.2			
2	6	1	P	20	10	5 ¹¹	-55 ¹¹	3	.6			
1	1	3	0	30	10	-15	P	4	.5			
1	25	4	P	50	-10	-60 ¹¹	P	.5	.1			
1	4	4	P	50	-10	-60 ¹¹	P	.5	.1			
1	4	4	P	50	-10	-60 ¹¹	P	.5	.1			
1	4	4	P	50	-10	-60 ¹¹	P	.5	.1			
1	6	1	P	10	-30 ¹¹	P	P	.2	.01			
na	10	1	P	P	P	P	P	2	.3			

NOTES:

- Must be employed before first fire.
- May not be fired by prone character.
- The target may be affected by substance in need; see 30.7.
- The strength of weapon used to check for stun only; see 30.4 (Terrain Value considered 0).
- Target hex and all adjacent hexes are filled with gas for six Action Rounds; all beings there which do not have their own air supply suffer the effects of the appropriate poison (see 30.7).
- Hit Strength is used in close combat; Hit Strength is 3 if thrown.
- Target hex and all adjacent hexes are treated as if it were dark for six Action Rounds.
- Target hex and all adjacent hexes are treated as if it were light for six Action Rounds.
- Will not be detected by metal detector.
- Weapon produces recoil with each shot (see 29.6).
- Strength Rating of firing (or throwing) character added to hit percentage.
- Prohibited.

[20.0] PROTECTIVE ATTIRE CHART

TYPE	ARMOR	CIV LEVEL	WEIGHT (Kilograms)	PRICE (Trans)	Air Supply (Hours)	ENCUMBRANCE	PROJECTILE DEFENSE	BEAM DEFENSE	HIT STRENGTH
Reflective	6	11	15w	12	2	1	3	2	
Reflective	8	9	28w	24	1	2	5	5	
Impact	5	22	9	None	5	2	1	9	
Impact	7	18	31w	18	3a	4	2	18	
Reflective/Impact	7	20	31w	18	4a	3	4	11	
Reflective/Impact	8	16	46w	24	2a	5	5	20	
Armor Vest	6	2	1.5	None	None	2p	2p	None	
Respirator Helmet	6	6	4	12	None	2p	2p	None	
Respirator Helmet	8	4	10	24	None	4p	4p	None	
Battle Sleeve	8	4	15w	None	None	5p	5p	25	
FORCE FIELD									
Force Field On	8	2	55	None	Imm	6	0	Imm	
Force Field Off	8	2	55	None	None	0	0	None	
EXPEDITION SUIT									
Expedition Suit	6	11	6	12	2	1	1	None	
Expedition Suit	7	7	11w	24	1	1	1	None	

w: Waiting period of one week required upon purchase. *Exception:* Waiting period for battle sleeve is two days. a: Movement of wearer may be augmented, depending on type of weapon except a beam weapon.

[21.2] MARINE VEHICLE CHART

VEHICLE	ASSOCIATED SUB-SKILL	CIV LEVEL	PRICE (Trans)	RANGE (x 100m)	SPEED (km/h)	SPEED (Hexes/Action Round)	PASSENGERS	CARGO CAPACITY (x 100kg)	MODIFIER	REPAIR TIME (Days)	ARMOR (projectile/beam)	LENGTH (Meters)
Sailing Ship	3	90	U	10	5	8	4	-20	1	3/2	12	
Mini Submarine	6	300	15	25	15	3	1	+5	1	3/2	4	
Flexicraft MOTORBOAT	6	1000	150	100	60	20	50	+15	6	2/4	40	
Reef Walker SUBMARINE	7	600	20	20	10	6	15	+5	2	3/3	18	
Water Scooter MOTORBOAT.SUB	7	5	1	15	10	1	.2	+15	1	1/1	2	
Amphibian ¹ MOTORBOAT.SUB	6	180	20	25	15	4	3	-15	1	3/2	5	

L: See Land Vehicle Chart for further details. U: Unlimited range. Where more than one associated sub-skill is listed, use the one appropriate to current use of vehicle.

[21.1] LAND VEHICLE CHART

VEHICLE ASSOCIATED SUB-SKILL	CIV LEVEL	PRICE (Trans)	RANGE (x 100km)	SPEED (km/hr)	SPEED (hexes/Action Round)	TERRAIN VALUE LIMIT	TERRAIN VALUE MODIFIER	PASSENGERS	CARGO CAPACITY (x 100kg)	PERFORMANCE MODIFIER	REPAIR TIME (Hours)	ARMOR (Projectile Beam)	LENGTH (Meters)	WEIGHT (Metric Tons)
Scout Car ATV	5	35	12.5	25	15	3	0	5	4	-10	6	2/2	5	2
Crawler ATV														
Wheeled	8	200	100	45	25	3	-1	8	5	+25	24	4/3	7	4
Legs	8	200	100	10	5	N	N	8	5	+25	24	4/3	7	
Rover ATV	8	150	300	75	45	4	-2	2	1	+25	24	3/3	5	0.5
Mobile Lab ATV	8	250	100	50	30	2	+1	9	25	+15	24	4/3	10	6
Amphibian ^m ATV	6	180	20	25	15	3	+1	4	3	-15	24	3/2	5	3
Van Rig TRUCK	6	240	24	100	65	1	+2	5	150	-10	12	3/2	8	6
Car AUTOMOBILE	5	40	10	200	120	1.5	0	3	1	-25	6	1/1	5	1
Horse Cart ANIMAL DRAWN	1	1	U	10a	15a	2	+2	6	2	-15	2	1/1	4	0.5
AutoSled	6	60	15	25	15	3	0	2	1	0	6	2/2	4	0.5
Tractor	5	35	5	15	10	4	-1	1	100	-20	6	1/1	5	3
Half-Track	7	1000	50	25	15	2	-2	8	4	0	24	4/4	7	7
Loricata APC	6	700	50	50	30	1.5	+1	12	6	+5	24	5/4	8	18
Armored ATV	6	200	15	75	45	3	-1	6	1	+15	24	5/5	5	10
Tank	6	2000	50	50	30	3	0	4	2	+20	24	6/6	6	20
Self-Propelled Artillery	5	2000	10	25	15	2	+1	3	1	0	24	6/5	7	20

a: Speed in km/hr represents a pace which the animal may maintain over a long period of time. Speed in hexes/Action Round represents the maximum speed which can be maintained for a short period of time.

m: See Marine Vehicle Chart for further details.

U: Unlimited range.

N: None.

[21.3] AIR VEHICLE CHART

VEHICLE ASSOCIATED SUB-SKILL	CIV LEVEL	PRICE (Trans)	RANGE (x 100km)	SPEED (x 100km/hr)	MAXIMUM WORLD SIZE BY ATMOSPHERE			PASSENGERS	CARGO CAPACITY (x 100kg)	PERFORMANCE MODIFIER	REPAIR TIME (Days)	ARMOR (Projectile Beam)	LENGTH (Meters)
					TRACE OR NONE	THIN	OTHERS						
Dragonfly GLIDER	6	5	1	.1	P	3	5	1	.1	-25	.5	1/1	2
Ornithopter GLIDER	8	300	200	15	P	4	7	12	12	0	1	1/1	20
Propeller Plane	5	200	40	5	P	3	7	5	25	-5	.5	2/2	8
Jet	7	1000	600	9	P	3	9	8	50	+25	2	3/3	25
Air Car JET	8	1300	10	7	P	6	9	3	2	+20	1	3/2	5
Levigator DIRECT LIFT	7	4000	U	.3	6m	6m	6m	100	100	0	10	4/4	40
Floater DIRECT LIFT	8	600	U	.4	6m	6m	6m	10	5	+25	6	1/1	8
Skimmer* DIRECT LIFT	8	500	U	.6	7m	7m	7m	5	3.5	+10	7	1/1	5
Helicopter	6	150	20	1	P	3	6	6	5	-20	1	2/3	5
Shuttle SHUTTLE OR PILOT	7	8000	640	20	8	8	8	40	200	+10	5	4/4	120

P: Prohibited.

U: Unlimited range; overhaul required once per year at a cost of 100 Trans.

m: Cannot be used on a world Size 3 or less.

*May not be used in an environ with a Terrain Value greater than 2.

[22.0] PERSONAL EQUIPMENT CHART

SCIENTIFIC	CIVIL LEVEL	WEIGHT (kilograms)	PRICE (Trans)	SKILL PLUS	TIME NEEDED FOR USE	BASE REPAIR TIME
Geo Lab	5	15	1	0	2 hr	1 hr
Geo Scanner	6	25	6	0	1 hr	1 hr
Geo Scanner	8	7	15	+2	.5 hr	2 hr
First Aid Kit	4	5	1	0	1 hr	1 hr
Medi Scanner	6	10	12	+1	.5 hr	1 hr
Medi Scanner	8	5	10	+2	.3 hr	2 hr
Bio Scanner	7	7	8	0	(a)	1 hr
Bio Scanner	8	2	12	+1	(a)	2 hr
Neuro Scanner	8	5	18	na	None	2 hr
Chem Lab	5	20	2	0	1 hr	1 hr
Chem Lab	7	15	7	+1	.5 hr	1 hr
Chem Synthesizer	6	25	2	0	4 hr	1 hr
Chem Synthesizer	8	22	6	+2	2 hr	2 hr
Energy Scanner	7	5	10	0	(a)	1 hr
TECH KITS						
Basic Repair Kit	5	5	1	0	(b)	na
Suit Kit	7	2	2	0	(b)	na
Armor Kit	7	15	20	+1	(b)	na
Armor Kit	8	15	30	+2	(b)	na
Weapon Kit	6	7	2	+1	(b)	na
Weapon Kit	8	7	4	+2	(b)	na
Electro Kit	7	5	11	+1	(b)	na
Electro Kit	8	5	15	+2	(b)	na
Robot Kit	8	15	30	+1	(a)	na
Vehicle Kit	6	30	25	+1	(b)	na
Vehicle Kit	8	30	35	+2	(b)	na
Spaceship Kit	6	100	60	0	(b)	na
Spaceship Kit	7	100	75	+1	(b)	na
Spaceship Kit	8	100	100	+2	(b)	na
COMMUNICATIONS						
Headset Radio	5	1	.2	0	na	1 hr
Planetary Shortwave	5	20	.4	0	na	1 hr
Interplanetary Radio Dish	7	5	2	0	na	1 hr
Planetary Headset	8	1	2	0	na	2 hr
Interstellar Commmlink	8	1	2	na	na	2 hr
Translator	7	2	16	+1	None	1 hr
Translator	8	1	48	+2	None	2 hr
RECORDING EQUIPMENT						
Audio Recorder	5	2	.1	na	AR	1 hr
Still Camera	4	3	.1	na	AR	1 hr
Superoid Camera	5	5	.4	na	AR	1 hr
Holographer	7	15	3	na	AR	1 hr
CAGES						
Metal Cage 0.5m ³	2	2	.1	na	na	1 hr
Metal Cage 8m ³	2	50	.5	na	na	1 hr
Super Cage 0.5m ³	5	1	.2	na	na	1 hr
Super Cage 8m ³	5	30	1	na	na	1 hr
Force Cage	8	3	20	na	AR	2 hr
VISION EQUIPMENT						
Night Glasses	7	.3	3	na	na	1 hr
Rocket Flare	5	.5	.1	na	AR	na
Anaerobic Torch	6	.5	.1	na	AR	na
Flashlight	4	.5	.1	na	AR	1 hr
Binoculars	5	1	.1	na	na	1 hr

na: Not applicable. AR: Activation takes one Action Round. (a): See 12.0 for explanation. (b): See 13.1 for explanation. See pages 28 and 29 for descriptions. Additional equipment includes: Psionic Rig (10.1), Jet Pack (21.3), Internal Gravity Web (33.3), Audio-sealed Case, Business Computer, Rock Blaster, False Identity, and Plastic Explosives (22.4).

[29.6] FIRE MODIFIER SUMMARY**Chance to Hit Target...**Base Hit Chance *minus*(Terrain Value $\times$ Terrain Multiplier) *plus*character's Dexterity Rating (if skilled) *plus*

square of character's Skill Level

Any of the following modifiers that apply are also considered and are cumulative.

(Modifier) if the Firing Character...

(-20) ...moves on foot in same Action Round.

(-30) ...is driving a vehicle.

(-5) ...is in a moving vehicle.

(-10) ...is firing at more than one target in the same Action Round. Apply modifier to all fires for each target beyond one (e.g., if 3 different targets are fired at, all hit chances are reduced by 20).

(-5) ...is firing more than one shot with a *recoil* weapon in the same Action Round. Apply modifier to all fires for each fire beyond one (e.g., if 4 fires are made, reduce all hit chances by 15).**(Modifier) if the Target is...**

(-45) ...Very small (-30) ...Small (+20) ...Large

(+40) ...One hex (+20) ...Immobile

(Double Terrain Value) ...Prone (Hit impossible) ...Miniscule

The GM may apply further subtractions if the target is partially obstructed by a distinct object (remember, natural terrain features are accounted for by the Terrain Value and Multiplier). The Base Hit Chance and the Terrain Multiplier are listed on the Weapon Chart. The Terrain Value is listed on the Terrain Effects Chart. See 29.4 for additional weapon fire restrictions.

[16.4] ROBOT CHASSIS CHART

ROBOT TYPE

CIV LEVEL 7

	STRENGTH	DEXTERITY	AGILITY	PORT CAPACITY	PROJECTILE ARMOR	BEAM ARMOR	HARDWARE POINTS	SOFTWARE SIZE	COST	WEIGHT
Brummagen I	17	5	1	350	2	2	2	1	75	800
Brummagen II	8	2	3	35	1	1	3	1	110	150
Manner 31b	20	3	5	200	4	4	1	1	70	520
Manner 36sd	9	8	8	90	2	1	2	2	125	300
Manner 38sdf	5	1	10	8	2	3	1	2	90	120
Frazette Blue	1	6	11	3	0	0	1	1	50	45

CIV LEVEL 8

Brummagen III	38	12	2	450	5	4	5	6	600	580
Manner 44	33	4	5	900	5	5	5	4	450	1020
Manner 50sd	20	12	6	60	4	4	2	4	200	140
Manner 51sdf	18	7	9	15	4	2	5	7	770	140
Frazette Green	22	9	10	250	4	5	6	4	600	370
Frazette Amber	18	14	12	150	3	3	4	4	280	240
Soldistant RAR	21	11	13	550	2	1	6	6	850	660
Soldistant V-201	8	13	14	5	2	3	3	6	400	85
Soldistant V-202	32	15	15	700	5	5	6	7	1200	850

Port Capacity and weight are in kilograms. Port Capacity is the weight that may be carried. Cost (in Trans) includes cost of the listed hardware and software systems.

[13.1] DAMAGE REPAIR TABLE

DAMAGE►	SUPERFICIAL	LIGHT	HEAVY	PARTIALLY DESTROYED	TOTALLY DESTROYED
BASE REPAIR CHANCE	50%	20%	-10%	-40%	Impossible
REPAIR TIME MULTIPLE	$\times 1$	$\times 2$	$\times 4$	$\times 8$	Impossible

[30.9] HIT TABLE

ONE DIE PLUS HIT STRENGTH	PHYSICAL CHARACTERISTIC RATING POINTS LOST	Armor Result (NUMBER OF FIRES)				DAMAGE TO EQUIPMENT
		1	2*	3, 4	5 or more	
1 or less	No effect	-	-	-	-	NE
2	1 Strength	-	-	-	-	NE
3	1 Dexterity	-	-	-	-	NE
4	2 Endurance	1	-	-	-	NE
5	2 Agility	1	-	-	-	NE
6	3 Endurance	1	1	-	-	NE
7	3 Strength	2	1	-	-	S
8	4 Endurance	2	1	1	-	S
9	4 Agility	2	1	1	-	S
10	5 Endurance	2	1	1	-	S
11	5 Strength	2	1	1	1	S
12	6 Endurance	3	2	1	1	S
13	6 Dexterity	3	2	1	1	S
14	7 Endurance	3	2	1	1	S
15	7 Agility	3	2	1	1	L
16	8 Endurance	3	2	2	1	L
17	8 Strength	4	3	2	1	L
18	9 Endurance	4	3	2	2	L
19	9 Agility	4	3	2	2	L
20	10 Endurance	4	3	3	2	L
21	10 Strength	4	3	3	2	L
22	11 Endurance	5	4	3	2	L
23	11 Dexterity	5	4	3	2	H
24	12 Endurance	5	4	3	3	H
25-26	13 Strength	5	4	3	3	H
27-28	14 Endurance	5	4	4	3	H
29-30	15 Agility	5	4	4	3	H
31-33	16 Endurance	6	5	4	4	P
34-37	17 Strength	6	5	5	4	P
38 or more	18 Endurance	6	6	5	5	T

*Use this column when involved in any close combat or accident. **NE**: No effect. **S**: Superficial damage. **L**: Light damage. **H**: Heavy damage. **P**: Partially destroyed. **T**: Totally destroyed. See 30.1 for explanation of use.

[12.3] TREATMENT RESULTS TABLE

TOTAL POINTS LOST	DAYS REQUIRED TO REGAIN ONE CHARACTERISTIC POINT
1, 2	1 Day
3, 4	3 Days
5-7	6 Days
8-10	10 Days
11-14	16 Days
15 or more	24 Days

The time required for a character to heal may be reduced, depending on his Endurance Rating and the quality of treatment he receives. If one or more of a character's Physical Characteristics has been reduced to zero, he may suffer permanent damage that may not be healed. See 12.3.