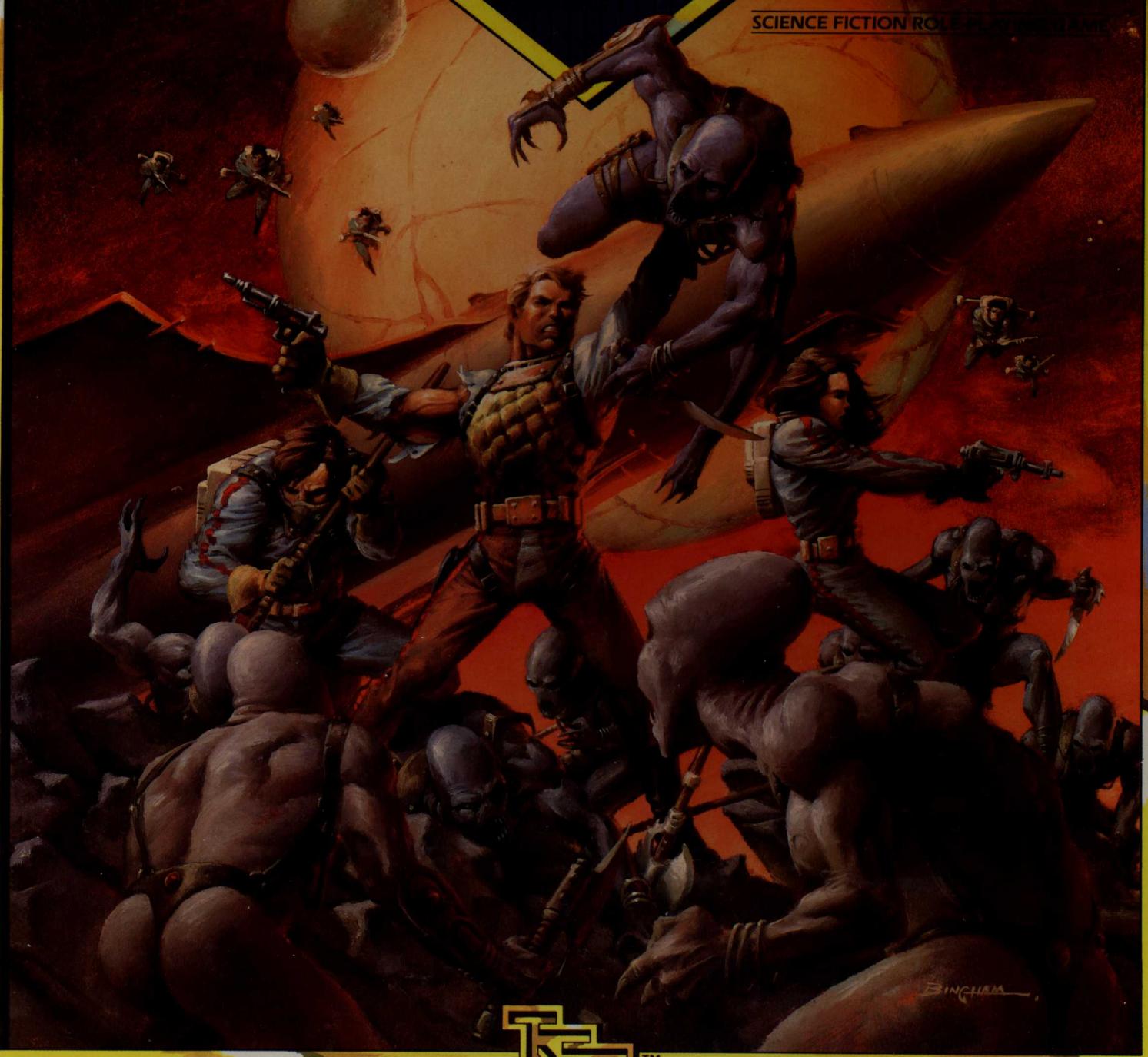


BUCK ROGERS®

THE 25TH CENTURY

SCIENCE FICTION ROLE-PLAYING GAME



BINGHAM

TSR™



Reference Screen: Tables and Statistics

Table 20: THAC0 (To Hit Armor Class Zero)

Level or Hit Dice of Attacker		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Warriors, Scouts, Creatures using d10 for Hit Dice		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Rocketjocks, Rogues, Creatures using d8 for Hit Dice		20	20	19	19	18	18	17	17	16	16	15	15	14	14	13	13	12	12	11	11
Medics, Engineers, Creatures using d6 for Hit Dice		20	20	20	18	18	18	16	16	16	14	14	14	12	12	12	10	10	10	8	8

Table 23: Melee Weapons

	Range (feet)	Damage	Rate of Fire
Knife	3	1d3	1
Dagger	3	1d4	1
Club, bottle, etc.	3	1d4	1
Mono Knife	3	1d6	1
Cutlass	6	1d6	1
Sword	6	1d8	1
Polearm	9	1d10	1
Mono Sword	6	1d10	1
Kryptx	6	var.	1

Table 24: Ranged Weapons

	Max. Range	Dam- age	Rate of Fire	Shots
Needle Gun	300	1d3	3	20
Bolt Gun	400	1d4	2	10
Desert Runner	200	1d4	1	10
Crossbow		or 1d8		
Kryptx	400	1d6	1	10
Laser Pistol	800	1d8	3/2	7
Rocket Pistol	400	1d10	2	5
Microwave Gun	400	1d10	2	10
Laser Rifle	3000	1d12	1	14
Heat Gun	60	2d6	1	7
Rocket Rifle	2000	2d8	1	10
Sonic Stunner	40	special	1	14

Table 25: Thrown Weapons and Heavy Weapons

	Max. Range	Damage	Rate of Fire
Dart	special	1d4	1
Brick, bottle, etc.	special	1d4	1
Grenade	special	special	1
Grenade Launcher	200	special	1/2
Plasma Thrower	400	4d10	1/2
Rocket Launcher	1000	5d10	1/2

Table 26: Blast Radius (in feet)

Explosive grenade	10
Stun grenade	15
Dazzle grenade	15
Gas grenade	20
Rocket launcher shell	20
Plasma thrower canister	25

Table 19: Movement Rates

	Run	Climb	Swim	Air
Human	600	150	300	—
Tinker	480	120	240	—
Worker	360	90	180	—
Terrine	720	180	360	—
Delph	480	120	600	—
Lowlander	480	120	240	—
Runner	840	210	420	—
Stormrider	360	90	180	1200
Spacer	600	150	300	600



Reference Screen: Tables and Statistics

Table 20: THAC0 (To Hit Armor Class Zero)

Level or Hit Dice of Attacker		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Warriors, Scouts, Creatures using d10 for Hit Dice																					
20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1		
Rocketjocks, Rogues, Creatures using d8 for Hit Dice																					
20	20	19	19	18	18	17	17	16	16	15	15	14	14	13	13	12	12	11	11		
Medics, Engineers, Creatures using d6 for Hit Dice																					
20	20	20	18	18	18	16	16	16	14	14	14	12	12	12	10	10	10	8	8		

Table 27: Basic Saving Throws

Type	Roll Needed
Explosion/Plasma Fireball	14
Electrical Shock	13
Paralysis/Stun/Fall	15
Toxic Atmosphere/Gas/Poison	14
Suffocation	16
Radiation	13
Extremes of Heat or Cold	13

Table 29: Falling Damage

Location	Damage per 10 feet	Maximum
Earth	1d6	20d6
Venus	1d6	18d6
Mars	1d4	10d4
Mercury	1d4	8d4
Luna	1d2	8d2
Large asteroid	1	10

Table 28: Racial Modifiers to Saving Throws

Race	Explosion/ Plasma	Electrical Shock	Paralysis/ Stun/Fall	Toxic/Gas/ Poison	Suffo- cation	Radiation	Heat	Cold
Terran	0	0	+1	0	0	0	0	0
Martian	0	0	-1	0	+1	+1	-1	+1
Lunarian	0	0	0	-1	+2	+2	-1	-1
Venusian	0	+1	+1	+3	-2	+1	+3	-2
Mercurian	0	0	+1	0	+1	+3	+4	-3
Tinker	-3	-2	0	-1	0	0	0	0
Worker	0	0	+3	0	0	0	0	0
Terrine	+4	+3	+3	+3	+1	+2	+2	+2
Delph	+2	+1	+3	+1	+4	+1	-4	+2
Lowlander	+2	+3	+2	+4	-4	+1	+6	-6
Desert Runner	+1	+1	+2	0	+2	+2	-3	+4
Stormrider	-2	+2	0	+4	-4	+1	0	+3
Spacer	0	+3	+5	+4	**	+4	+5	+5

**: Immune

Table 4: Racial Modifiers

	Str	Dex	Con	Int	Wis	Cha	Tech
Terran	0	0	+1	0	+1	0	0
Martian	-1	+1	-1	0	-1	+1	0
Lunarian	-2	+1	-1	+2	0	0	0
Venusian	0	-1	+1	0	+1	-1	0
Mercurian	-1	+1	+1	0	0	0	0
Tinker	-2	+3	-2	0	0	0	+3
Worker	+3	0	+3	-2	-1	-3	-1
Terrine	+2	+2	+2	-2	-1	-3	0
Delph	+2	0	+1	0	0	+1	-2
Lowlander	+3	0	+1	0	0	-3	+1
Desert Runner	+2	+2	+1	0	0	-1	0
Stormrider	+2	-2	+2	0	0	0	-2
Spacer	0	+1	+2	0	0	-1	+2

Table 18: Initiative Modifiers

Dexterity 15	-1	Encumbered	+2
Dexterity 16	-2	Knee deep water	+2
Dexterity 17-18	-3	Slippery ground	+2
Dexterity 19-20	-4	Chest deep water	+4
Dexterity 21-22	-5	Climbing, swimming, entangled, otherwise hindered	+3
Weapon out and ready to use	-2	Alien environment	+6

Table 14: Career Skills Lists

Rocketjock	Engineer
Drive Jetcar	Jury Rig
Drive Groundcar	Maneuver in Zero G
Maneuver in Zero G	Notice
Notice	Repair Electrical
Pilot Fixed Wing	Repair Life Support
Pilot Rocket	Repair Mechanical
Pilot Rotorwing Craft	Repair Nuclear Engine
Use Rocket Belt	Repair Rocket Hull

Table 16: Gravity and Encumbrance

Planet	Gravity (% of Earth normal)	Weight Multiplier
Mercury	33%	× 3
Venus	90%	× 1.1
Earth	100%	× 1
Luna	16%	× 6
Mars	38%	× 2.5

Medic

Diagnose
Life Suspension Tech
Treat Critical Wounds
Treat Disease
Treat Light Wounds
Treat Poisoning
Treat Serious Wounds
Treat Stun/Paralysis

Rogue

Bypass Security
Climb
Fast Talk/Convince
Hide in Shadows
Move Silently
Notice
Open Lock
Pick Pocket

Table 12: XP Awards for Combat

Level 1	15	Level 7	450
Level 2	40	Level 8	625
Level 3	75	Level 9	850
Level 4	125	Level 10	1,150
Level 5	200	Level 11	1,500
Level 6	300	Level 12	2,000

Warrior

Battle Tactics
Demolitions
Leadership
Maneuver in Zero G
Move Silently
Notice
Repair Weapon
Use Rocket Belt

Scout

Animal Riding
Befriend Animal
Climb
Move Silently
Notice
Planetary Survival
Planetology
Tracking

Table 13: XP Awards for Ship-vs.-Ship Combat

Winning Ship	Losing Ship							
	Krait	Starfire	Scout	Med. Cr.	Trans.	Hvy. Cr.	Liner	Battler
Krait fighter	200	*150	540	4,580	6,180	14,180	11,880	157,180
Starfire fighter	390	300	730	4,770	6,370	14,370	12,070	157,370
Scout cruiser (<i>Rogue</i>)	260	170	600	4,640	6,240	14,240	11,940	157,240
Med. cruiser (<i>Argyre</i>)	*100	*150	*300	3,000	4,600	12,600	10,300	155,600
Transport	*100	*150	360	4,400	6,000	14,000	11,700	157,000
Hvy. cruiser (<i>Chryse</i>)	*100	*150	*300	*1,500	*3,000	10,000	7,700	153,000
Space Liner	*100	*150	*300	3,700	5,300	13,300	11,000	156,300
Battler (<i>Tharsis</i>)	*100	*150	*300	*1,500	*3,000	*5,000	*5,500	100,000

* = Minimum award

Table 33: Ship Weapons

Type	Range (hexes)	Weapon Spaces	Shots	Damage	Hit Bonus	Reload Cost (cr)	Reload Weight (lbs)
Beam Laser	6	1	unl.	10	+1	0	0
Pumped Laser	4	2	unl.	20	0	0	0
Gyrocannon	4	1	50	10	+1	100	400
Missile Mount	6	1	4	40	0	300	400
Heavy Missile Mount	6	2	4	60	-1	900	1200
K-Cannon	4	5	6	100	-3	1500	4000
Light Acceleration Gun	2	1	15	20	-1	200	1500
Heavy Acceleration Gun	2	2	10	30	-2	400	3000

Table 34: Ship Hit Locations

1d12 Roll	Ship Section Hit
1	Sensors/Commo
2	Controls
3	Life Support
4-5	Fuel
6-7	Engine
8	Weapon
9-12	Hull

Table 35: Called Shots

Penalty	Ship Section Targeted
-6	Sensors/Commo
-6	Controls
-4	Life Support
-3	Fuel
-3	Engine
-6	Specific weapon
-1	Hull

Table 30: Standard Tonnages

Ship Type	Tonnage
Fighter	10-20
Asterover	20-30
Scout Cruiser	20-50
Light Freighter	30-50
Heavy Freighter	55-80
Medium Cruiser	55-200
Light Transport	80-200
Heavy Transport	205-350
Large Cruiser	205-500
Space Liner	500-800
Battler	1000-5000

Table 31: Speed and Maneuverability

Tonnage	Speed	Reaction Bonus	AC Defense Bonus
5- 15	5	-2	-4
20- 45	4	-1	-2
50-100	3	0	0
105-200	2	0	+1
205-500	1	+1	+2
505 and up	1	+2	+3 or more

Table 32: Ship Replacement Parts

Part	Cost (cr)
Sensor/Commo Unit	4000-6000
Controls Unit	3000-5000
Life Support Module	7000-9000
Fuel System	8000-10000
Nuclear Engine	20000-40000
Weapons (and # of spaces required):	
Beam Laser (1)	1000
Pumped Laser (2)	1500
Gyrocannon (1)	2000
Missile Mount (1)	2000
Light Acceleration Gun (1)	2500
Heavy Missile Mount (2)	3000
Heavy Acceleration Gun (2)	5000
K-Cannon (5)	10000

Table 22: AC Modifiers

Target is or has:	AC modified by:
25% hidden by cover	-2
50% hidden by cover	-4
75% hidden by cover	-7
90% hidden by cover	-10
25% hidden by concealment	-1
50% hidden by concealment	-2
75% hidden by concealment	-3
90% hidden by concealment	-4
Dexterity 15	-1
Dexterity 16	-2
Dexterity 17	-3
Dexterity 18-20	-4
Dexterity 21-22	-5
In dim illumination	-2
In darkness	-4
Dexterity 1-2	+5
Dexterity 3	+4
Dexterity 4	+3
Dexterity 5	+2
Dexterity 6	+1

Table 17: Equipment List (cont.)

	Cost (credits)	Weight (pounds)	Information/Description
Swim fins	60	2	Increases swimming movement by 50%
Inertial Compass	70	1/2	Can locate direction and position on any planet
Videophone	75	5	Basic personal unit; others cost more
Sleeping bag	100	3	Holds 1 man; rated to -50°F.
Macroglasses	150	1/2	Advanced binoculars; more expensive versions available
Tech Tools	150	3	Small leather case with basic tools
Compdex	200	3	Portable personal computer; printer module costs 50cr
Gillmask	200	5	Allows underwater breathing indefinitely
Powerpack Charger Unit	200	10	Recharging pack for weapons, tools
Rocket Motor Tools	200	8	Large case with vise grips, adjustable wrenches, gloves
Scrambler	200	1/2	2" x 5" x 1"; stops bugs and tracers from operating
Skis	200	5	Light plastic skis plus poles
Pressure Tent	250	5	Protects two men; larger sizes available
Bioscanner	400	2	Extra memory modules cost 50cr each
Watchbox	400	3	Mobile robotic security device
Drug Fabricator	500	5	Chemical supply pack: 1000cr, 8 lbs.
Tech Scanner	500	2	Diagnoses problems with electrical devices
Atomic Generator	600	10	Powers a small ship or building for 72 hours
Fieldfence	900	8	Protects from lasers and smart bullets
Autosurgery	1000	15	Mechanical, computerized "doctor" for simple chores
Rocket Belt	1000	10	Fuel pellet reload: 100cr, 1 lb.
Space Belt	1000	8	Gas canister reload: 20cr, 1 lb.
Dragonfly	15000	1000	One-passenger vehicle
Skimmer	20000	1200	Two-passenger vehicle
Jetcar	35000	2000	Three-passenger vehicle

Table 15: Overall Skill List

Dexterity Skills

Acrobatics	Move Silently
Animal Riding	Paint/Draw
Climb	Pick Pocket
Drive Groundcar	Pilot Fixed Wing Craft
Drive Heavy Ground Vehicle	Pilot Rocket
Drive Jetcar	Pilot Rotorwing Craft
Drive Motorcycle	Pilot Ship/Submersible
Hide in Shadows	Play Instrument
Maneuver in Zero G	Swimming
	Use Rocket Belt

Tech Skills

Bypass Security	Repair Electrical
Commo Operation	Repair Life Support
Cook	Repair Mechanical
Demolitions	Repair Nuclear Engine
First Aid	Repair Rocket Hull
Jury Rig	Repair Weapon
Open Lock	Sensor Operation
Repair Computer	

Medic Skills

Diagnose	Treat Light Wounds
Life Suspension Tech	Treat Poisoning
Treat Critical Wounds	Treat Serious Wounds
Treat Disease	Treat Stun/Paralysis

Intelligence Skills

Astrogeography	Law
Astronomy	Library Search
Battle Tactics	Literature
Biology	Mathematics
Botany	Memorize
Chemistry	Metallurgy
Composition	Mimic
Cryptography	Navigation
Design Engineering	Physics
Disguise	Planetology
Economics	Programming
General Knowledge	Ship Lore
Geology	Speak/Read Language
History	

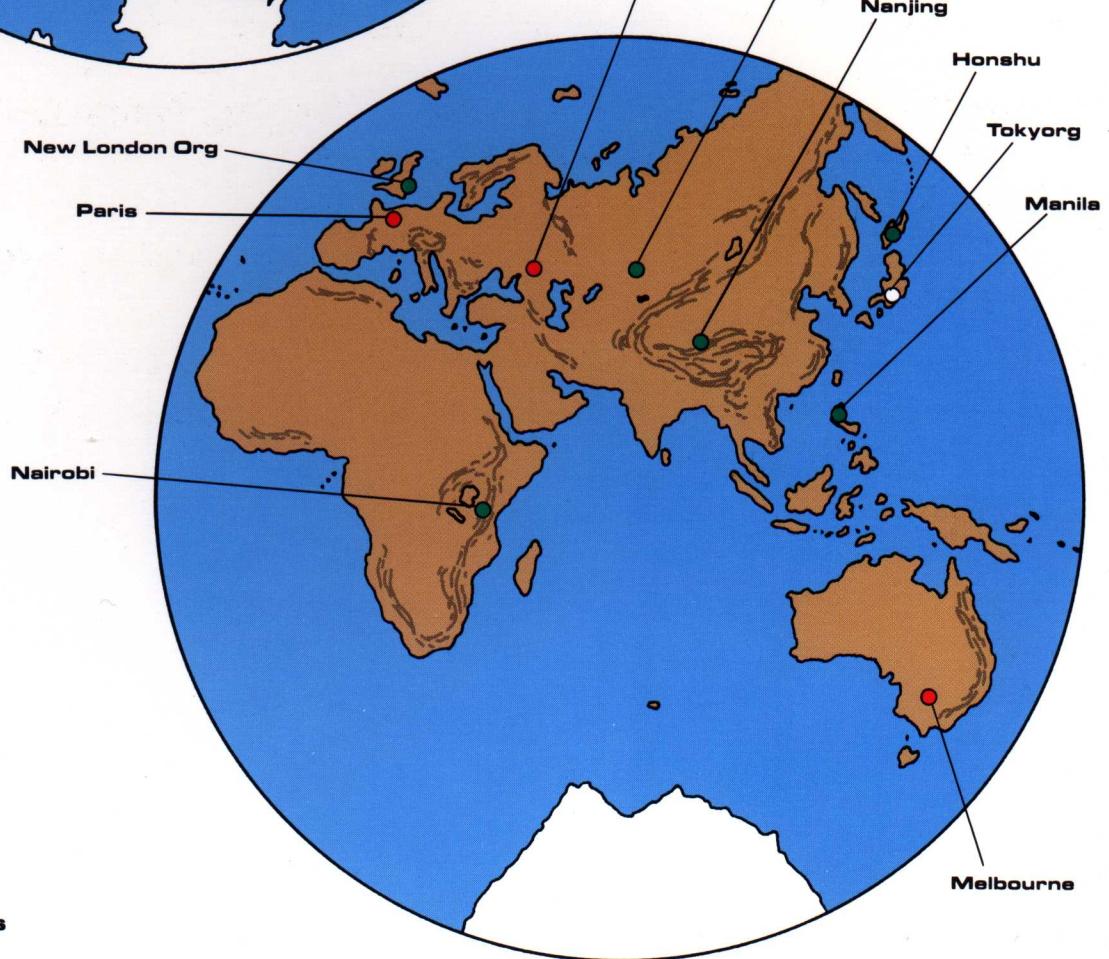
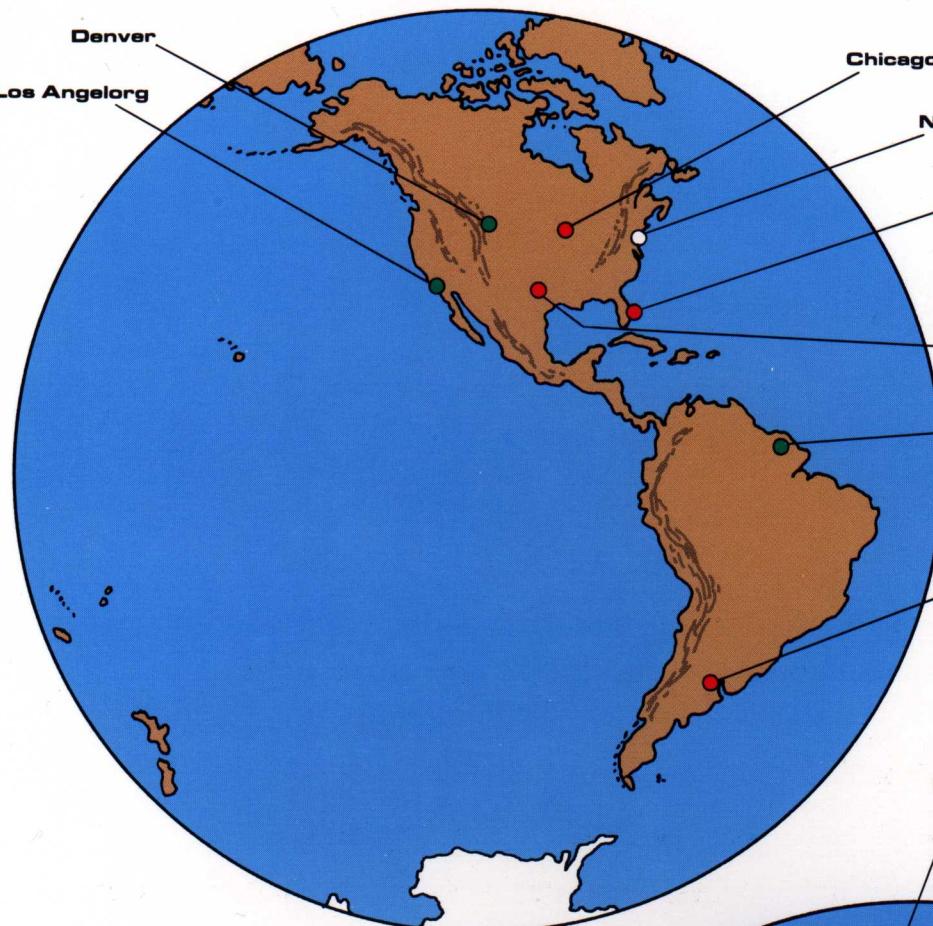
Charisma Skills

Act	Fast Talk/Convince
Animal Training	Hypnosis
Befriend Animal	Intimidate
Distract	Leadership
Etiquette	Sing

Wisdom Skills

Notice	Shadowing
Planetary Survival	Tracking
Read Lips	

EARTH



- Class A ports
- Class B ports
- Other locations

3rd Planet of Sol System

Orbital radius: 93,000,000 mi. (1.00 AU)

Diameter: 7,900 mi.

Period of revolution: 365 days

Period of rotation: 24 hours

Gravity: 100% Earth normal

Escape velocity: 25,000 mph

Surface temperature extremes: -130°F to +140°F

Atmosphere: Breathable; polluted, but recovering

Status: Home world of *Homo sapiens*; devastated and presently quarantined

Population: 3,000,000,000 (est.)

Government: Various forms; all currently under RAM control

Ports: Seven Class A, at Newyorg, Dallas, Canaveral, Paris, Moscorg, Buenos Aires, and Melbourne

Nine Class B, at Los Angelorg, New London Org, Tomsk, Nairobi, Nanjing, Honshu, Manila, Denver, and Guyana

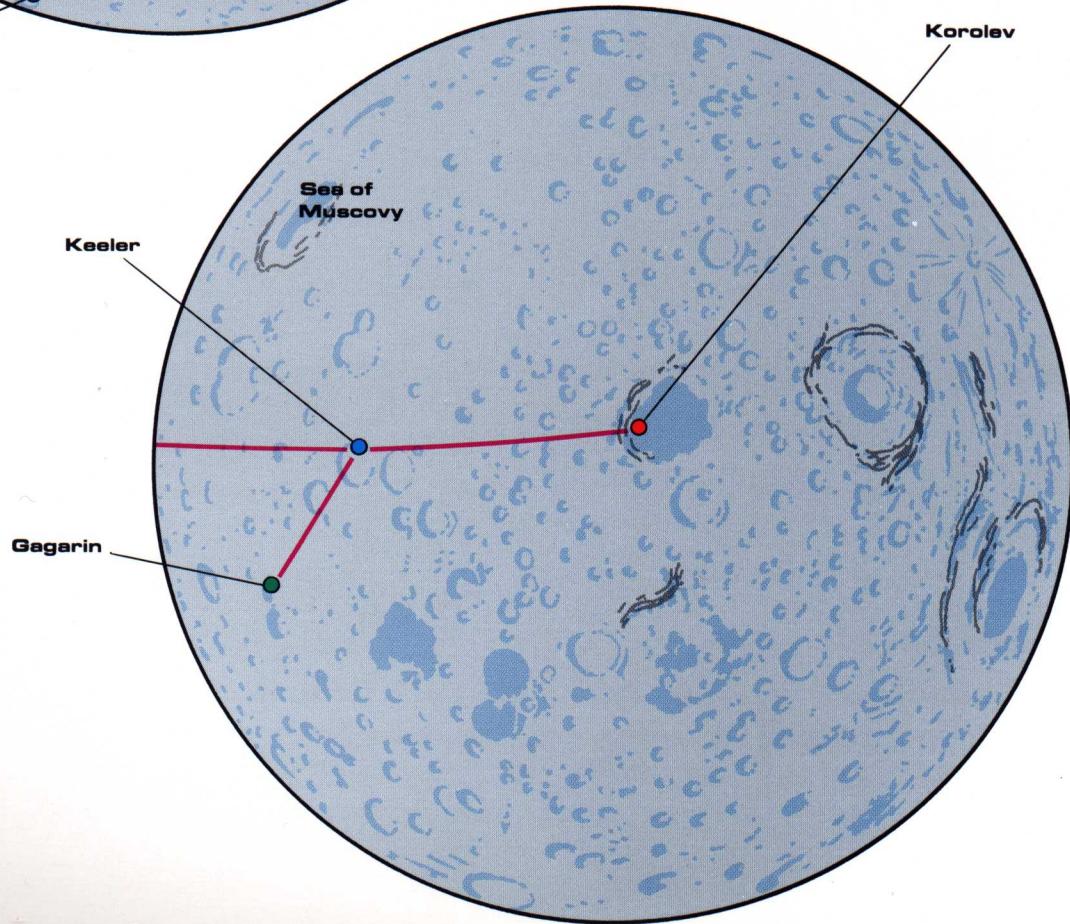
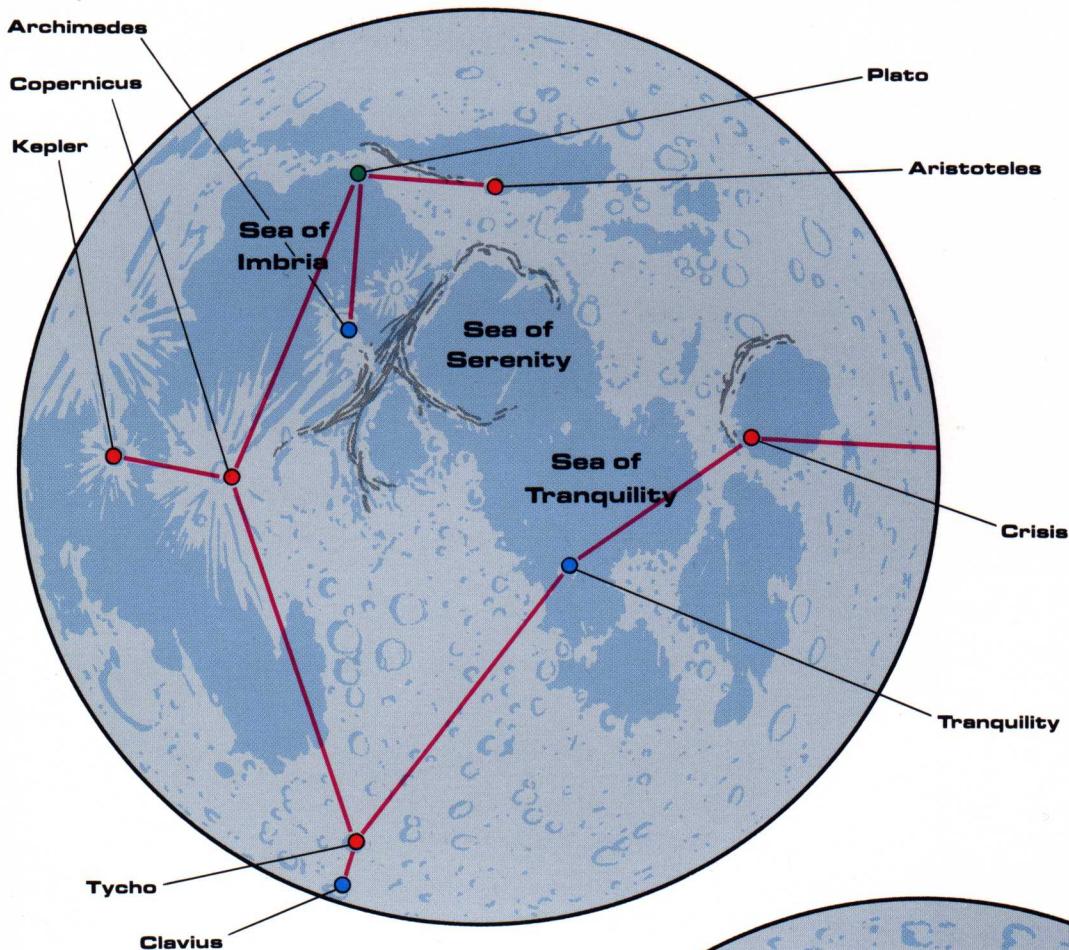
Many Class C

Other prominent locations: Dozens of arcologies and orgs, too numerous to list

Major imports: Technology, refined metals, fissionables, and drugs

Major exports: Water, art objects, historical treasures, and (under duress) raw materials





- Class A ports
- Class B ports
- Class C ports

Primary Satellite of Earth

Orbital radius: 240,000 mi.

Diameter: 2,160 mi.

Period of revolution: 27½ days

Period of rotation: 27½ days

Gravity: 16% Earth normal

Escape velocity: 5,350 mph

Surface temperature extremes: -280°F to +260°F

Atmosphere: Very thin, only significant inside deep craters and fissures

Status: Underground and domed settlements; gradually being terraformed

Population: 172,000,000

Government: Federation of independent underground arcologies

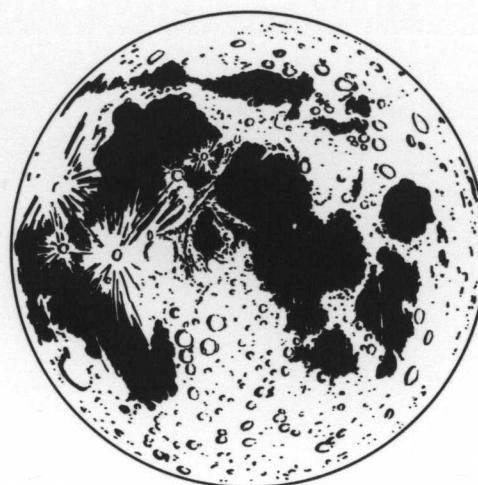
Ports: Five Class A, at Tycho, Aristoteles, Copernicus, Crisis, and Korolev

Three Class B, at Gagarin, Plato, and Kepler

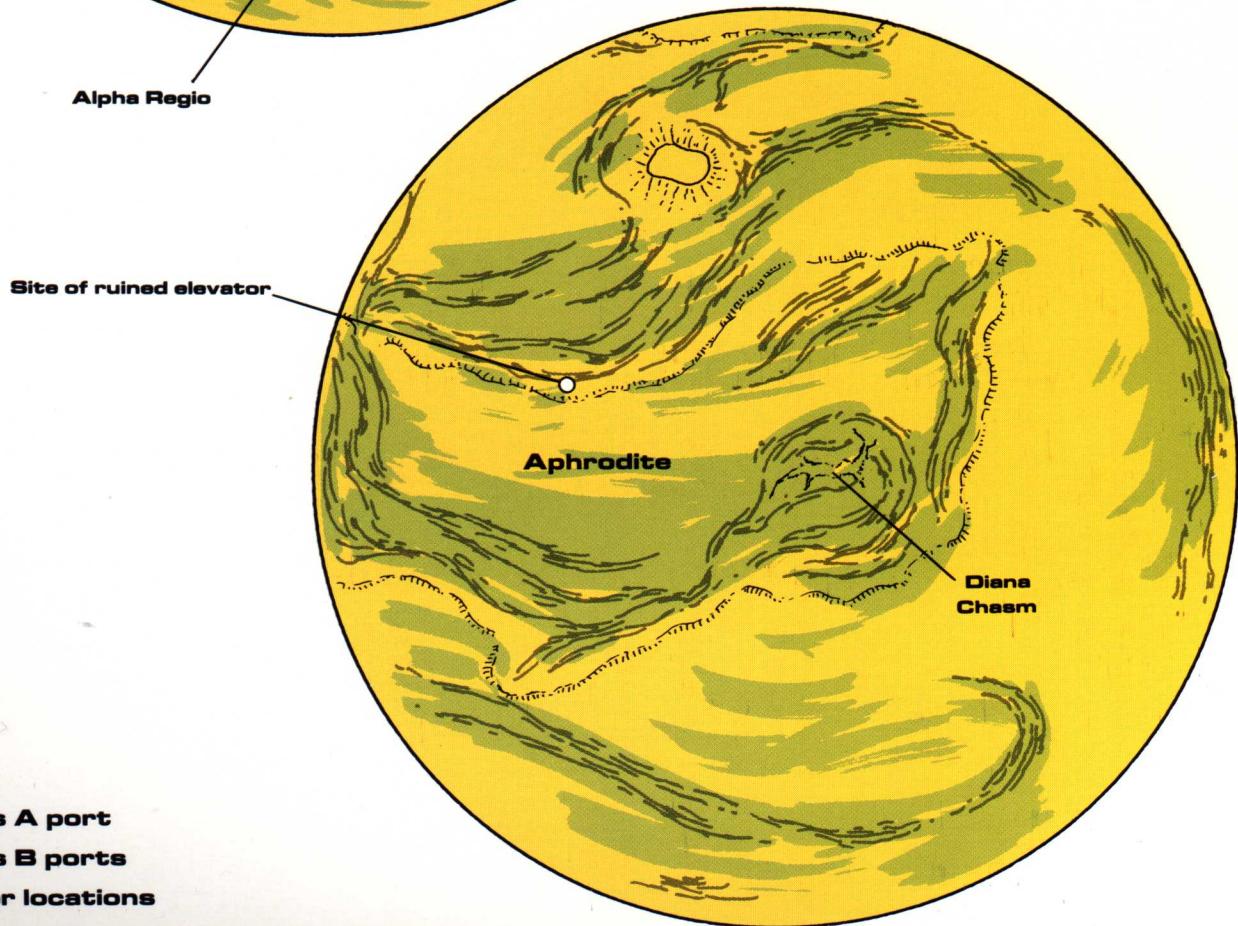
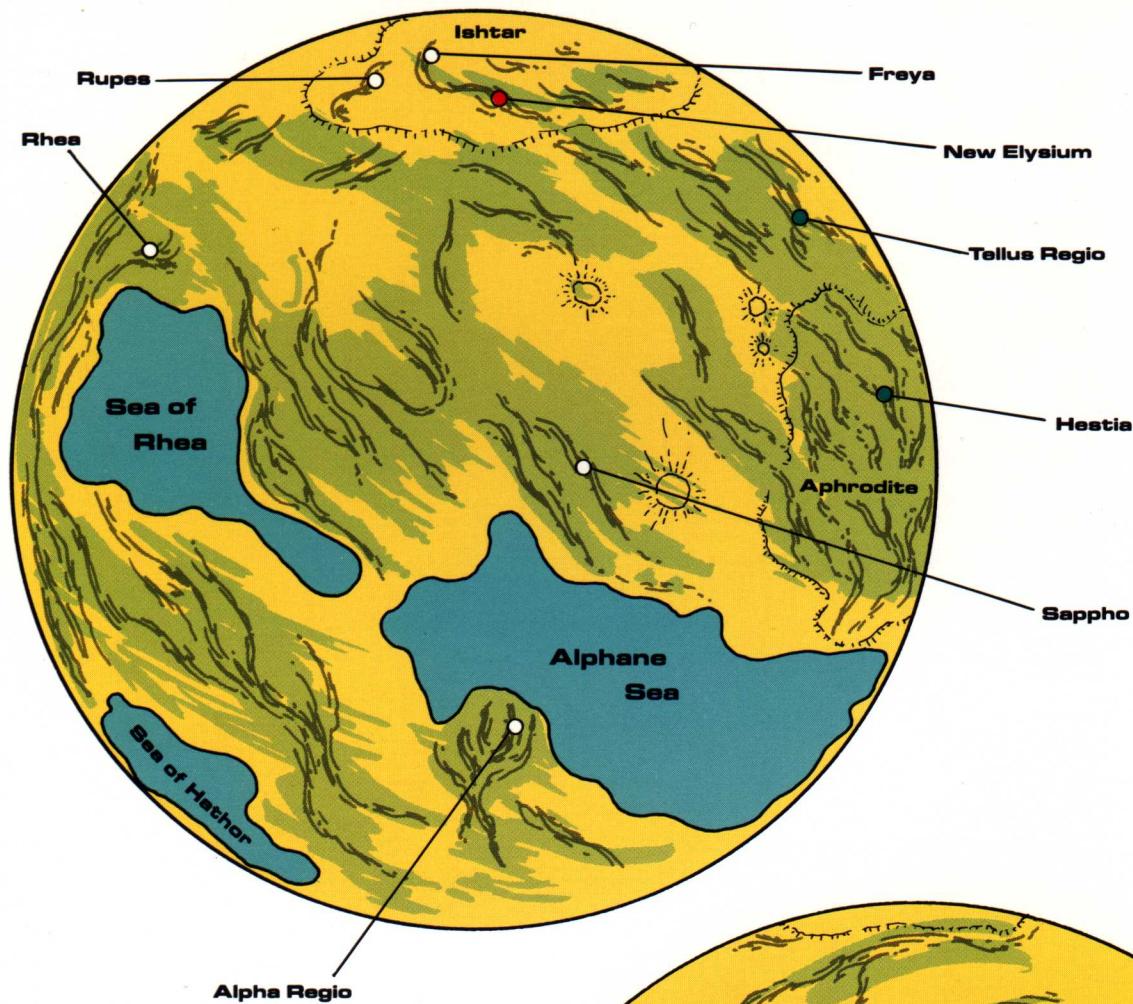
Four Class C, at Archimedes, Clavius, Tranquility, and Keeler

Major imports: Water, heavy metals, food, and raw materials

Major exports: Technology, investment capital, weapons, and spaceships



VENUS



- Class A port
- Class B ports
- Other locations

2nd Planet of Sol System

Orbital radius: 67,270,000 mi. (.72 AU)

Diameter: 7,520 mi.

Period of revolution: 225 days

Period of rotation: 243 days

Gravity: 90% Earth normal

Escape velocity: 23,000 mph

Surface temperature: 300°F (lowlands), 100°F (mountaintops)

Atmosphere: Acidic, high pressure; protective suits required for humans below 5,000 feet

Status: Partially terraformed; settled by four principal population groups

Population: 90,000,000

Government: Theocracy; family-oriented clans

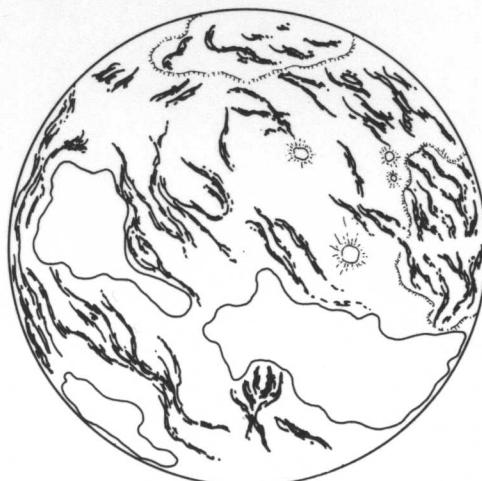
Ports: One Class A, at New Elysium

Two Class B, at Tellus Regio and Hestia

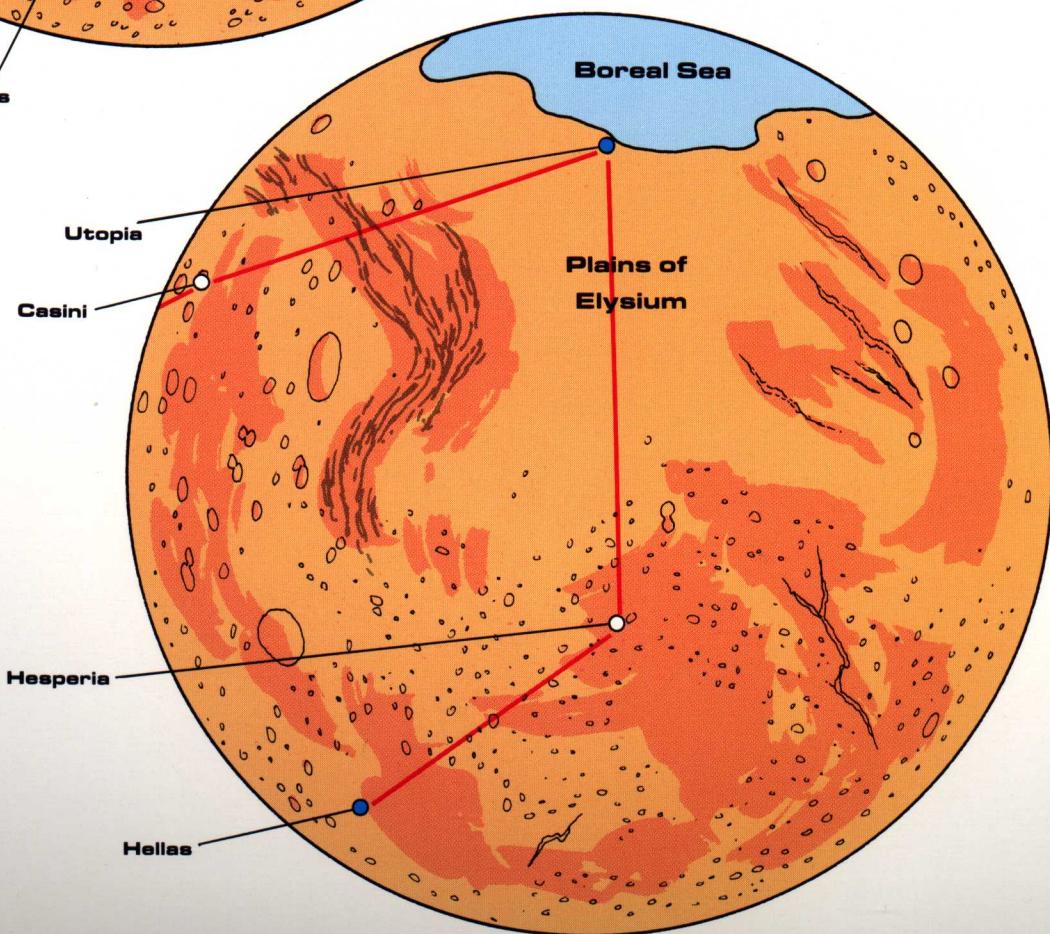
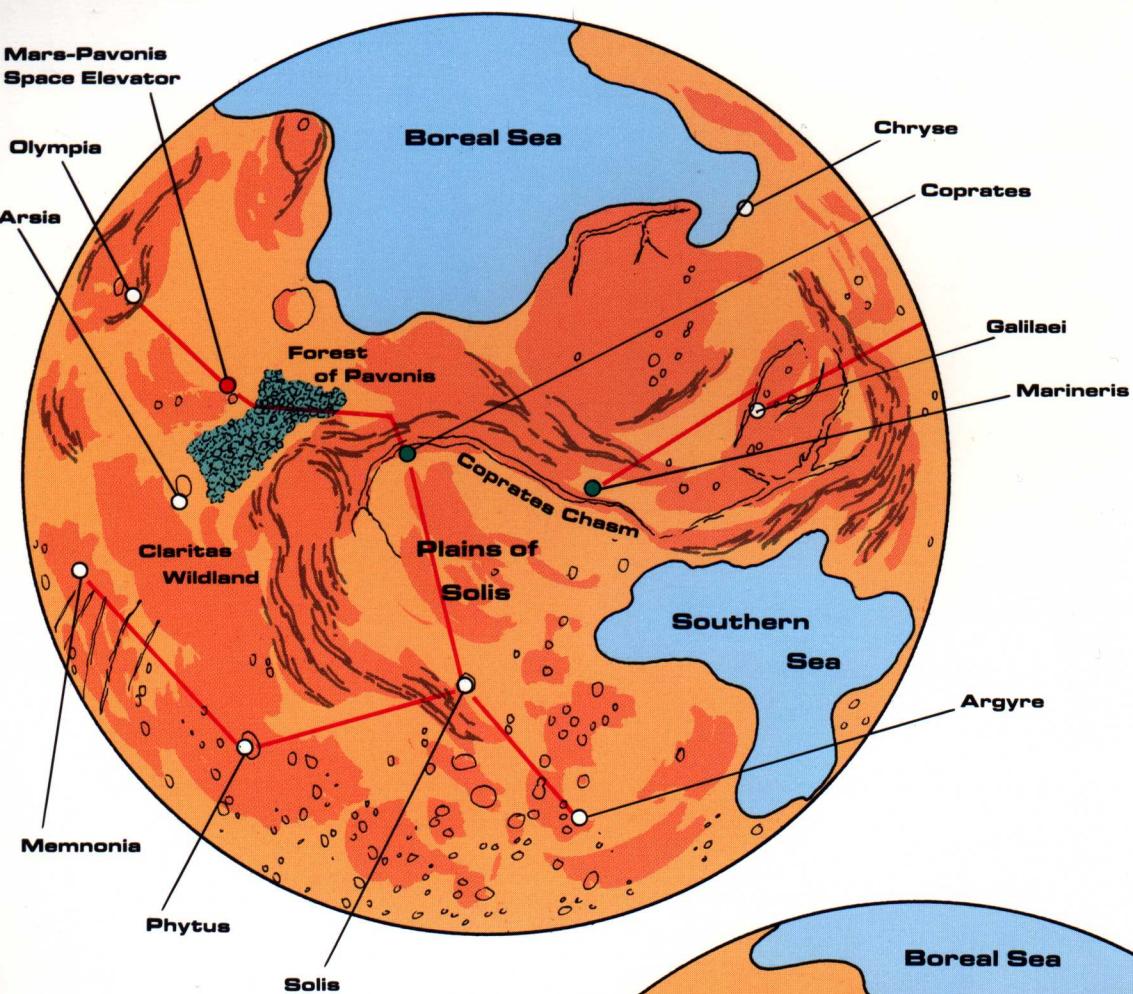
Other prominent locations: Freya, Rupes, Rhea, Sappho, and Alpha Regio

Major imports: Technology, spacecraft, weapons, metals, alloys, and gems

Major exports: Drugs, bioengineered animals, exotic foods, and chemicals



MARS



- **Class A port**
- **Class B ports**
- **Class C ports**
- **Other locations**

MARS

4th Planet of Sol System

Orbital radius: 141,710,000 mi. (1.52 AU)

Diameter: 4,200 mi.

Period of revolution: 687 days

Period of rotation: 24½ hours

Gravity: 38% Earth normal

Escape velocity: 11,160 mph

Surface temperature extremes (at equator): -80°F to +20°F

Atmosphere: Thin, concentrated in lowlands

Status: Extensively terraformed; most powerful planet in system

Population: 253,000,000

Government: Despotic corporate socialism

Ports: One Class A, in orbit above Pavonis

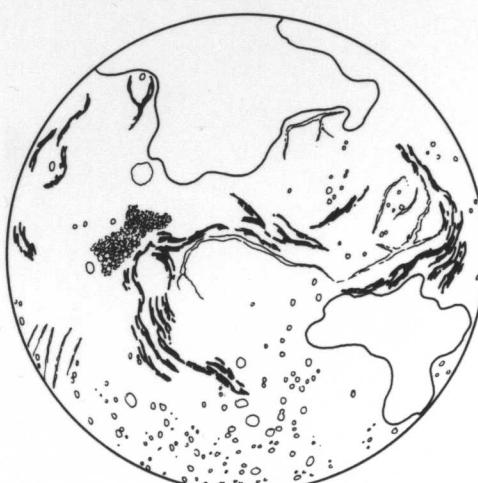
Two Class B, at Coprates and Marineris

Three Class C, at Pavonis, Utopia, and Hellas

Other prominent locations: Olympia, Chryse, Galilaei, Arsia, Memnonia, Phytus, Solis, Argyre, Casini, and Hesperia

Major imports: Luxury goods, gems, rare metals, and wines

Major exports: Technology, weapons, and ships



BUCK ROGERS



BUCK ROGERS

Native of Chicago, USA, Old Earth 10th-level Terran rocketjock

Str 17 Int 14
Dex 18 Wis 13
Con 15 Cha 16
Tech 10

AC 4 (smart suit) hp 55

Originally a top fighter pilot in the 20th Century, Buck is a man out of the past, catapulted by a strange sequence of events into his world's own future. In the year 1999, Col. Anthony "Buck" Rogers volunteered to go into space in an attempt to shoot down an enemy battle sattellite, using a fighter plane modified for space travel and equipped with an experimental cryogenic life-suspension system developed by the brilliant and eccentric Dr. Faustus Huer.

During the battle, the cockpit of Buck's ship was ruptured and the vessel was blown out of orbit. As the cold of deep space began to close in, Huer's cryogenic device was automatically activated. Miraculously, it worked, and thanks to a set of unforeseen but fortunate circumstances Buck was plunged into a deep state of suspended animation that allowed him to escape death for centuries. Considered lost in action, Buck Rogers became a legend among 20th-Century heroes and a source of inspiration for freedom fighters of the future.

After more than four hundred fifty years, Buck awakened to a very strange new world: an Earth controlled by Martian invaders and a solar system filled with strange, advanced technologies and odd, gene-twisted humans. Rescued by members of the New Earth Organization (a rebel band dedicated to breaking the tyranny of the Martian superpower, RAM), Buck quickly found himself the center of an epic conflict spanning the width and breadth of the entire solar system. Luckily, being Buck Rogers, he was equal to the job.

Buck stands over six feet tall, has sandy brown hair and a rangy, muscular frame. A simple, direct kind of guy, he has overwhelming confidence and optimism, a can-do mindset that runs completely counter to the self-centered, mercenary mentality of the 25th Century. Buck hates to see helpless or innocent people harmed, and just hearing about such injustices can provoke cold-blooded rage in the normally affable rocketjock. Buck's word also means a great deal to him—he

never makes a promise he doesn't intend to keep, no matter what it takes. He is even-tempered and rarely gets mad, but when he does, watch out!

Buck also has a romantic streak; as a fighter pilot and now as a rocketjock, he's always been a ladies' man and has the charm to match his good looks. His main interest in the 25th Century is the lovely but hot-tempered Wilma Deering. A definite chemistry exists between them, made all the more interesting when the two are thrown together on some of NEO's toughest missions, but so far nothing serious has developed. Another romantic complication is in the beautiful (but lethal) form of Ardala Valmar, RAM heiress and part-time information broker.

All in all, Buck retains the American "right stuff" attitude that made him a top fighter ace back in his own day; this, and the legend that has grown up around him over the intervening years, has made him an invaluable player on the stage of interplanetary politics. The stage is set for the right man to lead Earth out from under RAM's domination. Buck Rogers is that man.

Traits: Easygoing, smart, a bit cocky (comes with being a fighter jock); stands up for the little guy; honest and stubborn. Extensive knowledge of Earth military history. Loves to fly anything.

Locations: Chicagorg (his main home on Earth), Mars, deep space and anywhere there's a fast ship.

Trademarks: A charismatic grin, blue NEO uniform with full military package, a rocket pistol in one hand and an antiquated .45 caliber Colt in the other. Has no personal spacecraft at this time, but can fly anything.

Buck's gun: Unique among the weaponry of the 25th Century, the .45 caliber pistol that survived through the centuries along with Buck is his most distinctive trademark—but he only shows it to those he intends to use it on. It has the same basic game characteristics (range, damage, ROF) as a rocket pistol, but Buck gets a +2 bonus to hit whenever he uses it. The bullets, being "only" bullets, are immune to the sorts of electronic defenses that can throw off a smart shell from a rocket pistol. The bad news is that bullets are in very short supply; he carries only 20 extra shells (in addition to the gun's full load of 6 shots) at any time, and can only get more when he's at one of the few NEO bases that has the facilities to manufacture them.

WILMA DEERING



WILMA DEERING

Native of Chicagorg Arcology 8th-level Terran warrior

Str 14 Int 15
Dex 16 Wis 10
Con 13 Cha 16
Tech 8

AC 4 (smart suit) hp 52

Wilma Deering was born in the large city-state that rises above the shoreline west of Lake Michigan. Her parents were active Reconstructionists, devoted to the reunification of the nations of Earth as independent and self-governing entities. Both of them disappeared while on a diplomatic mission. RAM was suspected for the disappearances and supposed deaths, but nothing has ever been proven.

Wilma fought for several years as an independent "freedom fighter" (RAM calls her a terrorist), sabotaging RAM installations on Earth. She was eventually captured and incarcerated first on Mars (from where she escaped) and then on Calypso (a moon of Saturn). Wilma does not talk much about her imprisonment in either place, except to say it was there that she made many of her contacts among other revolutionaries, criminals, and pirates. She got free from Calypso during a raid by the infamous pirate Black Barney, and soon made her own name as a privateer in the reaches between Mars and the Asteroid Belt, preying primarily on RAM ships.

After several months, Wilma returned to Earth to officially join NEO, resuming her effort to free her home world from RAM and its Protectorate puppet state. For her actions, she has been sentenced to death in absentia by the Directorate of RAM, with a bonus going to the corporate officer whose troopers bring her down.

Wilma is a tall, striking strawberry blonde with a warm personality. Beneath that serene-looking surface lies an explosive temper (Wilma isn't above throwing things to make a point) and some deep-set opinions about freedom in general and RAM in particular. Wilma feels there is no middle ground in a battle for liberation, and as such can be merciless in a fight. Yet for all of this, she's anything but a humorless revolutionary. She has an

impish sense of humor, a fair knowledge of history and popular culture, and can get off a quick quip with the best of them. She also has a weakness for reading romance novels (something Buck teases her about), which may have contributed to her falling for Killer Kane's smooth lines.

As a result of the loss of her parents, Wilma tends to be overprotective of both her younger siblings (Sally and Roberto "Buddy" Deering) or anyone else she considers a friend. Balancing this concern for others is a wild, irrational streak to put herself at personal risk in order to get the job done, particularly if someone she cares about is in danger.

One person who sets off this wild streak is Buck Rogers. The mutual attraction between Buck and Wilma was obvious from the first. But between staying alive and battling RAM, neither one of them has had much of a chance to explore the romantic possibilities.

The other barrier between Wilma and Buck is Killer Kane. Still drawn to the dark, sardonic rock-etjock, Wilma's emotions wildly seesaw between absolute loathing and romantic longing. To Buck, Kane is a snake who needs to be stomped, and he has no patience for Wilma's ambivalent feelings.

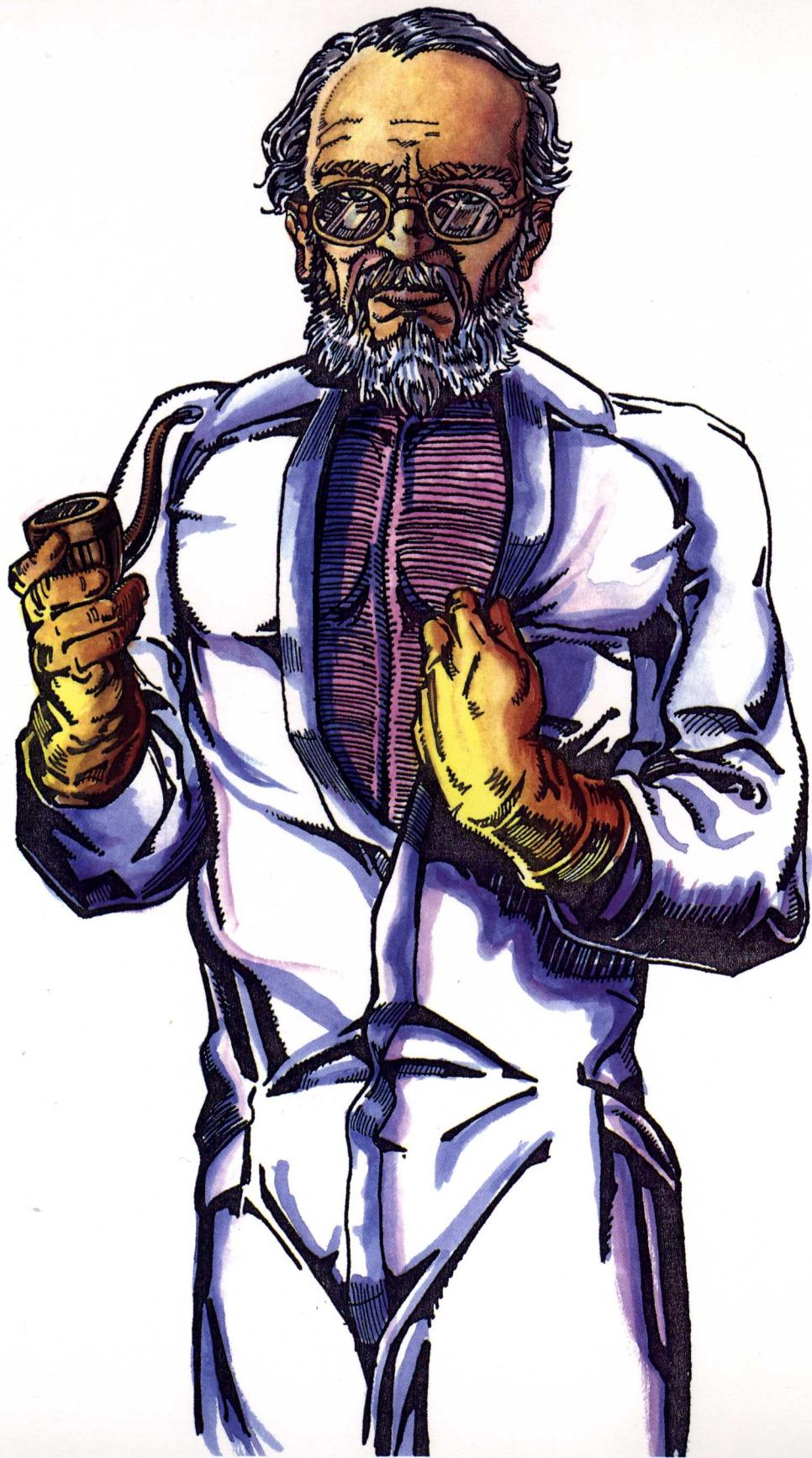
As comrades in arms, Wilma and Buck work together quite well; she respects his combat sense and tactical brilliance; he relies on her judgment and fighting skills. And even if they haven't figured it out yet, their friends and enemies are already starting to see them as an unstoppable team—the team that they hope will lead the forces of NEO to victory.

Traits: Hot-tempered, passionate (either about a cause or a romance), stubborn, soft-hearted where children or other helpless things are concerned; can be an extremely ruthless fighter when she needs to be.

Locations: Chicagorg, the Sprawls, Coprates, deep space, and the Belt.

Trademarks: Flowing blonde hair, piercing blue eyes, blue NEO uniform with full military package, laser pistol and a laser knife hidden in a sheath behind her neck, various gadgets for breaking, entering and assaults. No particular ship.

DOCTOR HUER



DOCTOR HUER

**Created from pirated software, Chicagorg
Native (in original form) of Chicago,
USA, Old Earth
8th-level Digital Personality**

**Str n/a Int 18
Dex n/a Wis 17
Con n/a Cha 15
Tech 15**

AC 2 hp 80

Doctor Huer is a living program, a computer-generated entity created by NEO to help Buck Rogers get acclimated to the far future. The sudden cultural shock of moving between times was so great that Buck's new allies felt he needed a "seeing-eye dog," someone who was capable of explaining the differences in society and fill in 450 years of history. Their creation, officially known as Huer.dos, is based primarily on Buck Rogers's best friend in the 20th Century, the now-famous Dr. Faustus Huer.

The original Dr. Huer was a brilliant, if eccentric, scientist. At the time of Buck's original mission in the 20th Century, Dr. Huer already possessed degrees in physics, chemistry, biology and philosophy. A restless maverick, he was only barely accepted by the scientific community, whom he tended to regard as stuffy paper-pushers. With a pretty good feel for "breadboarding" his own inventions, he was a competent technician as well, and it was because of this ability that he was brought in on the secret military project involving Buck Rogers. It was Dr. Huer's design for a life-suspension system that enabled Buck to survive exposure to the cold and vacuum of outer space—although neither the good doctor nor

anyone else at the time knew just how well the system had worked.

Like the original doctor, Huer.dos is also a brilliant eccentric (after all, the personality engram was based on Buck's recollections, and Buck knew Huer pretty well). As a computer-generated persona, Huer's appearance varies, but when normally accessed as a three-dimensional hologram for conversation appears as a good-looking, reasonably athletic man in his mid-fifties.

Huer.dos was programmed to interlock with Buck's personality, creating a persona that would dovetail neatly with Buck's needs. Where Buck is blunt, Huer is diplomatic. Where Buck is straightforward and a regular guy, Huer is much more refined and charming. As Buck has become more of a part of NEO's operations, his "sidekick" has also found himself a niche as a NEO spokesman, diplomat, and political wit. Computer ambassadors aren't all that uncommon in the 25th Century, and what better ambassador than one who can go anywhere in seconds? But Huer.dos's greatest strength is within the computer systems of the future itself. In his own element, he is a vicious fighter and dangerous opponent. When dealing with Buck he is more human, and therefore more vulnerable.

Traits: Unflappable, eccentric, brilliant, a little egotistical; constantly wandering off on strange tangents.

Locations: Anywhere there's an access to his computer network (phones, radios, TV's, etc.).

Trademarks: Dapper dresser; dry, amused voice with slight accent. Occasionally likes to generate small props along with his basic holo image, such as pointers, pipes, pets, and chairs.

ARDALA VALMAR



ARDALA VALMAR

Native of Coprates, Mars 8th-level Martian rogue

Str 13 Int 16
Dex 12 Wis 14
Con 9 Cha 18
Tech 10

AC 7 (light armor) hp 32

Ardala is a statuesque, dark-haired Martian beauty (looking more like a true human than many of her race), a fashionable socialite, and a dangerous trader in black market information. Her family has worked for and intermarried with the Holzerheins, RAM's ruling family, and as such she has a great deal of power—if not at her direct disposal, then in the hands of those who are easily manipulated by her.

The future is the age of the data bank and the computer. Ardala is a broker in secret and dangerous information, using any data she acquires for personal gain, and in particular to advance her own high standard of living. She is a cold-blooded businesswoman, acquiring major holdings in large organizations through blackmail and underhanded dealings, and just as ruthlessly cutting them loose when she is done with them. She treats other people in the same fashion, as pawns to be manipulated and sacrificed to advance her own ends.

Ardala has made and lost several fortunes, usually through letting her own greed get the better of her, and taking wilder and greater chances. Those she has manipulated and betrayed do not kill her only because she has incriminating data squirreled away on most of the important individuals of the solar system. Among her investments includes a private orbital base whose sole purpose is to scan transmissions and information, and thereby indicate to her possible areas where she may make a profit.

Ardala's match is the equally devious Killer Kane. Occasional allies, lovers, and enemies, each keeps a hold over the other with threats of blackmail, hidden information and just plain old-fashioned treachery. (It's rumored that Kane actually does have something concrete on Ardala, but the exact nature of this information is vague.) The pair are indeed an evil duo, allied only so far as their own greed allows. The only thing they always have in common is an obsession with Buck Rogers—Kane wants him destroyed, while Ardala merely wants him.

Like many of Ardala's pet peeves, Buck Rogers represents something she wants but can't quite get—first, as a frozen body stolen from her by NEO, which barely beat her to the place where Buck was found; later, as the victorious NEO general who foils all her plans; and finally, as the magnetic and handsome warrior who is willing to flirt with her, but in the end keeps Ardala at arm's length. As an accomplished seductress and bender of men's wills, Ardala is both intrigued and enraged that her wiles won't work on this "20th Century bumpkin," little realizing that it is Buck's basic honesty that makes him impervious to her charms.

If Ardala is obsessed by Buck, she's positively livid about Wilma Deering—that gawky NEO tomboy who has managed to snare not only Buck's interest but Killer Kane's as well!

Traits: Vain, cool, calculating; concerned about clothes and jewelry.

Locations: Coprates, occasionally Luna.

Trademarks: Expensive designer clothes, sensual smile, poisoned fingernails, mono knife with a blue-tinted laser. Her personal ship is a modified scout cruiser, the *Princess of Mars*.

KILLER KANE



KILLER KANE

Native of suburban Losangelorg 8th-level Terran rocketjock

Str 15 Int 14
Dex 17 Wis 10
Con 12 Cha 17
Tech 14

AC 4 (smart suit) hp 42

A survivor from the mean streets of ruined Los Angeles, young Killer (if Kane has any other name, very few have ever heard it) rapidly learned that power was the best route to success. Now the greatest turncoat of the 25th Century, Kane has learned to revel in his power and abuse it. Proud and haughty, he is not beyond lying to advance his career, or leaking information to the enemy in order to put rivals away. As the best pilot in the solar system, he felt that he was above the law, and when any irregularities were detected, he used his power and reputation to suppress them.

Rapidly rising in the NEO forces, he made a name for himself as the top rocketjock in the organization. His considerable charisma he turned toward making friends for himself on the NEO Council. Among these new friends was Wilma Deering. The pair were a torrid item before Buck's arrival, during the time when Kane's self-interest and Wilma's fury about RAM domination turned the pair into a dynamite team that captured the imagination of the populace of Earth. Although she was sometimes swept away by his charming manner, Kane's underlying ruthlessness made Wilma usually keep her distance, and their romance became a series of short, clandestine meetings instead of the marriage Kane hoped for. Even now, Kane still truly loves Wilma, so much so that he is driven to act rashly where she is concerned.

This combination of his love for Wilma and his own pride led to Kane's eventual downfall. Captured with Wilma by RAM, Kane bargained for Wilma's life, trading her "escape" from Mars in exchange for his agreement to work on behalf of the Martians. (Wilma doesn't know about Kane's deal with RAM that enabled her to escape, but if she ever thinks about it hard enough to put the facts together, she might come up with the correct assumption.) Whether his original intentions were to betray his new masters and escape himself or not, Kane soon found himself enjoying be-

ing on the "winning side" and went entirely freelance, turning on his former comrades of Earth.

Wilma is Kane's one visible weakness. His other, less obvious, one is his overweening pride. At first, Kane betrayed NEO only to free Wilma. But soon he realized just how much power a clever man could wrest from RAM's hands, and he set out to do just that. He told himself that by working from the inside, he would be able to one day convince RAM to turn Regentship of Earth over to him. With Wilma at his side, Kane the Regent would then lead his people to freedom (under his enlightened guidance, of course). Like many men motivated by pride, Kane is oblivious to the pain and suffering his "dream" will cause for others—he truly believes that the end justifies the means.

Killer Kane is tall and athletic, a deadly opponent in hand-to-hand combat. While not as muscular as Buck Rogers, he is powerfully built, with handsome features, black hair, and piercing green eyes. Kane has a few affectations: A small pencil mustache adorns his sardonic lips, and he prefers to have his personal vehicles painted in dark colors. "Just playing the villain again," as he might say.

With the arrival of Buck Rogers, Kane was faced with a challenger for the title of the best pilot in the solar system. The idea of being displaced by some relic from the past became too much for the arrogant Kane to bear, and soon led him to become Rogers's greatest adversary. Even in this, however, Kane has maintained his own twisted version of honor—in order to prove he is really the best, he has become driven to challenge Buck in direct combat, rather than relying on indirect methods that might be less dangerous to him personally. For Killer Kane is a bitter man: a man who believes that he really is doing the right thing, and that history has unfairly branded him the villain.

Traits: Sardonic, arrogant, cool.

Locations: Luna (in his fortress, the "Mark of Kane"), Coprates, deep space.

Trademarks: Small waxed mustache and a curl of hair falling into his eyes. When on a mission, prefers to wear gray and black. His normal ship is a scout cruiser, the *Rogue*, operating out of Luna.

BLACK BARNEY



BLACK BARNEY

Native of Jovian Trojans

10th-level Terrine (variant) warrior

Str 19	Int 10
Dex 18	Wis 10
Con 18	Cha 8
Tech 13	

AC 0 (battle armor) hp 90

Barney is a genetically modified human, engineered to produce the ultimate warrior. Tall, incredibly strong, well protected by his armor, and with concealed weapons beneath the skin (such as foot-long daggers on the inside of each wrist), Barney is a one-man fighting machine.

Black Barney was one of 150 gennies manufactured at a laboratory in the Jovian Trojans by the Dracolysk Corporation, a RAM division that had fallen on hard times. Barney and his buddies, created by combining human traits with certain reptilian characteristics, were to be fully outfitted as space raiders, increasing the corporate bottom line by attacking rival divisions. Unfortunately, something went wrong and the Barneys escaped, brutally killing their creators in the process.

Unlike most types of gennies, the Barney line was designed to create a subtle feeling of terror and fear in onlookers. Along this line, Barney was created to look moderately human (allowing him to pass most not-too-close inspections), although certain physical features are enhanced to make him appear more frightening and powerful. His voice is inhumanly deep and inflectionless, with a slight, hissing rasp built in. His torso is incredibly muscled, yet he controls it with a dancer's grace. In his characteristic battle armor, Barney projects an aura of inhuman menace.

All of this is not without cost. To achieve this inhuman speed of reflex and balance, the reptilian aspect of Barney's brain has been enlarged at the expense of the higher, or human, brain. Barney is a creature without pity and with only the barest scraps of morality.

Forty-eight of the Barneys died in the corporation's own "training process" designed to weed out the ones that were less than perfect. Another 12 perished when the warriors took over the

manufacturing complex, killing their Dracolysk masters. The rest of the Barneys became space pirates, and over the passage of time only 14 of them have survived. Black Barney is one of them. The rest are known by a variety of names and labels, and not all are pirates any more.

Black Barney is loyal to his master of the moment, but perfectly willing to kill that master when he shows any sign of weakness. His ship, the *Free Enterprise*, is a captured RAM warship, "liberated" from Deimos and manned by lesser genetic warriors. Black Barney met Wilma Deringer briefly on Calypso, when Barney was on a raid rescuing prisoners that he planned to ransom back to their original governments.

Barney is an amoral creature guided by few prime directives. He gives loyalty to those who can beat him, punishment to anyone who gets in his way, and steadfastly believes that the solar system is made for plunder. He is the best at his job, and makes no excuses for his job (killing others and taking their money). At least, that's the way he used to be. . . .

After he was defeated by Buck Rogers—his first "failure"—Barney was astonished to find that he was not immediately killed. At first, he stayed with Buck merely to satisfy his prime directives. But as he followed Buck through successive adventures, a feeling not unlike respect developed within the gennie for the 20th-Century pilot who defeated him.

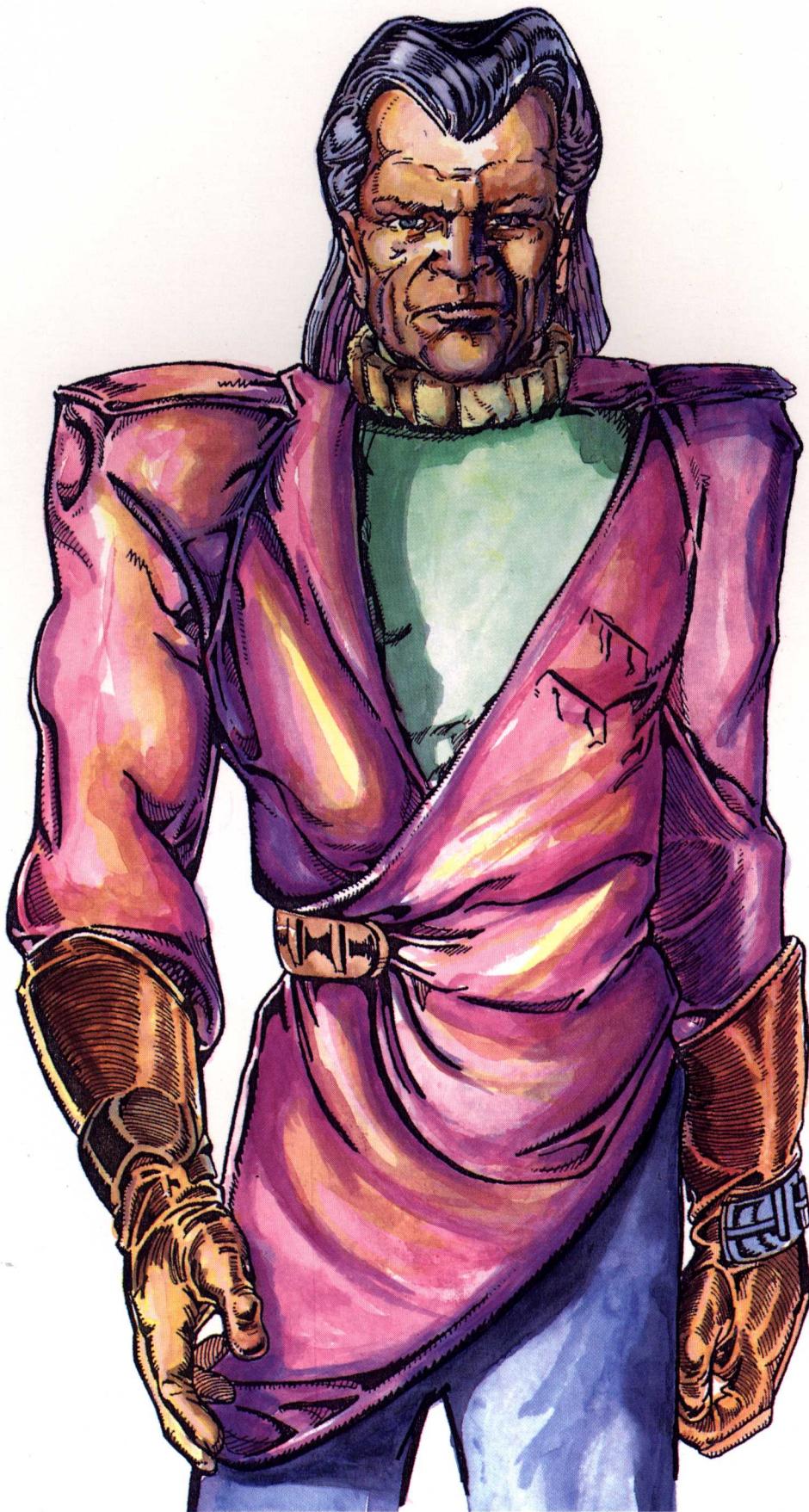
Barney still isn't one for showing feelings or jolly camaraderie. He listens to Wilma only because Buck has ordered him to. His conversation with Buck is usually monosyllabic, but Barney is starting to realize that Buck is a very clever strategist.

Traits: Grim, fond of cruel jokes, vicious; projects an aura of overwhelming menace.

Locations: Usually the Belt, although Barney can and does go anywhere he wants.

Trademarks: Metal-and-plastic space helmet covering his entire face. Scars all over his body. A menacing, very deep voice. Daggers mounted on his arms. The *Free Enterprise*, a specially modified heavy cruiser equipped with a one-of-a-kind camouflage screen.

SIMUND HOLZERHEIN



SIMUND HOLZERHEIN

"Born" in RAM data banks 10th-level Digital Personality

Str n/a Int 18
Dex n/a Wis 18
Con n/a Cha 14
Tech 18

AC 0 hp 95

RAM rose to its current place of power more than 100 years ago through the actions of one Simund Holzerhein, an extremely effective and ruthless businessman. As the great founder aged and his flesh began to fail, Holzerhein arranged to have his mind "uploaded" and made into the basis of a computer personality. Existing as a program within the vast RAM Main system, and with absolute access to every section of RAM's tremendous computer system, Simund is nearly immortal both in world view and life span. His original body is stored in a glass suspension tube in the basement of his palatial chalet overlooking the Mars-Pavonis Space Elevator, with his now nearly dead human brain kept active by life-support modules. In hologram form, he attends all board meetings of RAM, and at odd times he can be encountered stalking the corridors of his kingdom like a light-energized spectre.

Holzerhein, even in human form, was not the nicest individual—fiercely competitive and constantly looking for ways to edge out his competition or step on anyone weaker than himself. As a Digital Personality, he is even more distant, which may be due to the fact he has lost interest in mankind or that (despite his original software) his psyche has decayed. The unsavory elements of his old life that Simund has retained have become stronger and more sharply directed. A cultivated veneer barely covers his savage lust for power and control, while the boredom brought about by decades of noncorporeal existence has increased his appetite for novel forms of cruelty and bizarre sensations—even if he can only experience them through his imagination.

When he chooses to appear as a hologram, Simund is capable of looking any way he wants, but sees no point in playing dress-up for a group of subordinates. His normal "public" appearance is of an older man with hard, wrinkled features and cold, unblinking eyes—the sort of image that he believes commands respect and obedience (and he's not wrong about that). Simund's voice is deceptively soft, laced with the faint Neo-Swiss accent of his youth; he wears expensive, bland clothing.

Although he holds very real and absolute power over the RAM oligarchy, Holzerhein tends to leave the day-to-day management of RAM to his subordinates. The result is a continual power struggle between various factions of RAM for "real" control, while Holzerhein *appears* to be only a figurehead. Factions and divisions of RAM are often working against each other, occasionally in open war, as one official tries to conquer the others and gain both a position on board and access to Holzerhein's input.

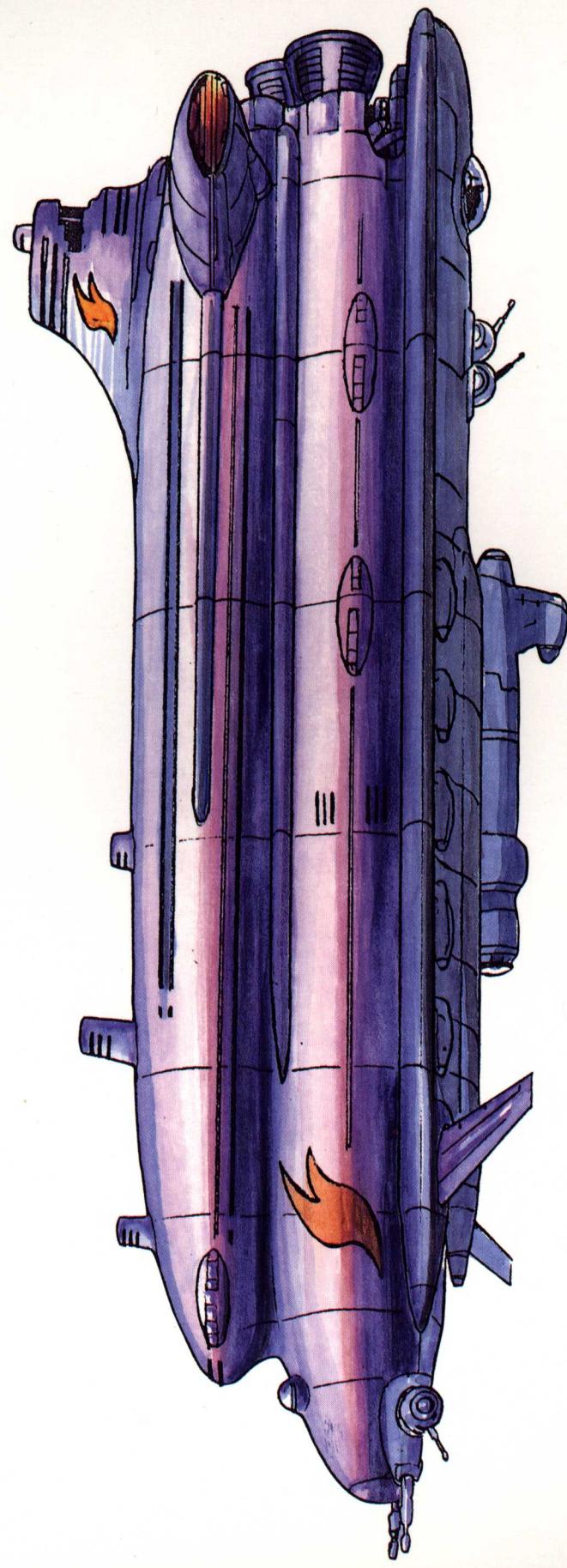
The truth is, Simund is aware of almost every aspect of his sprawling creation—he can get a computerized status report anytime he wants—but in his boredom and bitterness has learned to delight in watching his relatives, friends, and enemies battling in their futile struggles. He secretly longs for some type of real competition—an adversary might be capable of beating him at his own game. One such enemy is Doctor Huer.dos, who truly is capable of battling Holzerhein in the electronic arena. But Holzerhein's greatest nemesis—a threat to all that Holzerhein controls, if not to Holzerhein himself—is the man from the past, Buck Rogers.

Traits: Deceptively calm, remote; mocking laugh.

Locations: Holzerhein Crag, Mars-Pavonis. Also RAM Main computer system, in Coprates Chasm, Mars.

Trademarks: None. Simund makes a point of being nearly invisible to most humans.

LUXUS TRIPPLANETARY



LUXUS TRIPLANETARY

Type: Interplanetary Spaceliner

Armor Class: 8 (Civilian)

Attributes

Tonnage: 550

Length: 1,100 feet

Width: 275 feet

Cargo: 305 tons*

* Weapon space traded for additional cargo capacity

Weapons

3 Pumped Lasers

Crew & passengers: 300

Speed: 1

Reaction Bonus: +1

Hit Points:

Hull 2,200

Sensors/Commo 550

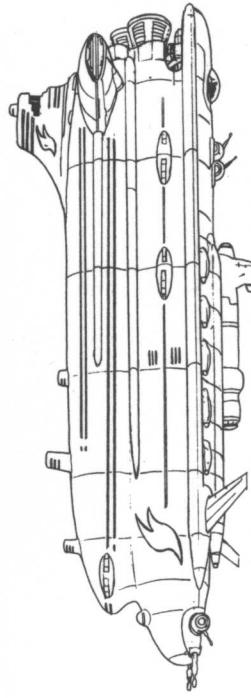
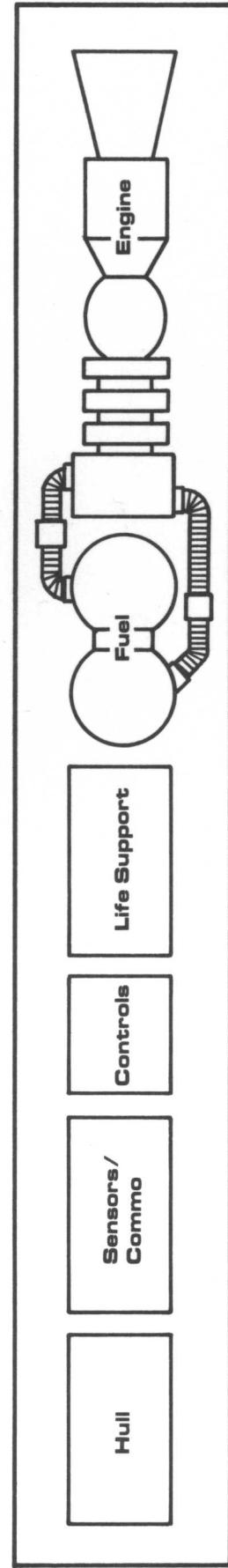
Controls 550

Life Support 1,100

Fuel 1,650

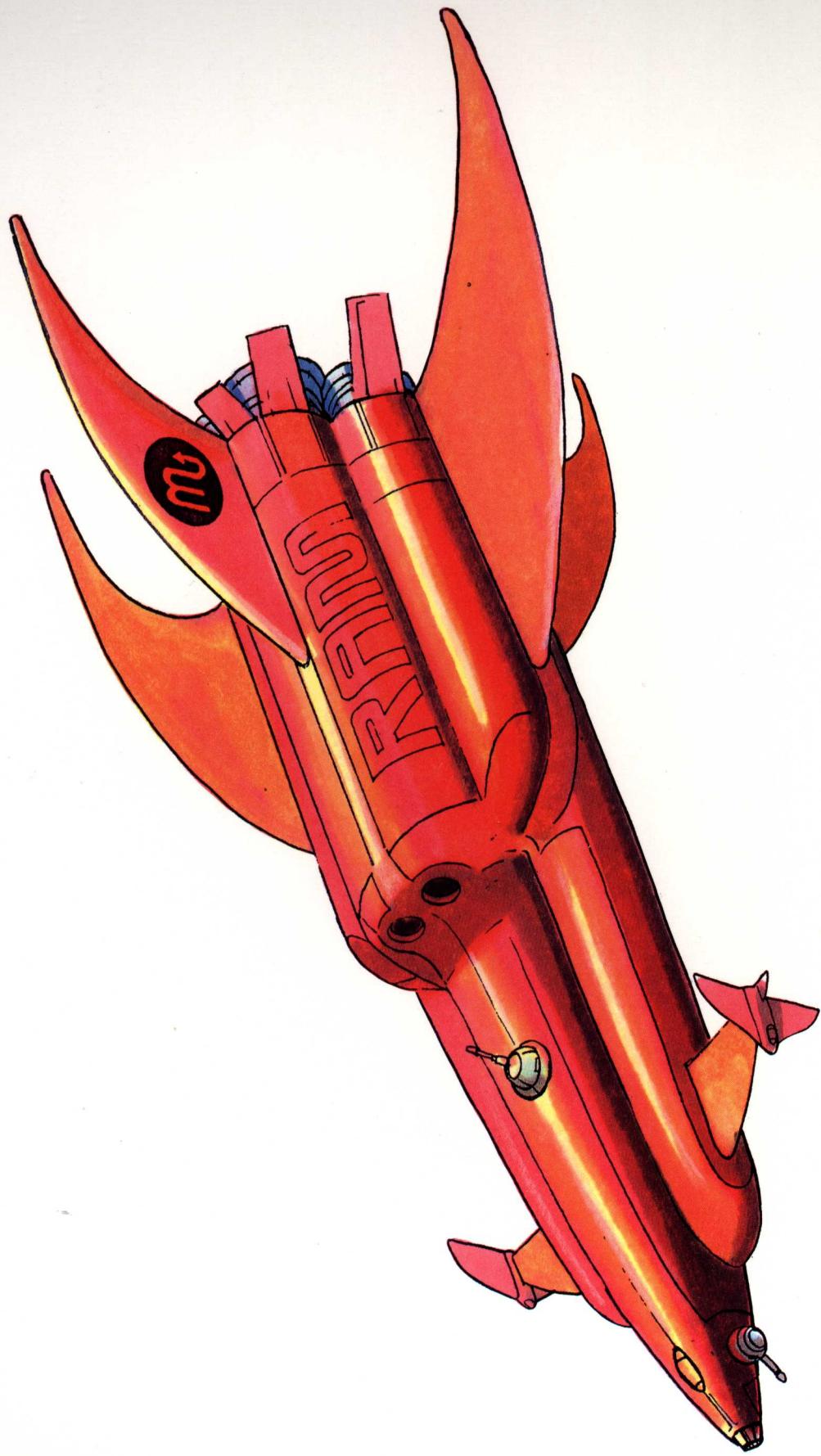
Engine 1,650

AC Defense Bonus: +2



The ultimate in civilian interplanetary transportation, spaceliners like the *Luxus* make regular runs between the worlds of the inner solar system. A liner can dock at a Class A spaceport; if the destination does not have such a facility, the liner goes into orbit and passengers are ferried to the surface in shuttle craft.

RMS CHRYSE



RMS CHRYSE

Type: RAM Heavy Cruiser

Armor Class: 4 (Maximum Military)

Attributes

Tonnage: 500
Length: 1,000 feet
Width: 250 feet
Cargo: 250 tons

Weapons: 5 K-Cannons
5 Heavy Missile Mounts
5 Pumped Lasers
5 Gyrocannons

Crew: 135

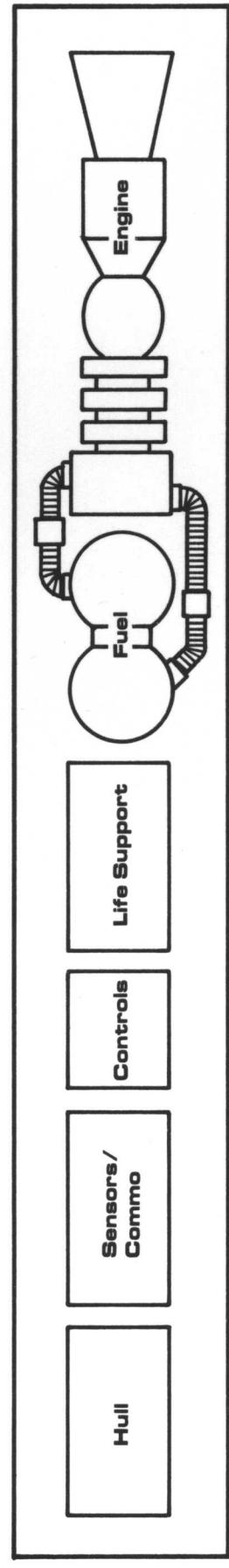
Hit Points:

Hull	2,000
Sensors/Commo	500
Controls	500
Life Support	1,000
Fuel	1,500
Engine	1,500

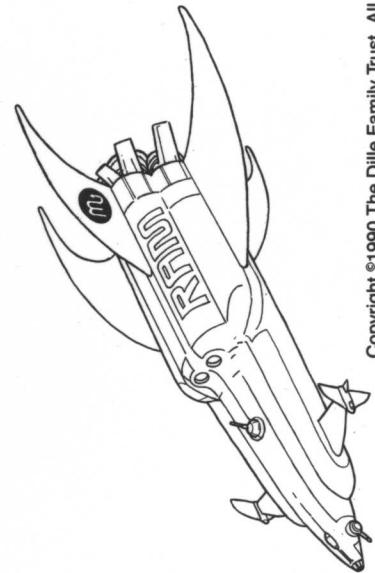
Speed: 1

Reaction Bonus: +1

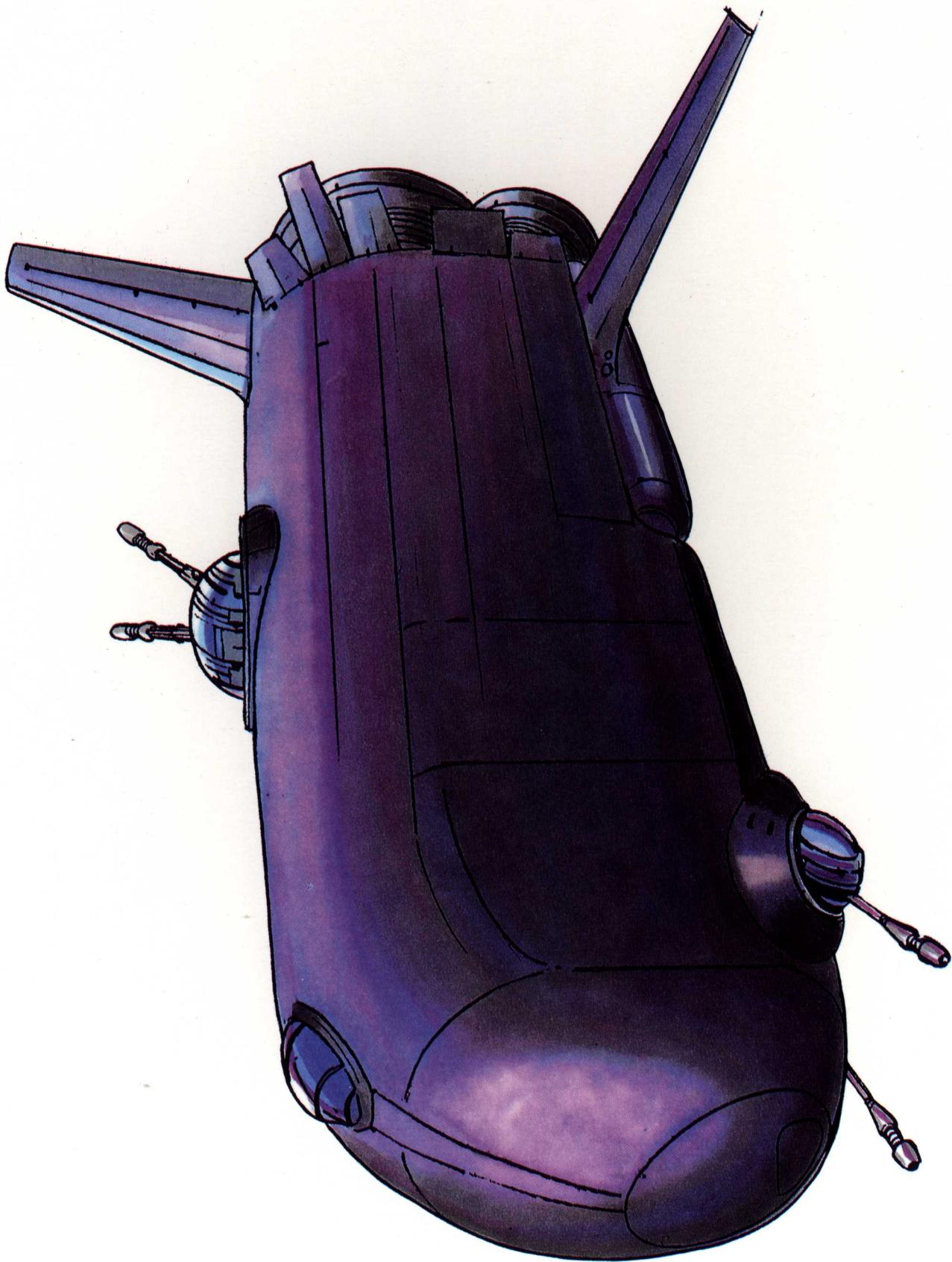
AC Defense Bonus: +2



Heavy cruisers like the *Chryse* are not fast . . . but they don't have to be. They have the durability to stand up to anything that most other ships can throw at them, and the striking power to cripple or destroy a smaller ship in a matter of minutes. RAM usually places its heavy cruisers in strategic locations throughout the inner solar system, so that at least one of them is never more than a two-day flight from a possible trouble spot.



LADY JANE GRAY



LADY JANE GRAY

Type: Light Stock Freighter

Armor Class: 8 (Civilian)

Attributes

Tonnage: 30
Length: 60 feet
Width: 15 feet
Cargo: 15 tons

Weapons

2 Beam Lasers
1 Gyrocannon

Crew: 3

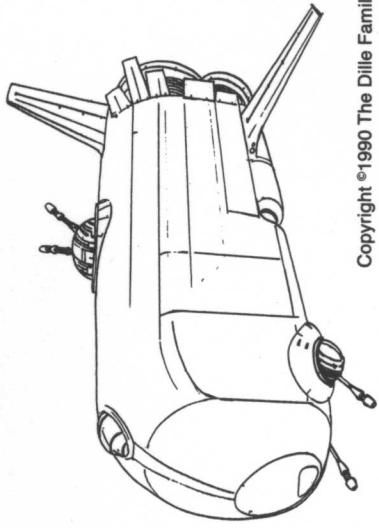
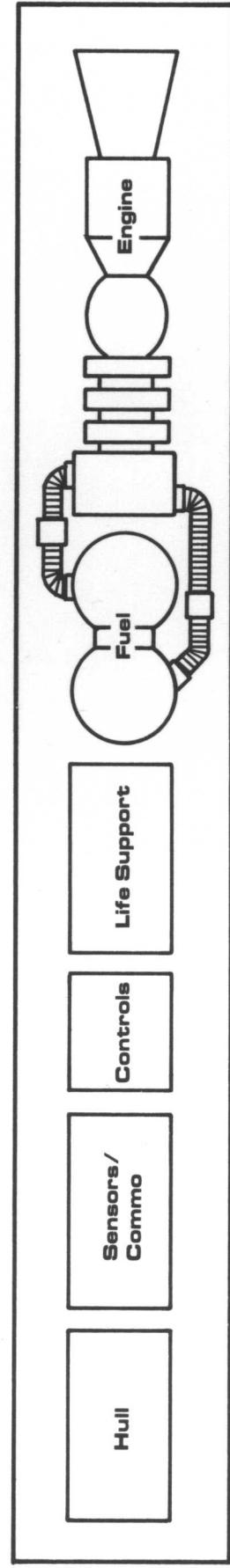
Speed: 4

Hit Points:

Hull	120
Sensors/Commo	30
Controls	30
Life Support	60
Fuel	90
Engine	90

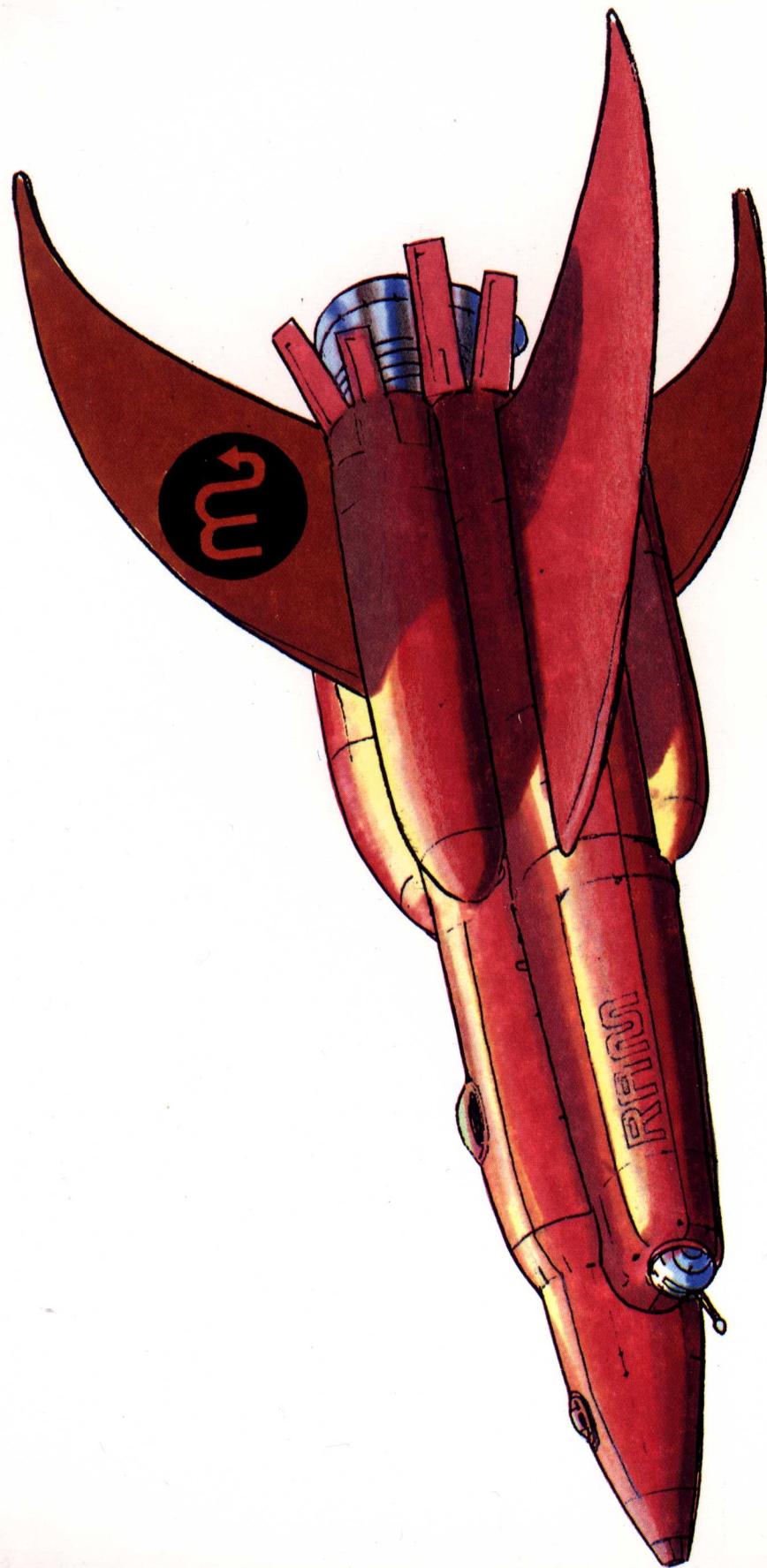
Reaction Bonus: -1

AC Defense Bonus: -2



A perfect example of how looks can be deceiving, the *Lady Jane*—like most ships of its type—presents an ungainly appearance. But especially when it's in the hands of a good pilot, a freighter of this type is capable of outrunning, outmaneuvering, and outshooting many warships. Because they often carry valuable cargo, freighters have to be able to protect themselves.

RMS MAXIMUS ARGYRE



RMS MAXIMUS ARGYRE

Type: RAM Medium Cruiser

Armor Class: 6 (Military)

Attributes

Tonnage: 150
Length: 300 feet
Width: 75 feet
Cargo: 75 tons

Weapons

5 Beam Lasers
3 Gyrocannons
1 Heavy Acceleration Gun
1 K-Cannon

Hit Points:

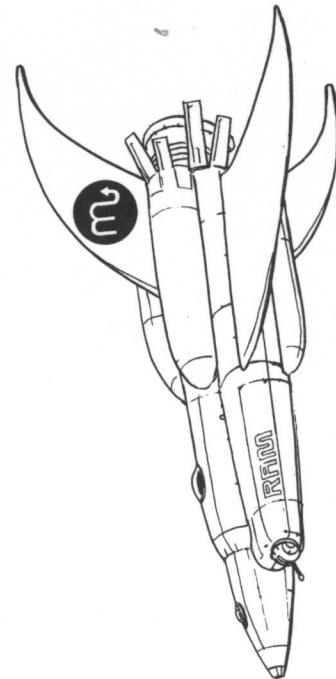
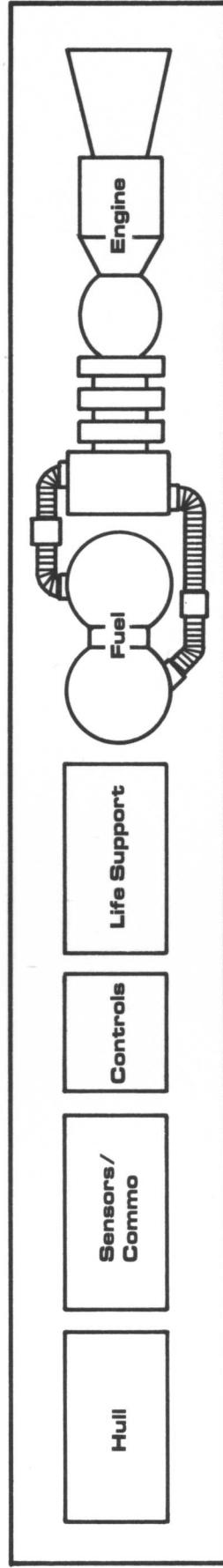
Hull	600
Sensors/Commo	150
Controls	150
Life Support	300
Fuel	450
Engine	450

Crew:

Speed: 2

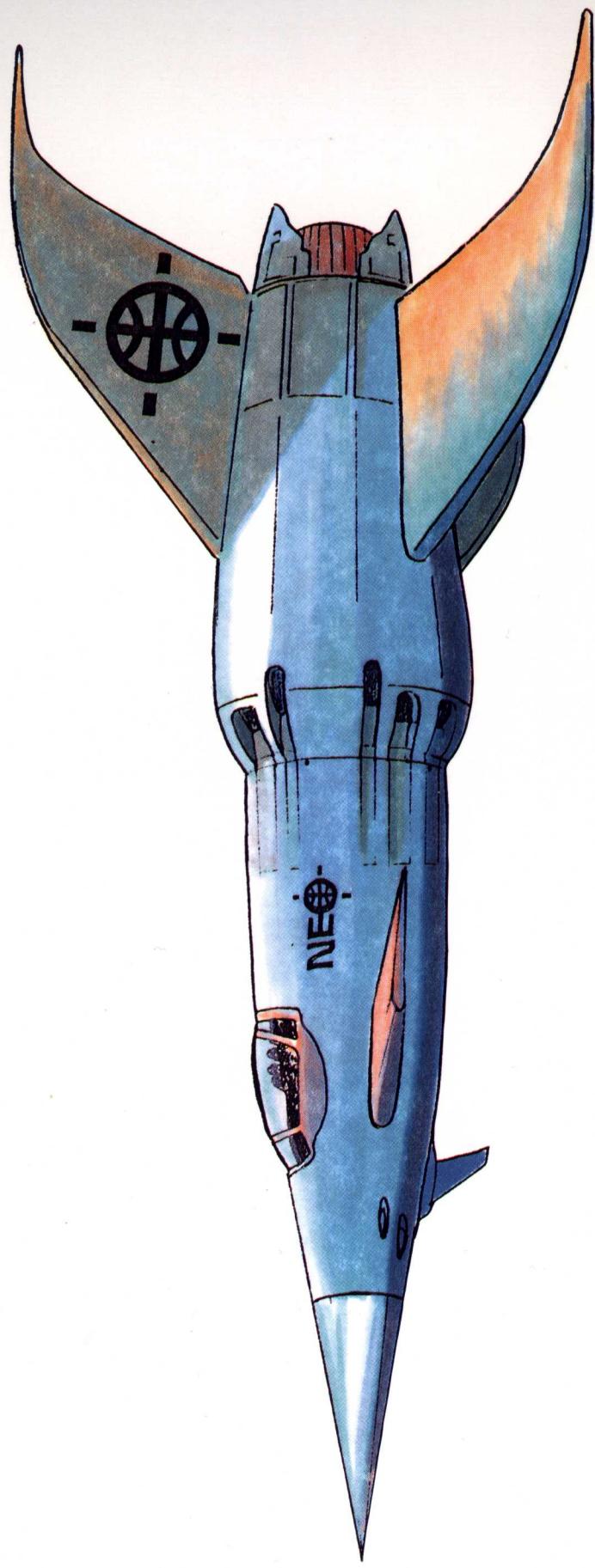
Reaction Bonus: 0

AC Defense Bonus: +1



RAM's battlers and heavy cruisers have a lot more firepower, but it's the medium cruisers like the *Maximus Argyre* that most people in the solar system visualize when they think of "a RAM ship." These are the vessels most often sent out on patrols and intercept missions. They look innocent enough—because most of their heavy weapons are concealed behind retractable panels—but a naive or careless pilot will soon find out just how much of an adversary he's up against.

F-66 STARFIRE



F-66 STARFIRE

Type: NEO Space/Earth Fighter

Armor Class: 6 (Military)

Attributes

Tonnage: 15
Length: 30 feet
Width: 7 feet
Cargo: 7 tons

Hit Points:

Hull	60
Sensors/Commo	15
Controls	15
Life Support	30
Fuel	45
Engine	45

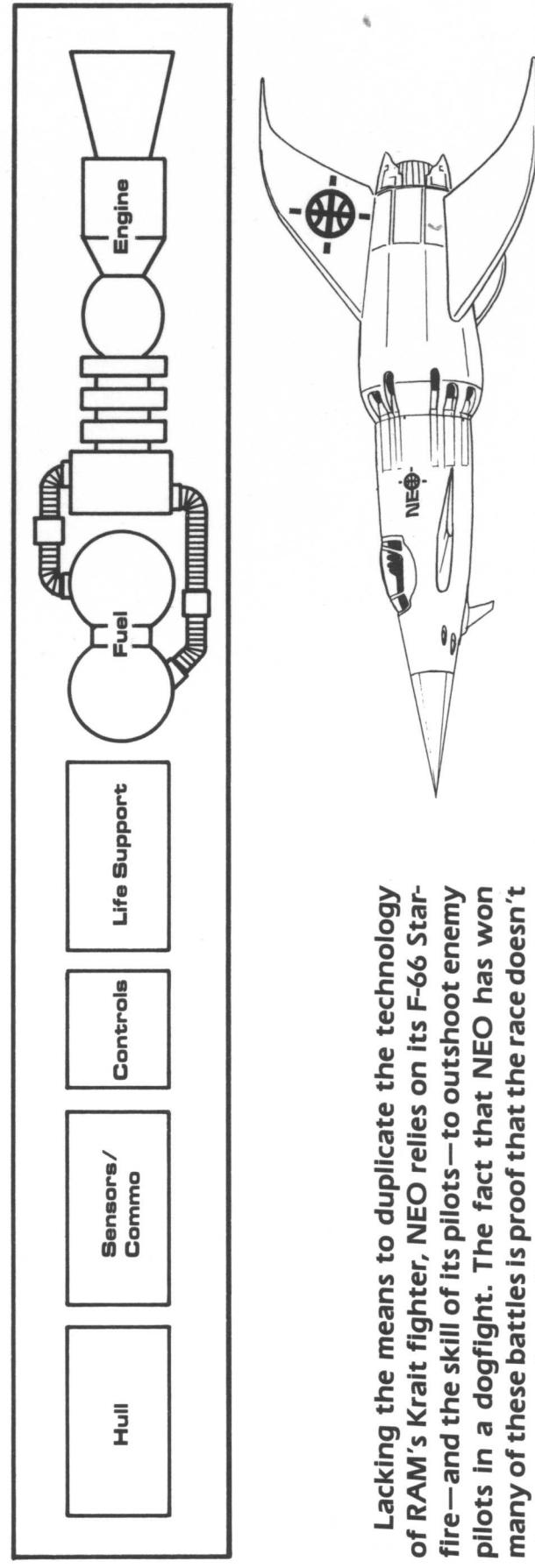
Weapons: 1 Light Acceleration Gun

Crew: 1

Speed: 5

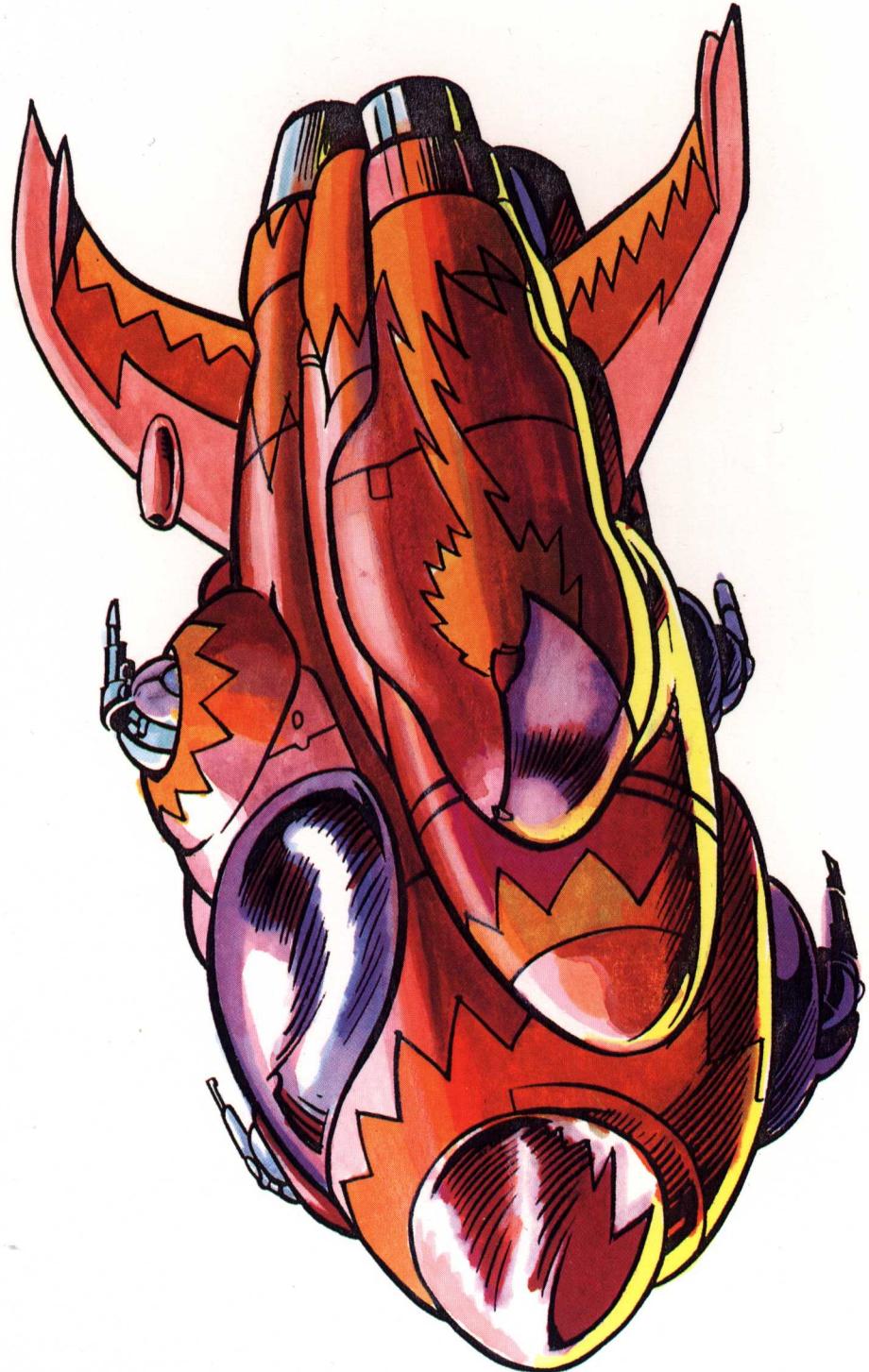
Reaction Bonus: -2

AC Defense Bonus: -4



Lacking the means to duplicate the technology of RAM's Krait fighter, NEO relies on its F-66 Starfire—and the skill of its pilots—to outshoot enemy pilots in a dogfight. The fact that NEO has won many of these battles is proof that the race doesn't always go to the swiftest.

Killer Kane's ROGUE



Killer Kane's ROGUE

Type: Scout Cruiser

Armor Class: 6 (Military)

Attributes

Tonnage: 30
Length: 60 feet
Width: 15 feet
Cargo: 15 tons

Weapons

1 Heavy Acceleration Gun
1 Missile Mount

Crew: 3

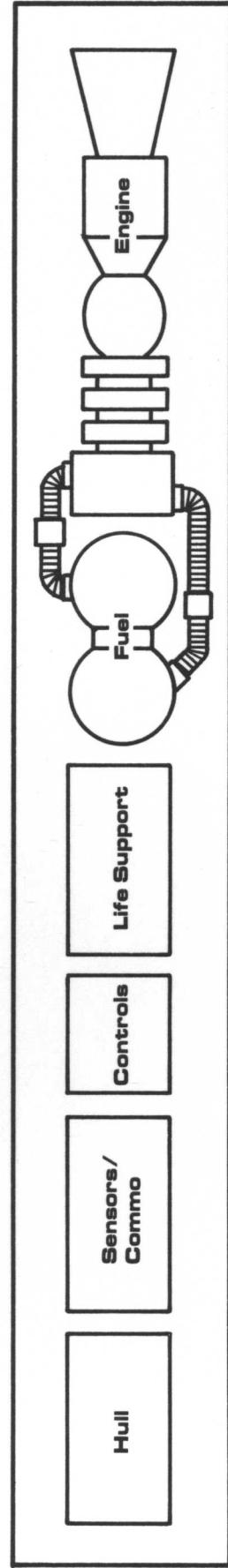
Speed: 4

Hit Points:

Hull	120
Sensors/Commo	30
Controls	30
Life Support	60
Fuel	90
Engine	90

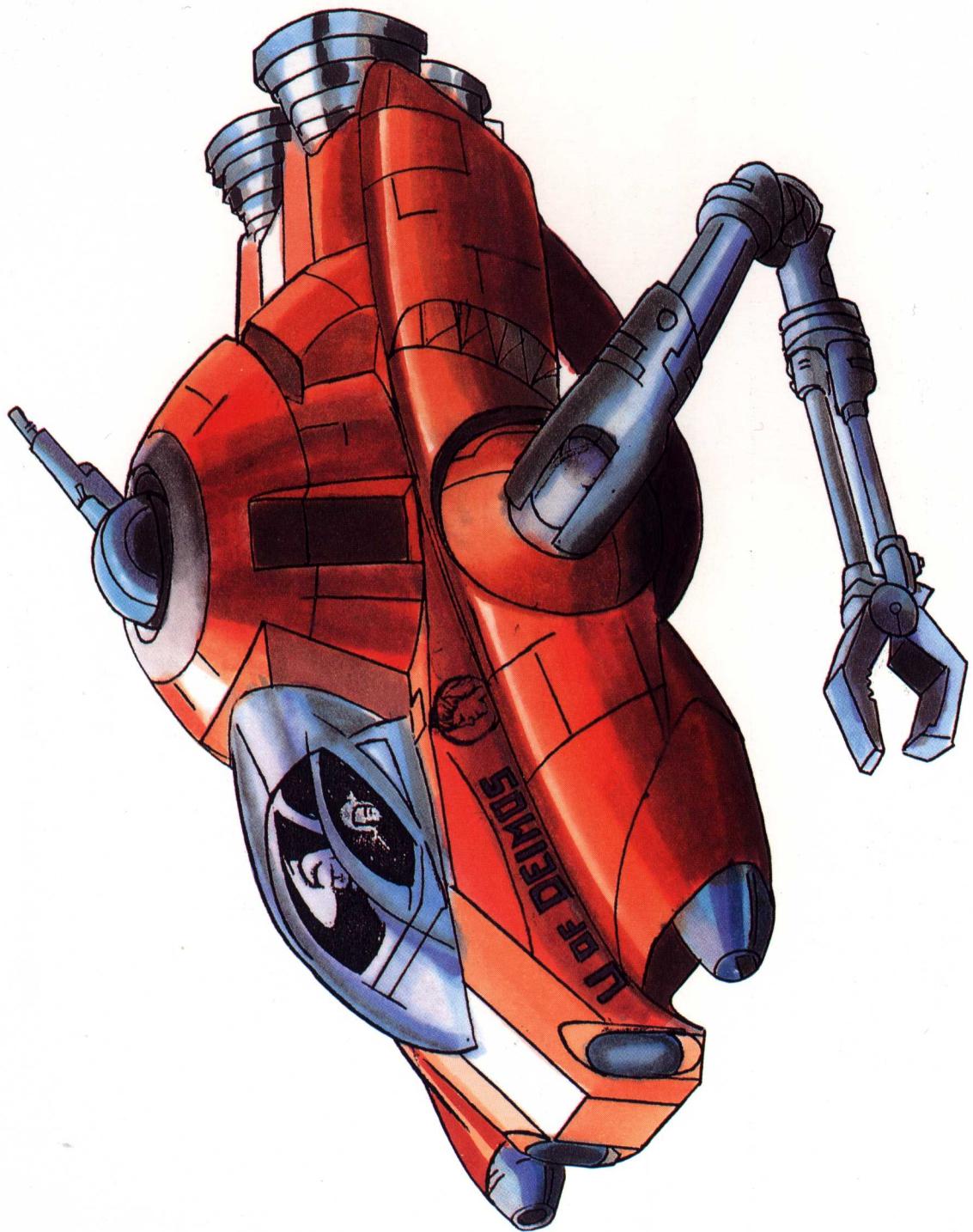
Reaction Bonus: -1

AC Defense Bonus: -4



This speedy scout is Killer Kane's personal cruiser, and is used on his most daring missions. It is well armed, for a ship of its size, and very maneuverable.

U OF DEIMOS



U OF DEIMOS

Type: Asterover

Armor Class: 8 (Civilian)

Attributes

Tonnage: 20
Length: 40 feet
Width: 10 feet
Cargo: 10 tons

Weapons: 1 Pumped Laser

Crew: 4

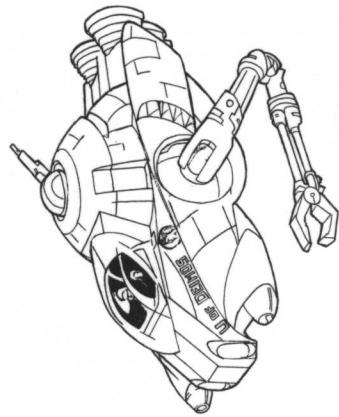
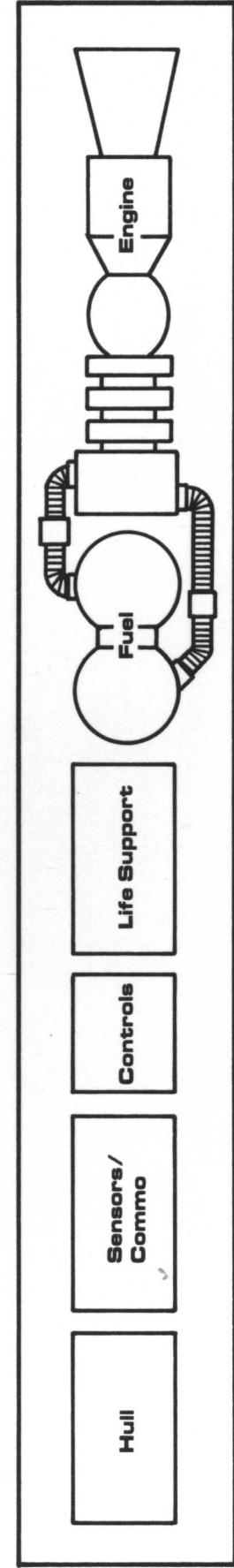
Speed: 4

Hit Points:

Hull	80
Sensors/Commo	20
Controls	20
Life Support	40
Fuel	60
Engine	60

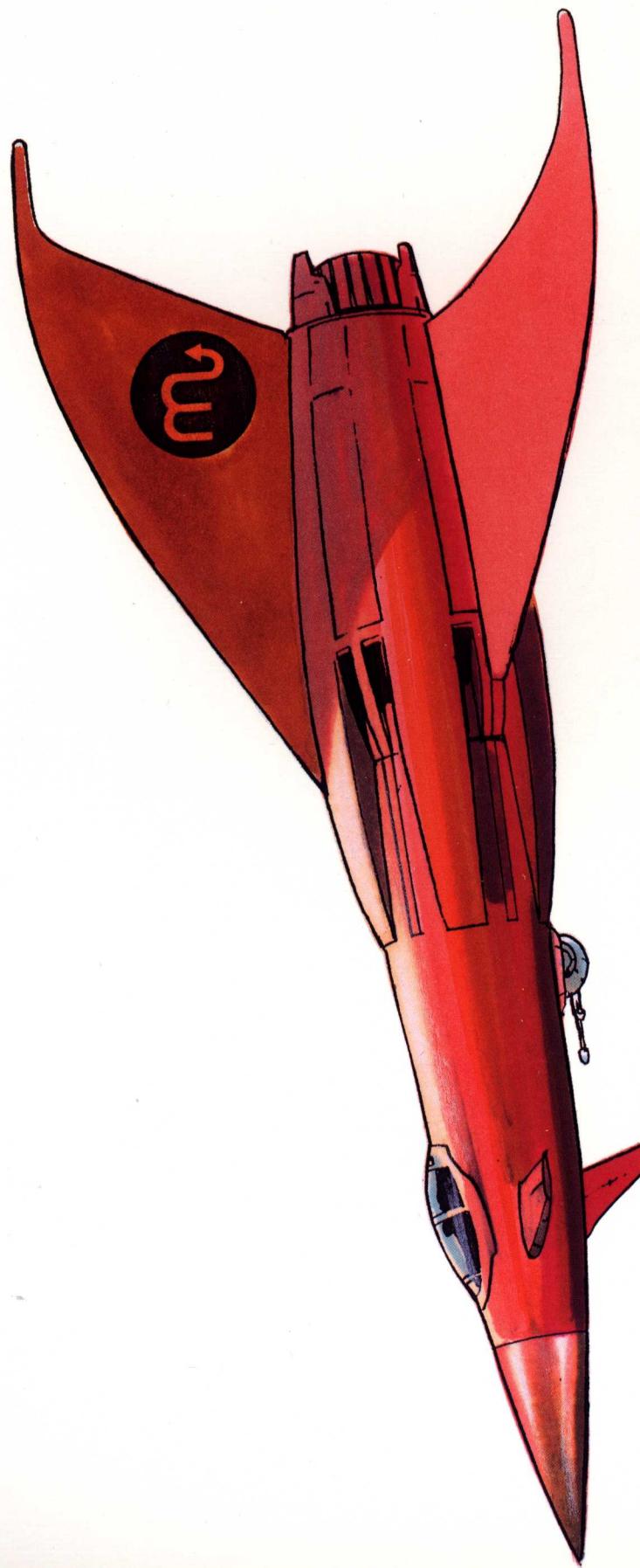
Reaction Bonus: -1

AC Defense Bonus: -2



The asterover is a workhorse, the type of vessel most often used to make shuttle runs from a planet's surface to a near-orbit station or a larger ship. Although larger and more sturdy than a typical fighter, an asterover is basically built along the same lines as those small vessels.

X-23A KRAIT



X-23A KRAIT

Type: RAM Stealth Fighter

Armor Class: 6 (Military)

Attributes

Tonnage: 10
Length: 20 feet
Width: 5 feet
Cargo: 5 tons

Hit Points:

Hull	40
Sensors/Commo	10
Controls	10
Life Support	20
Fuel	30
Engine	30

Weapons:

1 Gyrocannon

Crew: 1

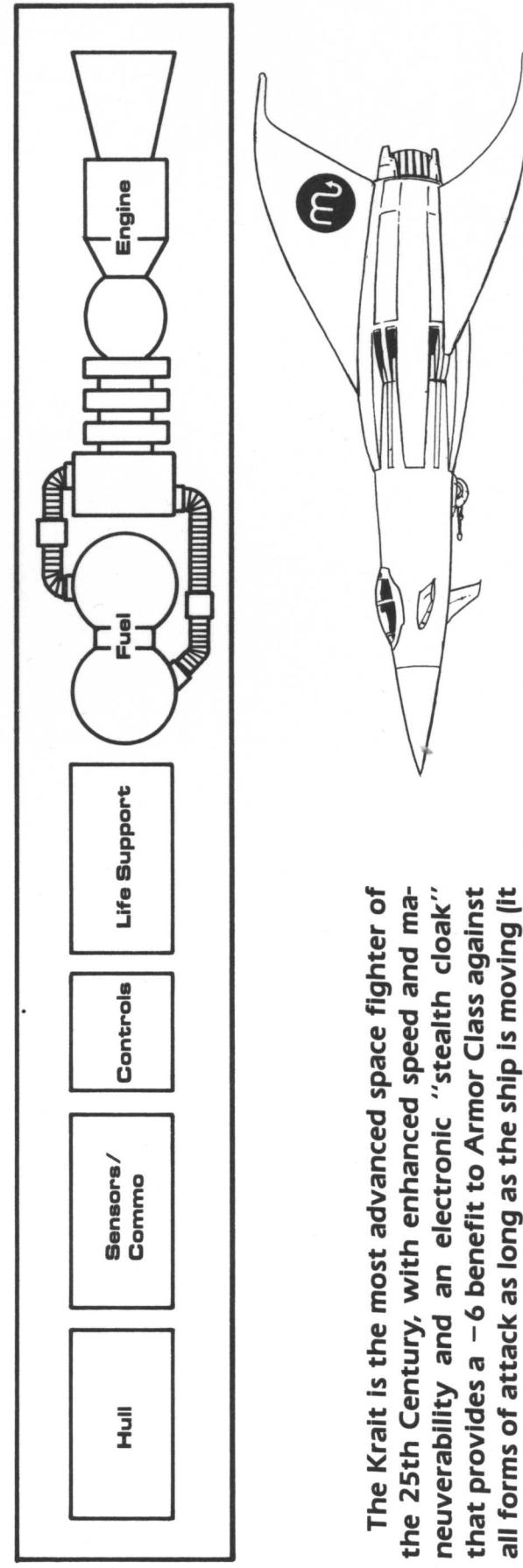
Speed: 7

Reaction Bonus:

-3

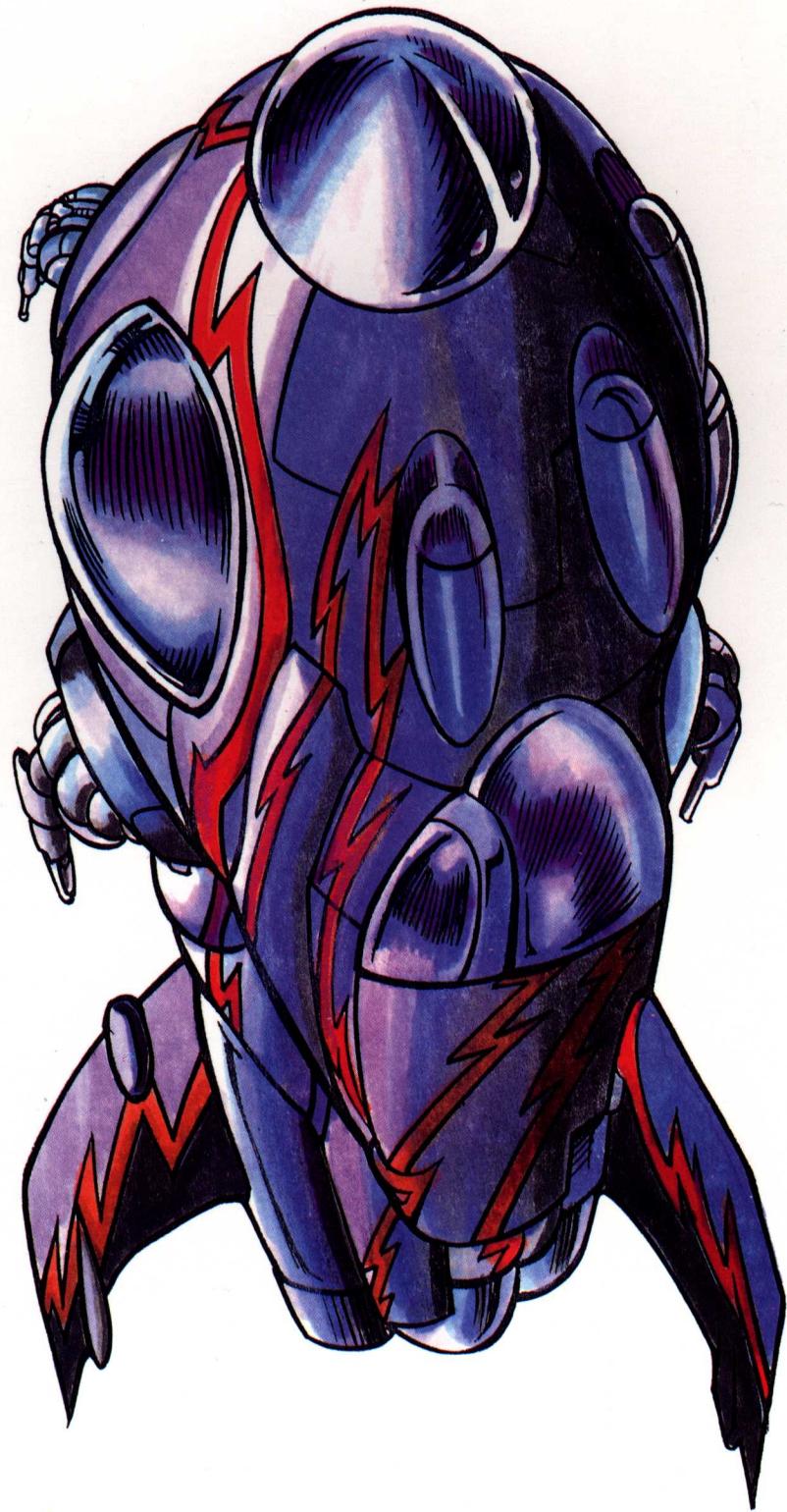
AC Defense Bonus:

-5



The Krait is the most advanced space fighter of the 25th Century, with enhanced speed and maneuverability and an electronic "stealth cloak" that provides a -6 benefit to Armor Class against all forms of attack as long as the ship is moving (it cannot be cloaked while it is docked or hovering).

Black Barney's FREE ENTERPRISE



Black Barney's FREE ENTERPRISE

Type: Pirate Heavy Cruiser

Armor Class: 4 (Maximum Military)

Attributes

Tonnage: 300
Length: 600 feet
Width: 150 feet
Cargo: 150 tons

Weapons

5 Heavy Missile Mounts
2 K-Cannons
2 Heavy Acceleration Guns
1 Gyrocannon

Hit Points:

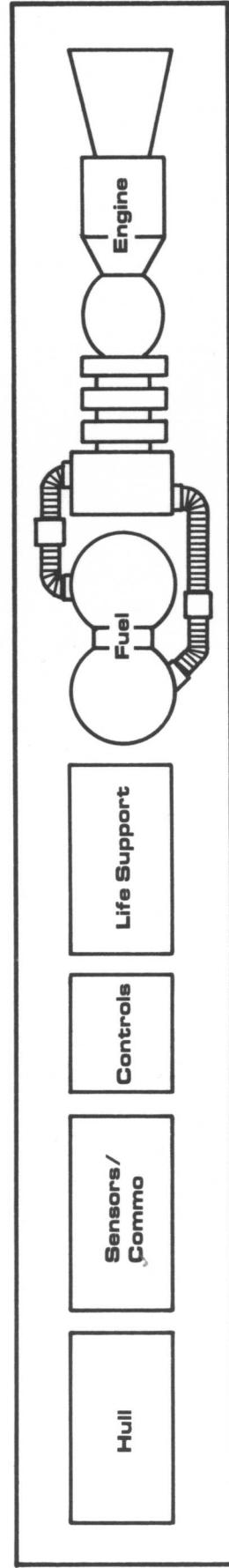
Hull	1,200
Sensors/Commo	300
Controls	300
Life Support	600
Fuel	900
Engine	900

Crew:

Speed: 3 (modified by Dr. Huer)

Reaction Bonus: +1

AC Defense Bonus: +2



Black Barney's ship is a sleek, high-speed cruiser, heavily armed and equipped with a special camouflage hull that can take on the background of surrounding space, giving it the effect of 90% cover (-10 benefit to Armor Class) against attacks by lasers, gyrocannons, and acceleration guns. However, the camouflage doesn't prevent missiles, including K-cannon projectiles, from having their normal chances to hit.

Ardala Valmar's PRINCESS OF MARS



Ardala Valmar's PRINCESSES OF MARS

Type: Scout Cruiser/Yacht

Armor Class: 8 (Civilian)

Attributes

Tonnage: 35
Length: 70 feet
Width: 17 feet
Cargo: 17 tons

Weapons

2 Missile Mounts
1 Beam Laser

Crew: 8

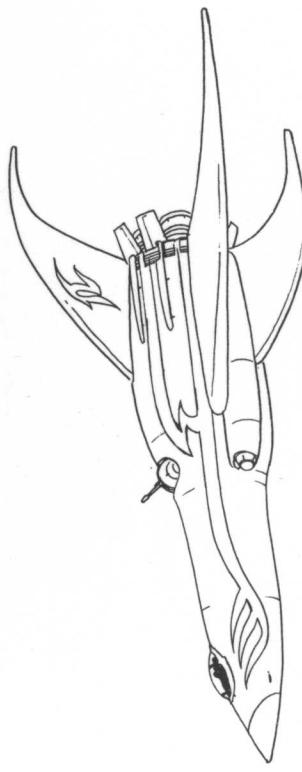
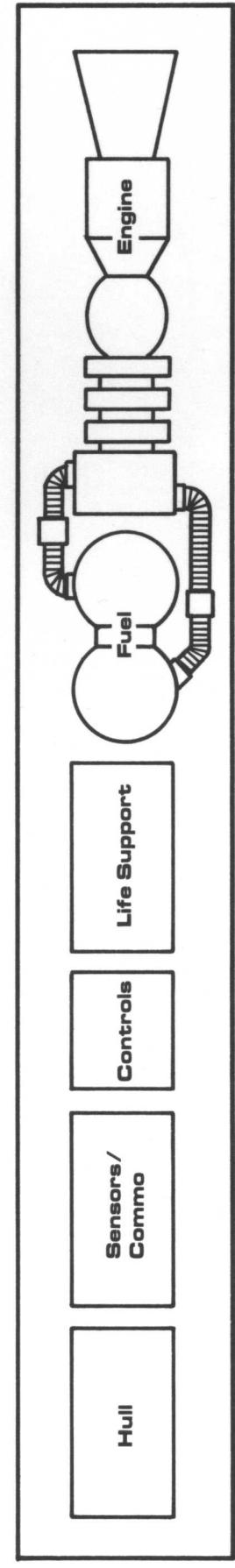
Speed: 4

Hit Points:

Hull	140
Sensors/Commo	35
Controls	35
Life Support	70
Fuel	105
Engine	105

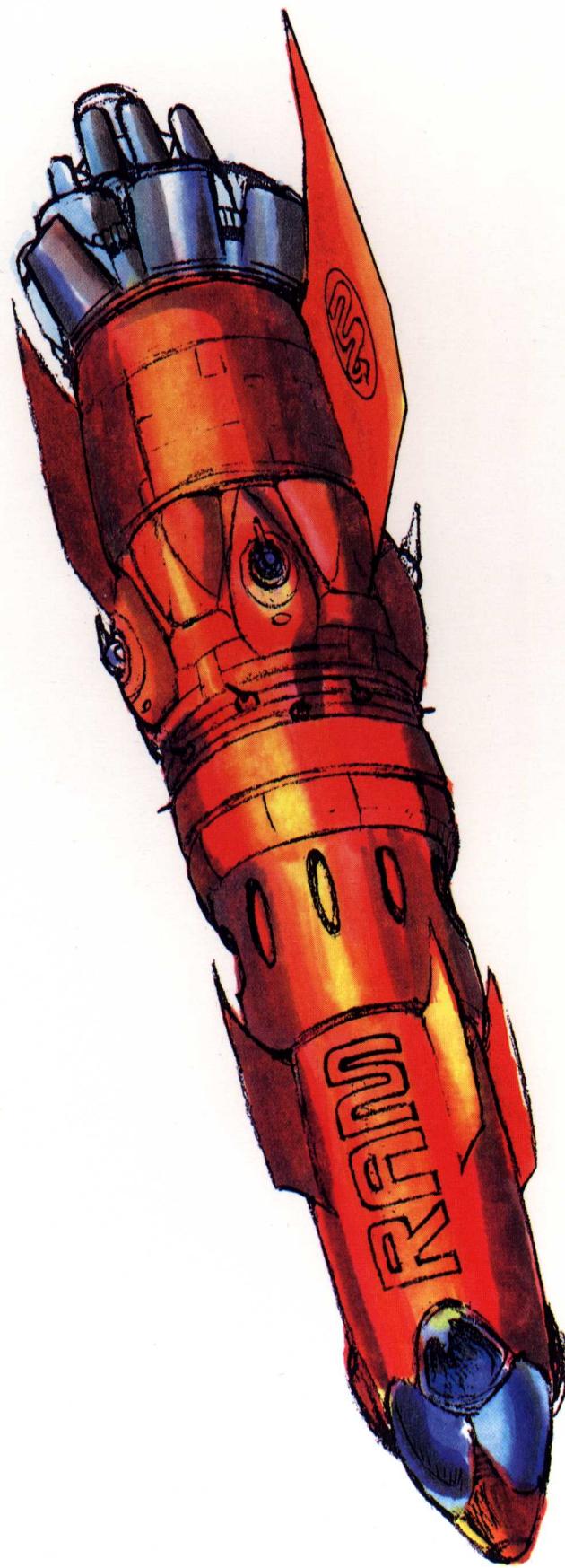
Reaction Bonus: -1

AC Defense Bonus: -2



Ardala's ship is a pleasure craft, and looks very much the part, but is also outfitted with enough weaponry (missile mounts concealed behind retractable panels) to hold its own in a firefight. Ardala doesn't always travel in this ship—she has other ways of getting around, too—but never allows the *Princess* to fly when she isn't aboard.

RMS THARSIS



RMS THARSIS

Type: RAM Battler

Armor Class: 0 (Battler)

Attributes

Tonnage: 5,000
Length: 10,000 feet
Width: 2,500 feet
Cargo: 2,500 tons

Hit Points:

Hull	20,000
Sensors/Commo	5,000
Controls	5,000
Life Support	10,000
Fuel	15,000
Engine	15,000

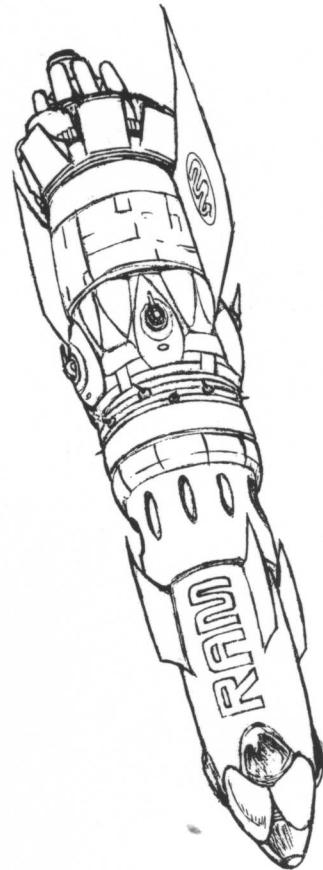
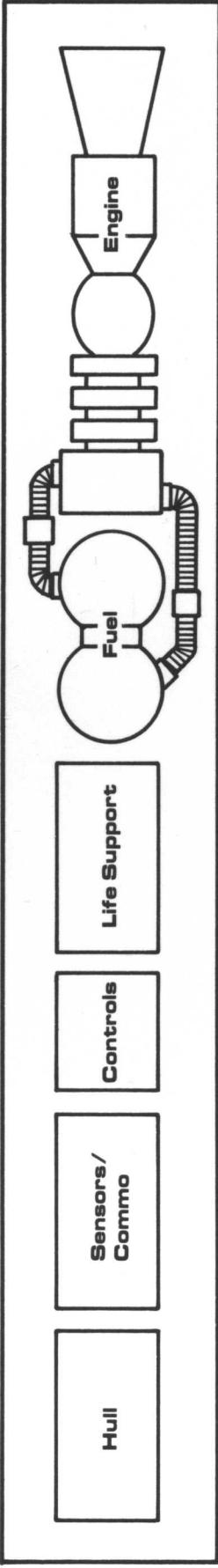
Crew:

Speed: 1

Reaction Bonus: +2

AC Defense Bonus: +5

Weapons: 100 Pumped Lasers
50 Heavy Missile Mounts
50 Gyrocannons
20 Missile Mounts
20 K-Cannons



The battler is every fighter pilot's worst nightmare—unless it happens to be a *friendly* battler, which can be a real lifesaver. A monster such as the *Tharsis* is virtually a city in itself, with more and better weapons than most real cities can boast. In addition to its built-in weaponry, a battler can carry from 20-50 fighters that can be launched as a prelude to a big firefight or a planetary invasion.

— FIRMS EFFICIENT COMMERCE!



RMS EFFICIENT COMMERCE

Type: RAM Transport

Armor Class: 8 (Civilian)

Attributes

Tonnage: 300

Length: 600 feet

Width: 150 feet

Cargo: 240 tons*

* Weapon space traded for additional cargo capacity

Weapons: 1 Gyrocannon

Crew: 2

Speed: 3

Reaction Bonus: 0

Hit Points:

Hull 1,200

Sensors/Commo 300

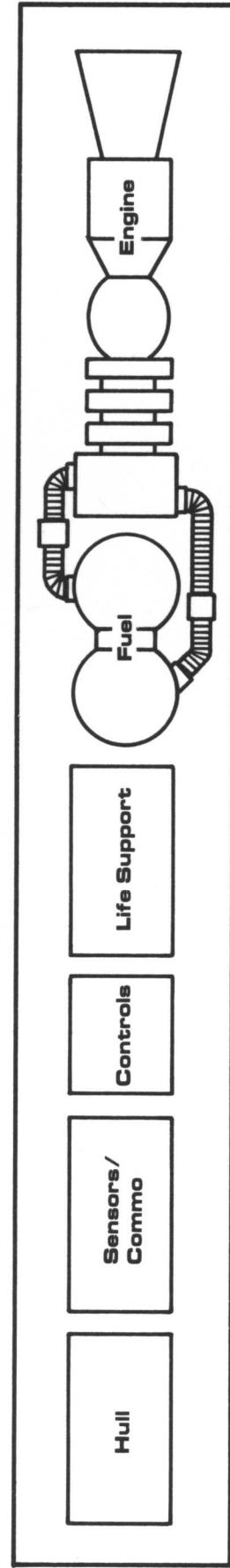
Controls 300

Life Support 600

Fuel 900

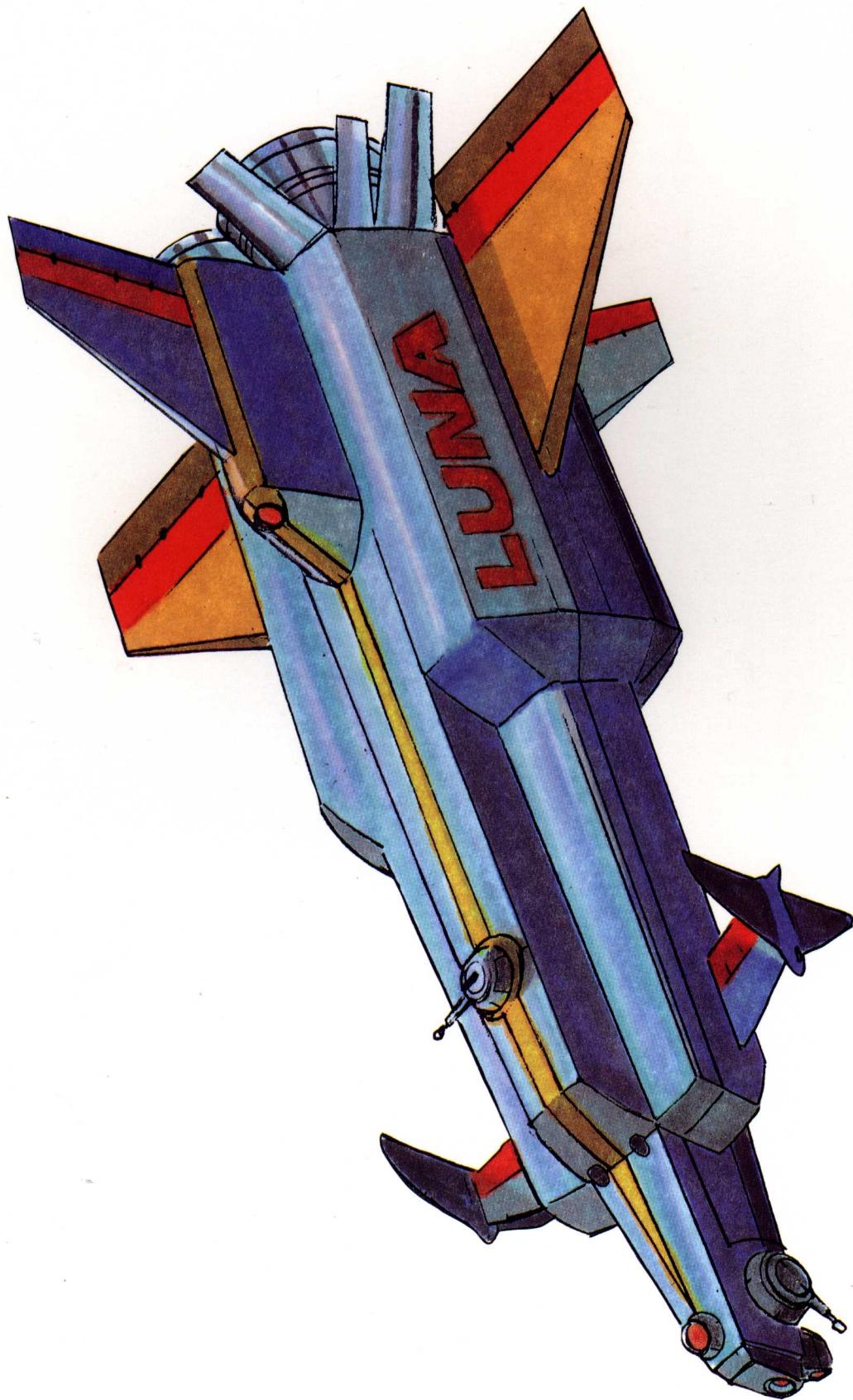
Engine 900

AC Defense Bonus: 0



The only type of RAM ship that doesn't necessarily look like a RAM ship, transports such as the Efficient Commerce are often disguised as independent merchant ships to conceal their true nature. A transport can carry cargo, troops (up to 300 soldiers), or a combination of both.

CLASS COPERNICUS



LSS COPERNICUS

Type: Lunar Scout Cruiser

Armor Class: 6 (Military)

Attributes

Tonnage: 25
Length: 50 feet
Width: 12 feet
Cargo: 12 tons

Weapons

1 Missile Mount
1 Gyrocannon

Crew: 9

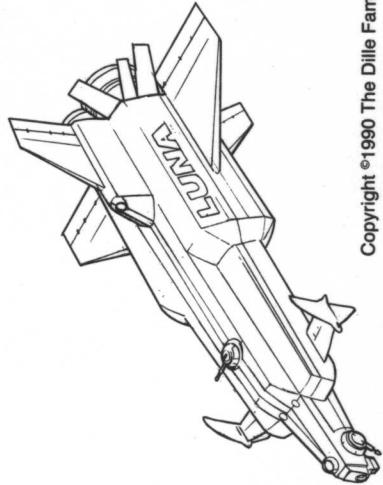
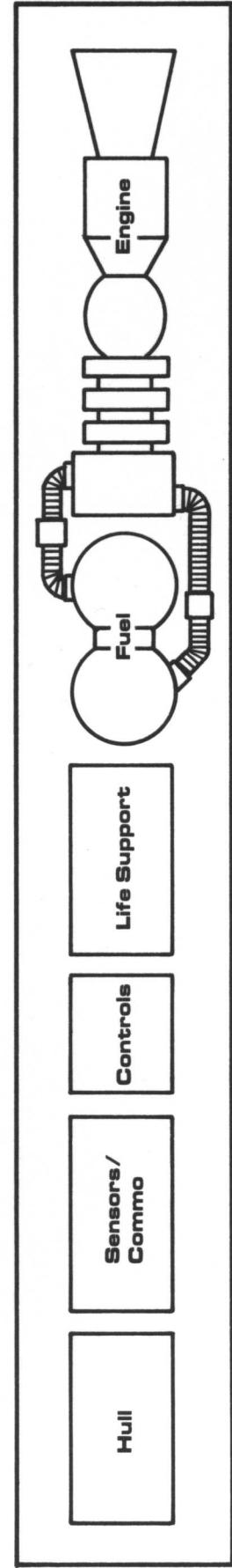
Speed: 5

Hit Points:

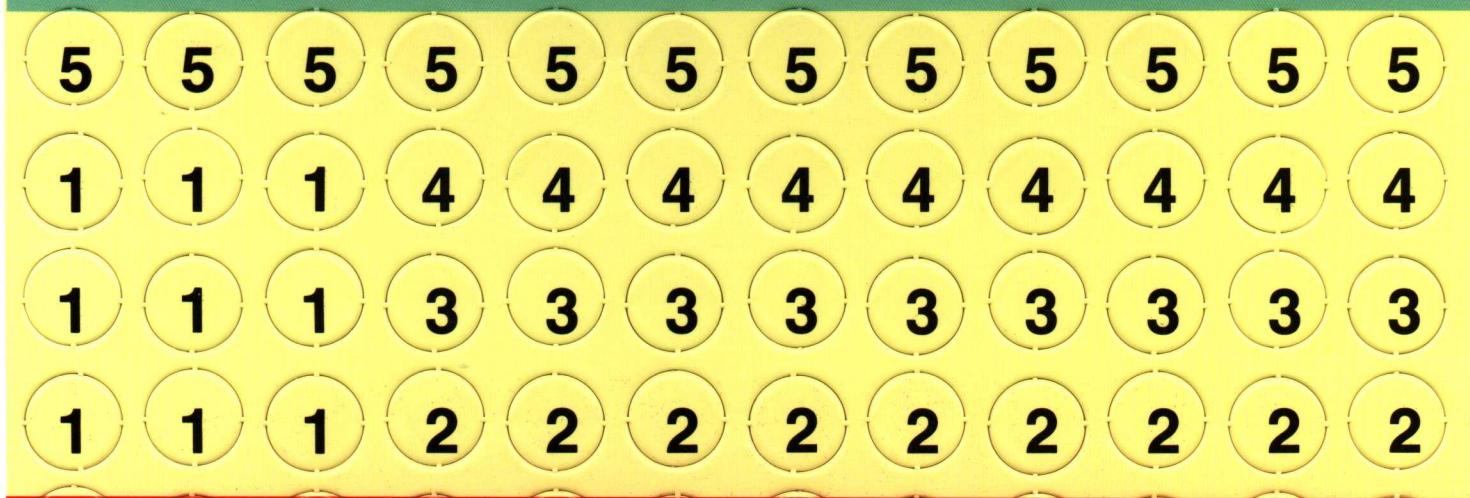
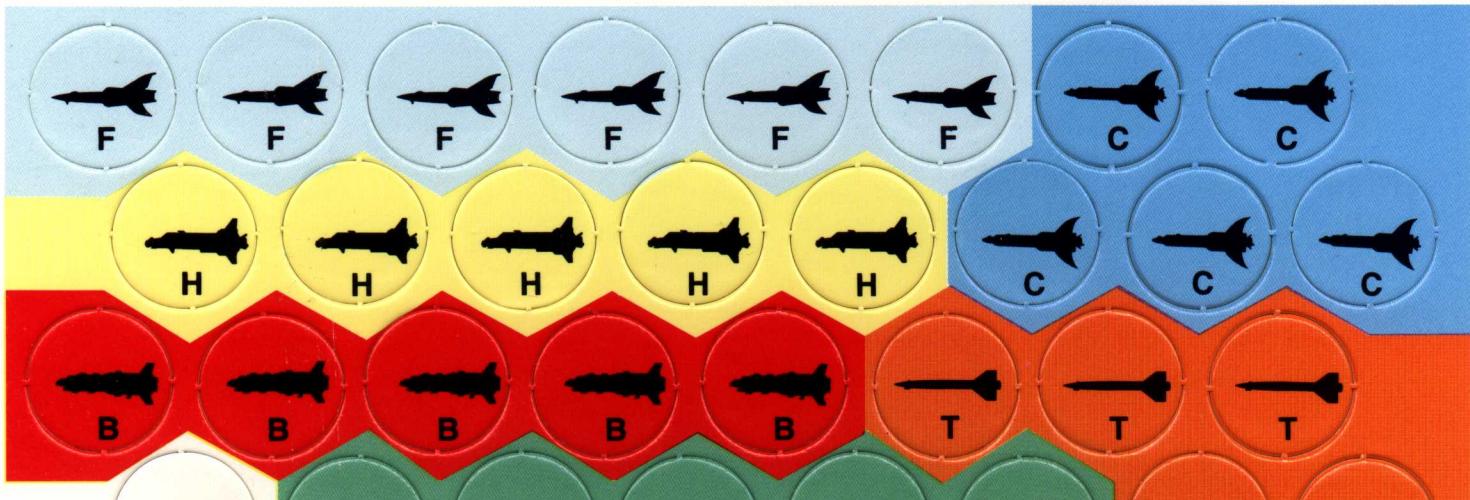
Hull	100
Sensors/Commo	25
Controls	25
Life Support	50
Fuel	75
Engine	75

Reaction Bonus: -1

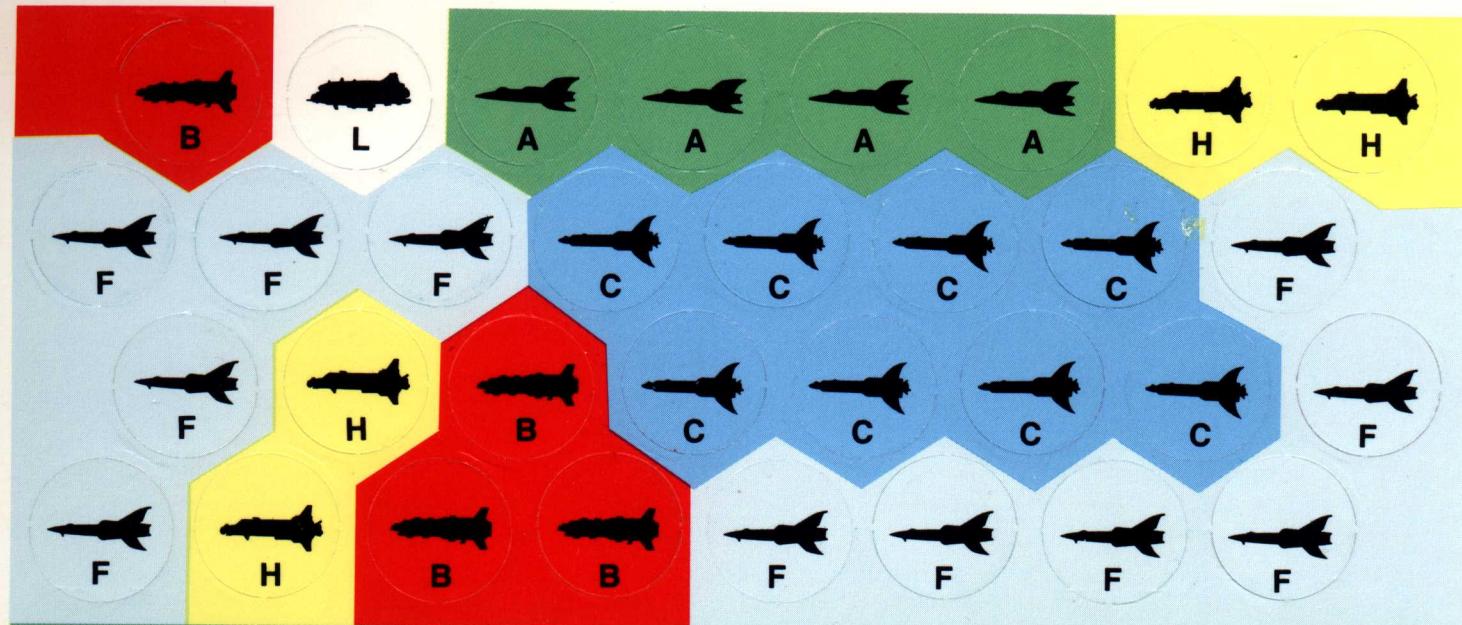
AC Defense Bonus: -2



Patrolling the near reaches of Lunar space is the job of scout ships like the *Copernicus*—lightly armed, built for speed, and used (as is the entire Lunar fleet) to solidify the Lunar Federation's defensive posture.



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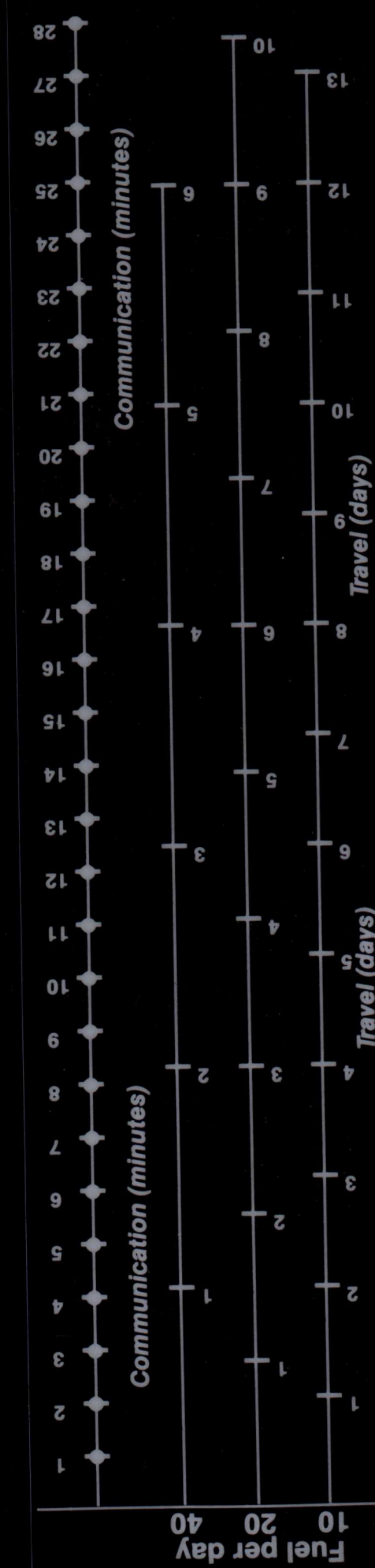


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4	4	4	4	5	5	5	5	6	6	6	6	6
7	7	7	7	8	8	8	8	9	9	9	9	9

1	1	1	2	2	2	2	2	2	2	2	2	2
1	1	1	3	3	3	3	3	3	3	3	3	3
1	1	1	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5

1	1	1	1	1	1	1	2	2	2	2	2	2
2	2	3	3	3	3	3	3	3	3	4	4	4
4	4	4	4	5	5	5	5	5	5	5	5	5

Me Vn Ea Ma Ve Ce Pa Ju Hy Au Ast Ast



BUCK
ROGERS®

THE 25TH CENTURY

WC

SCIENCE FICTION ROLE-PLAYING GAME

Characters & Combat

Every manager works hard for the day when he too will be able to live in the glittering pyramids of the executives. Very few of them live to see that day.

Back in the deep tunnels behind the chasm walls live the Workers—unintelligent slaves who take care of the real grunt work of harvesting, planting, mining, and waste disposal. The Martians have crafted other types of gennies, mostly variants of the Worker that are designed for specific purposes. The most feared of all Martian gennies are the Terrines, elite soldiers manufactured by RAM. Also formidable in their own way are the Desert Runners who prowl the wide-open expanses of the planet. (All three of these gennie types are described in detail later in this chapter.)

Far out on the high, chilly Martian deserts are the various anarchists, lowlifes, and desert rats who refuse to toady and won't fit into the corporate structure. They are tolerated by RAM only because they can do some of the dirty jobs that require more intelligence than Workers have. Whether tending the food farms of the shallow Boreal Sea, maintaining the obsolete and run-down spaceport on the ground at Pavonis, or monitoring the weather stations and surveillance outposts sprinkled throughout the wilderness, these independents eke out a meager existence far removed from their corporate relations.

Advantages: Slightly more nimble and more charismatic than normal humans; slightly less vulnerable to radiation poisoning, cold, and suffocation. Able to hear faint sounds that escape the notice of humans, which makes them more difficult to sneak up on. Able to make out images in dim light, which makes them better at hitting a target in combat under that condition. Aside from all of the above, the biggest advantage of being a Martian is . . . being a Martian. A character who is backed by RAM could have access to great amounts of technology and manpower (specifically, gennie-power) that would enable him to succeed where a non-Martian would fail.

Disadvantages: Generally weaker and more frail than humans because of their affinity for lower gravity, which also makes them more susceptible to damage from falls and other physical trauma. Vulnerable to the effects of extreme heat. Sensitive ears cause them to be hampered by loud noises, and sensitive eyes give them problems in bright light. Last but far from least, the disadvantage of being a Martian is that most of the rest of the solar system identifies you with RAM and thus sees you as an adversary. It can be very hard for a Martian to make friends with non-Martians, but a Martian in a player character group that also includes members of other races might be looked upon more favorably.

Role-playing Notes: A Martian player character is not a RAM-type "bad guy" (Characters of that sort, such as the evil Simund Holzerhein, are NPCs whose actions are controlled by the referee.) There are plenty of Martians—even some highly placed in the organization—who don't agree with everything that RAM is doing, and it is from this group that a Martian PC will come. Of course, this means that you'll have to conceal your true feelings whenever you're on Mars or in the company of RAM loyalists—but that's part of what makes role-playing a Martian fun and challenging.

Lunarians

"Next to Power Deck Engineers, Lunarians may be the toughest, stubbornest humans in the solar system. And when a Lunarian becomes a Power Deck Engineer . . ."

—**Badinger**

Physical Size: 4 to 5 feet tall, 120–180 lbs.

External Covering: Smooth, hairless skin, usually white, tan or beige.

Eyes: Human-based, larger and more sensitive.

Ears: Human normal.

Mouth: Human normal.

Nose: Human normal.

Genotype: Mildly altered human. Lunarians are somewhat shorter than Terrans, with compact, slender frames. Originally gene-altered to make their eyes more sensitive, Lunarians have evolved further in a few short centuries, to the point where their visual ability exceeds even that of Martians.

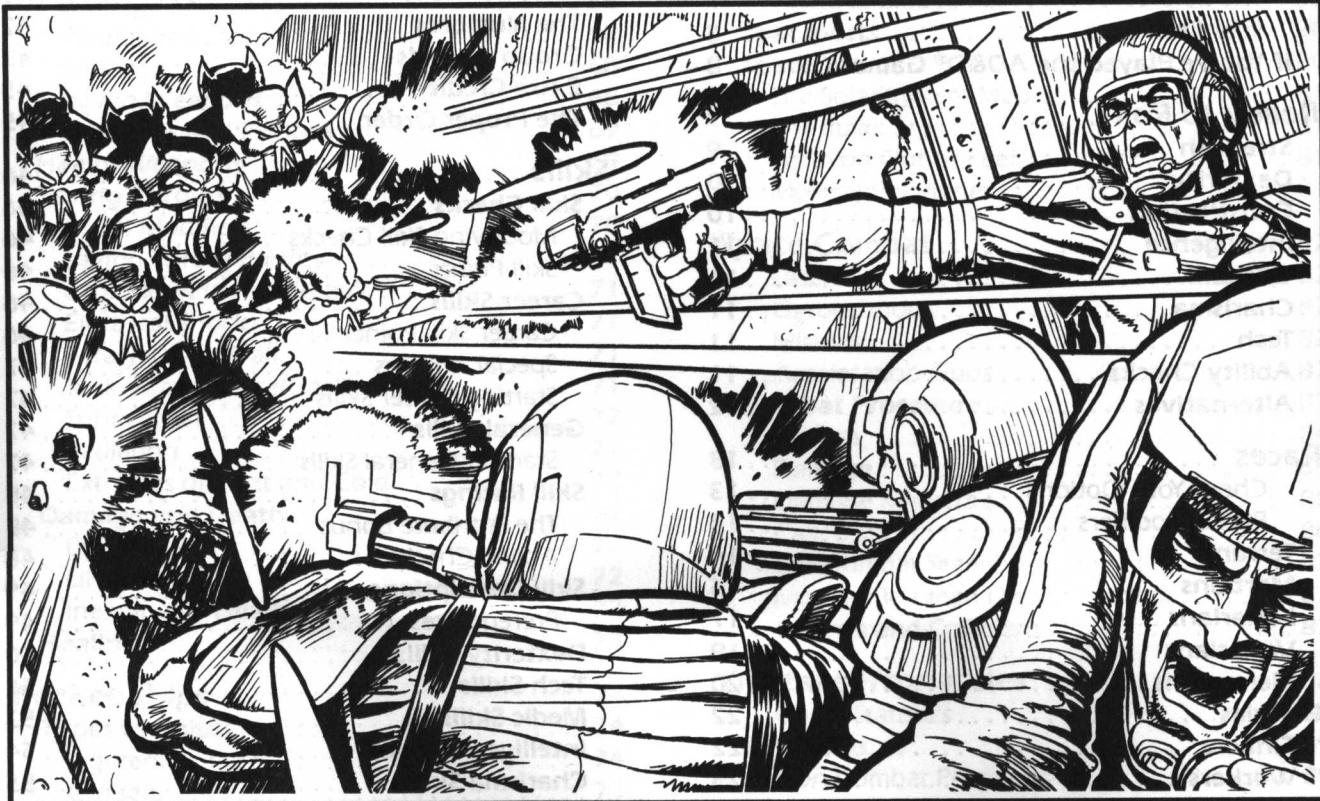
Cultural

Descended from a combination of Swiss, French, German, British and Central European colonists, the Lunarians are a fascinating series of contradictions. They are famed as fearless mercenaries, known for their cool competence in battle. Yet they are also rabid isolationists who scrupulously avoid interplanetary conflicts on their own behalf. They will handle the business transactions of any intersolar government, but will allow no military ships to land on their planet.

Lunar cities are mostly built beneath the Lunar surface, around and under huge domes that cover some of the moon's craters. Spaceports are always built under domes (with retractable panels that allow ships to enter and exit), since these are the principal places where Lunarians must deal with traffic from

Characters & Combat

Rules for Adventuring in the 25th Century



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Distributed to the toy and hobby trade by regional distributors.

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Introduction: Fire in the Stars

Flint strode down the gangway, boot magnets clicking against the steel ramp in the light gravity of Ceres. From behind him, the brilliant flame of an outbound rocket's exhaust illuminated the spaceport as the winged bullet threw itself skyward. Flint turned to look at the vessel and squinted against the glare. He'd taken the *Lady Jane* through the Martian blockade and out the other side, slugging it out toe to toe with lasers blazing. Sure, he wasn't a big hero like Buck Rogers, but it was common knowledge from the dives of Tycho Arcology Spaceport to the salons of Coprates-Mars that if you wanted a cargo delivered and didn't care how it was done, Flint was your man. He delivered. The New Earth Organization would get their secret weapon as promised, and they'd be able to stop the Martians' assault on Earth.

He was about to break into a satisfied grin at the thought of a job well done when he suddenly noticed a sound behind him. Leaping out of a narrow alley, the two men drew their lasers with blinding speed. Flint threw himself to one side as the sizzling blue-white bolts hissed overhead. One hand clawed for his gun as he hit the deck. A sound of thunder filled the night—

Welcome to The 25th Century!

In a future five hundred years away lies an amazing world of space adventure, awaiting your arrival. With this book and your imagination, you'll soon be battling space pirates, thwarting mad scientists and standing up against the invading fleets of dictators in the exciting 25th-Century world of Buck Rogers.

The year is 2456. Mars and Venus, once forbidding alien wastes, have been terraformed into livable worlds supporting millions of people. Colonies float in the upper reaches of the Jupiter gas clouds; cities are built on and inside the asteroids.

For all the triumphs of 25th-Century technology, there are still dangers aplenty. Savage space pirates prowl the dark wastes between the worlds. A powerful and despotic government plots to enslave the solar system. Renegade scientists isolate themselves in remote laboratories, creating genetic monsters and dangerous superdevices.

The 25th Century is a world where the scale is titanic and the action heroic. Fleets of sleek rocket cruisers streak through the depths of intersolar

space, battering each other to scrap with blistering lasers. Stalwart heroes lead daring assaults on asteroid fortresses. Villains are smooth, dangerous predators with ambitious plans to rule planets, backed by armies of vicious thugs. Every rundown spaceport town is hip deep in secrets, villains and adventures.

And now the future is yours, thanks to the magic of role-playing.

What's Role-Playing?

If you're already experienced at the fine art of role-playing, you may want to skip the rest of this introduction and begin the process of making a character right away.

However, if you've never done this sort of thing before, you're probably measuring the thickness of the rulebook and thinking, "Hey, how am I supposed to learn all this to play a game?" Relax. You've done this role-playing stuff before.

Whenever you played games like cowboys and Indians or super heroes and super villains, you and your friends were pretending to play the part of one side or the other. You acted out all the parts, came up with your own plots, and even improvised some dialogue.

That's what role-playing is—pretending with rules. You and the other players invented a make-believe situation (say, a group of super heroes and super villains slugging it out in a secret hideout). Everyone in the game did their best to act out their part as realistically as possible; you talked like you thought a super hero would talk, made big speeches, and probably staged a lot of pretend slug-fests where Good conquered Evil.

About half the time, when you pointed your make-believe gun at the other kid and said, "Bang! You're dead," he turned around, yelled "Am not!" and kept playing. A big fight—a *real* one—sometimes followed. To avoid this sort of thing, role-playing games use rules to determine what you can or can't do. Using the rules, you'll be able to determine whether or not the other player's character was hit, how badly he was hurt, and other types of questions. What the rules do is give your acting a little structure.

So far, we've been talking a lot about what role-playing is. But experience is the best teacher. Grab a piece of paper and the dice in this game box. It's time to tackle the High Frontier!

Fire In The Stars Revisited

Your first experience in the world of the 25th Century will be a "read-along" adventure. It skips all the learning of rules, for the time being, and gets right to the heart of role-playing: making decisions. As a role-player, you're going to make all the decisions that your character would make in the course of his or her adventure. Each decision you make will steer your character and the plot line of the adventure in a new direction.

In this read-along adventure, we're going to give you a choice of possible decisions. Once you've made a choice, go to the numbered section specified by that decision and keep reading.

1 It's nearly midnight as your towering silver rocket comes to ground at the spaceport of the asteroid Ceres. It's been a tough trip, starting with the pirates who tried to overrun you just off Vesta. It took a couple of well-placed laser blasts to discourage them. But the pirates were nothing compared to the dodge-'em game you played with that RAM blockade cruiser off Callisto. If you hadn't faked it into that rock, the cruiser would have had you for sure.

Now, your heavy boot heels are clicking on the tarmac as you stride away from the spaceport's launch bay. You've tucked the tiny box that contains ol' Doc Huer's latest brainstorm in the breast pocket of your smart suit. Just in case, you've also tied down your holster, and your heat gun is riding low and loose.

As you make the first corner, steely eyes scanning for danger, there's a small sound behind you: boots rasping in the black gravel of the road. Your space-honed reflexes kick in, spinning you around. Standing in the shadows between two buildings are a pair of men. Both have lasers drawn. Even before they speak, you know from their clothes and weapons that they're Martian agents. You've been set up!

Do you try to talk your way out of it? Go to 2.
Do you run for it? Go to 4.
Do you go for your guns? Go to 3.

2 "Hey, spaceman," you say casually, addressing one of the men as you face them down, "you got a problem?" You pitch your voice low and mean, to show you're not really being casual.

"Listen," replies one of the Martians in a grating voice. "We know you have the plans for the secret weapon. If you'll deal with us, we'll make it worth your while."

You think about it for a moment. If the Martians get the secret plans, they will be able to continue with

their conquest of Earth. But you're not sure you can get past them otherwise.

Do you give the Martians the plans? Go to 6.
Do you go for your guns? Go to 3.
Do you run for it? Go to 4.

3 Your hand flashes down, and out darts your heat gun! A jet of flame fills the narrow street!

To hit the Martians, you must roll a 13 or higher on your 20-sided die. Your heat gun is far more powerful than their lasers—it only takes one hit to kill both of them.

The Martians must roll a 16 or higher on a 20-sided die to hit you. (Because there is no one playing the role of the Martians, you'll have to roll for them.) You can be shot three times by the Martians before you're put out of action.

If you're hit three times, go to 5.
If you beat the Martians, go to 7.

4 You lunge to one side and make a break for it. As you run down the street, you can hear the sizzle of laser blasts splitting the air behind you! Suddenly, pain stabs through your back once, twice, a third time. You fall to the ground, barely conscious.

Keep reading with section 5.

5 Through the red haze clouding your mind, you can hear the slow footsteps of the men as they cautiously approach. One of them grunts as he leans down to inspect your body. "You think we could let you get away with what you know?" he says with an evil chuckle. "Think again, groundhog." As he gets back up, you feel everything go black. . . .

If you were killed in combat, go back to 2 and try again.

If you got here as the result of a decision in 1 or 2, go back to your previous section and make a different choice.

6 What does NEO mean to me anyway? you think. A bunch of terrorists. Not worth wasting my life on. You reach into your pocket and calmly remove the box. "Sure," you say. "I've got it. What's it worth to ya?"

The Martian leader smiles; you're his kind of guy—space scum who'll sell out to the highest bidder. "We can talk," he says, pulling out a handful of coins. He counts out several hundred credits' worth and hands it to you. "Deal?" he ventures with a greasy smile. You take the money and toss him the box. You both chuckle like polite sharks, and part as the best of friends. . . .

Maybe it should be no surprise to hear the sound

of a laser being drawn behind you. Still clutching your ill-gotten gains, you can't react fast enough to go for your own weapon. The blazing blue-white bolts pin you to the wall. You scream and fall, while around you the coins clatter to the ground.

Go to 5.

7 As the last Martian falls, you let your heat gun drop to your side. Just more space scum, you think, turning on one booted heel and heading down the street at a brisk pace. It wouldn't be smart to be here when the Port Patrol discovers the bodies.

You encounter no further resistance as you work your way through the crowded asteroid city. Eventually, you reach a bright neon holo sign that says *Club Comet*: the place where you're supposed to meet your NEO contact. You step down into the cool, blue-lit gloom.

You don't exactly know who your contact is—all you know is that he or she will be wearing a blue smart suit with a gold rocket patch on the left sleeve. You scan the club cautiously. Hmm... There are two people wearing blue with a gold rocket patch, seated at opposite ends of the club. One is a powerfully built man with iron-gray hair and a look that projects a tough competence. The other is a young woman, exceptionally attractive, with a thick spill of flaming red hair that sweeps over slim shoulders. You know which one of them you'd rather talk to, but this is supposed to be a *business* decision. . . .

Do you approach the man? Go to 9.

Do you approach the woman? Go to 8.

8 "You must be Captain Flint," the tall redhead says to you as you slide into the booth. "I must say that you are far more . . . hmm . . . shall we say, dashing, than your holo pics would let on."

Flattery is nice, but you do have business to deal with. "Look, lovely," you say with a tight grin. "We can get down to introductions later. Right now, let's see the color of your money."

"I have it right here," she says, gesturing to a flat case in her lap. "But before we get down to business, I suggest we order a couple drinks first. There are people watching us—the gentleman in blue, for example—and I want to allay their suspicions about our meeting."

You order two Colliding Asteroids; your favorite drink. As you sip your drinks and watch the bar, she hands the case to you under the table. You reach for the item in your pocket . . .

. . . And suddenly the room starts to spin. Drugs! you think desperately, as you push back from the table. But it's too late! As you crash heavily to the floor,

you feel her slender fingers withdrawing the NEO invention from your pocket. As she leaves, she leans down and brushes your almost-numb face with a kiss. "Dear Captain Flint," she breathes, "I would so much have liked to stay and play . . . but I must be going now. If you're ever in Coprates, do look me up. Just ask for Ardala . . . Ardala Valmar."

Then you slip into blackness.

Go back to 7 and make a different choice.

9 "You must be Flint," the weatherbeaten spaceman says to you as you sit down. "You look just like your file holos. I'm Captain Rogers. You can call me Buck."

You slowly slide the package out of your smart suit pocket. "You sure don't look like your holo pics," you say with a grin. "I'd always heard you were a lot younger, and maybe a little better looking. . . ."

He takes the case from you, passing a hefty pouch of coins to you in turn. "Disguise," he says. "Otherwise, my many Martian fans get very insistent about meeting me." He opens the case, peering closely at the small, shiny metal object nestled there. "Time to move," he says, starting to rise.

Just then, the doors of the *Club Comet* fly open with a crash. Framed in the door, you can see the hulking forms of five RAM troopers! Seven feet of armored muscle, they hardly seem to need the huge rocket rifles they are bringing to bear on your table. "You!" the leader shouts, his pupilless white eyes pinning you down in their inhuman gaze. Your hand slips silently, slowly, toward your holstered heat gun—

What Happens Next?

Well, that's what you decide! You've just had a small taste of what it's like to enjoy a role-playing game. Once you master some of the rules—you don't necessarily have to learn everything at once—you will be able not only to play in all kinds of exciting adventures throughout the XXVc™ game world, but also will be able to create your own adventures for all of your friends' characters to star in! So let's continue with the next step in this introduction: a quick look at the basics of role-playing games.

The Basics

Dice

Dice are used in role-playing games to determine the outcome of decisions where chance plays a part—for example, the combat episode that was part of the read-along adventure. You could decide to fire

at the Martians, but only the dice could "decide" whether you actually hit them (or vice versa). Dice have a number of different uses in the *XXVc™* game, all of which will be explained as we go along. Before you know it, you'll be generating random numbers (a fancy term for "rolling dice and reading the result") just as if you've been doing it all your life.

In the game, you'll find a number of types of dice besides the everyday six-sided die you've seen before. There are other dice with four, eight, ten, twelve, and twenty sides. For convenience, each type of die is usually referred to by the prefix "d" followed by the number of sides on the die. For example, a regular six-sided die would be referred to as a d6. A d4 has four sides, a d8 eight sides, and so on.

Sometimes the number you need to generate is simply the result of a roll of one or more dice. For example, the instruction "Roll 1d6" tells you to roll one six-sided die, getting a number from 1 to 6. "Roll 3d8" instructs you to roll an eight-sided die three times (or three eight-sided dice all at once, if you have that many) and add the results together.

But you aren't limited to generating only the numbers that are printed on the dice. A die roll such as "1d6 + 1" means that you would roll one six-sided die and add 1 to the result, yielding a number from 2 through 7. A roll of "2d8 + 2" produces a result from 4 through 18.

A special use of the 10-sided die is to roll a percentage (a number from 1 through 100). To do this, roll 1d10 twice; the first result is the tens digit and the second result is the ones digit. For instance, a roll of 7 followed by a roll of 5 would be a result of 75. The only exception is two consecutive rolls of 0, which translates to a result of 100. If you have two 10-sided dice of different colors, you can roll a percentage by tossing both of them at once, as long as you specify beforehand which die is the tens digit and which is the ones digit.

The Referee

Another essential part of every *XXVc™* game is the referee—a member of the playing group who is not role-playing a particular character. What does a referee do? First of all, like a referee in a football game, he or she is the arbiter of the rules of the game. He makes sure that all the players play fair and give each other chances to role-play their characters fully. He also makes decisions on whether your character would be able to do certain things within the context of the game world.

The referee is also the storyteller of the *XXVc™* game world. Think back to the read-along adven-



ture. There were sections of dialogue and sections of description. Much of the dialogue in an adventure is handled by the players, as part of the process of portraying their characters. But all the descriptions of places and events—what the *Club Comet* looks like; what happens when players make decisions; in short, how the world reacts to the player characters—would all be handled by the referee of the game.

The referee represents all of the characters that are not played by the players. These non-player characters, or NPCs, include all of the villains, some of the heroes, and all of the minor characters who play parts in an adventure. The referee handles their actions and dialogue. He's the one who does the talking for Buck Rogers, the seductive and deadly Ardala Valmar, the Martians who ambushed Captain Flint at the spaceport, and other characters who interact with the player characters.

Maybe you'll want to become a referee yourself. If so, you should study the section of the *World Book* that describes how to create XXVc™ game adventures. However, before you throw yourself straight into refereeing, we suggest that you first get familiar with the rules in the rest of this book. Before you or any of your friends can become a referee, you *all* need to know at least the basics of what the game is about and how the rules work.

Supplies

The XXVc™ game box contains everything you need to play the game, but life will be a little easier and more organized if you also have a bit of extra equipment:

—Pens or pencils and a few sheets of scratch paper for each participant;

—Several photocopies of the Character Record Sheet (the last page of this book) for players to record information about the characters they create;

—Some extra dice, if you have them. The game will move a lot more quickly if every player has his own dice, so you don't have to keep passing dice around the table.

And don't forget to bring along a lot of imagination. That's the most important part.

If You've Played the AD&D® Game . . .

. . . a lot of the rules in this book are going to look familiar. There's a reason for this. While there are quite a few differences between the games, the XXVc™ game is structured a lot like the ADVANCED DUNGEONS & DRAGONS® game, making it easy to learn this one if you know the other one.

The big differences between the two games are all related to the fact that they take place in very different worlds. First, being based in the realities of science, the XXVc™ game doesn't have magic spells or spell casters. The only wizardry you'll see here will be the technical magic performed by scientists and engineers.

Second, for defining special abilities that some characters have and others don't, the XXVc™ game uses a skill system rather than the AD&D® game's system of proficiencies. The words "skill" and "proficiency" aren't that far apart in meaning, but you'll see that the skills of a XXVc™ game character play a much more important role in determining what that character can and can't do.

Third, the system for combat in the XXVc™ game works somewhat differently from the AD&D® game's combat system, primarily because most of the battles in an XXVc™ game ad-

venture are settled by using projectile weapons—lasers, rocket pistols, and so forth. Hand-held weapons such as swords, clubs, and knives are still available in the 25th Century, and sometimes they can come in very handy, but they aren't as central to the combat system as hand-held weapons are in the AD&D® game world.

While it's not impossible to transfer a character from an AD&D® game world to the XXVc™ game universe, we don't recommend trying it. This game uses far more deadly weapons and requires many more skills than the average AD&D® game character would have access to. Without the aid of magical armor and weapons—which don't exist in the non-magical world of the 25th Century—a hero from the AD&D® game would find himself made short work of by even a moderately skilled warrior of the 25th Century.

Ready to Roll

"Well, for starters, I was born on Ceres in a fifteen-foot pressure dome, in between a meteor shower and a pirate attack . . ."

—Captain Flint

The first thing you're going to need to adventure in the 25th Century is a character. A character is the person you play in a *XXVc™* game; like an actor in a movie, you'll portray this person's reactions to the world, events, dangers and triumphs. It's just like watching your favorite TV series or movie and imagining what it would be like to be the hero—except in this game you *are* the hero.

But to start out, you're going to need a framework to hang all of this acting on. Is your player character smart, slow, strong, good-looking? All these questions, and more, will be answered when you determine his or her attributes.

Attributes are basically a way of defining and measuring the natural abilities the character was born with; how strong he or she is, how smart, how attractive, etc. We "grade" people this all the time in real life, with expressions such as, "Well, as dates go, he was a five on a scale of one to ten."

In this game, we take that kind of grading system a bit farther. Each attribute covers a specific area of ability, and is defined by a basic score ranging from 3 to 18. (This basic score may be altered by the race you choose for your character; see the next chapter.)

You determine your attribute scores (also called ability scores) by rolling 3d6 seven times, writing down the total for each roll. Then, assign these scores to your character's attributes in any order you want.

Grab yourself a Character Record Sheet—you can photocopy one from the example in the back of this book—and let's get started. (Write down your scores in pencil for now, because when you get to the next chapter you may find that some of them are modified.) The first attribute is . . .

Strength

Obviously, a character's Strength (Str) score is a measure of how strong the character is. But it also covers a few other related areas: the character's endurance, stamina, and muscle bulk. (Your character's Strength score is a general tipoff to his or her weight and physique. A high score means that the character is visibly well muscled and of at least average weight, while a low score indicates someone who is

obviously undermuscled and probably underweight.) Strength is an important attribute for any character who plans to do some fighting.

The Strength score of a character has the following game effects, as detailed on Table 1.

Table 1: Strength

	Hit Bonus	Damage Bonus	Weight	Max. Lift	Strength Feat
1	-5	-4	1	3	0
2	-4	-3	2	5	0
3	-3	-2	5	10	0
4	-2	-1	10	25	0
5	-2	-1	15	40	0
6	-1	0	20	55	0
7	-1	0	25	70	0
8	0	0	30	90	1
9	0	0	35	100	1
10	0	0	40	115	2
11	0	0	45	125	3
12	0	0	50	140	4
13	0	0	55	155	5
14	0	0	60	170	7
15	0	0	65	180	9
16	0	+1	70	195	10
17	+1	+1	85	220	15
18	+2	+2	110	255	20
19	+3	+4	200	400	40
20	+3	+6	300	500	50
21	+4	+8	450	650	60
22	+4	+10	600	800	70

Hit Bonus: Whenever the character uses a melee weapon (club, sword, knife, etc.), or a physical attack (such as punching), his Strength allows him to be better at hitting his target. A positive number gives the character a greater chance of hitting; a negative number (which is technically a penalty, not a bonus) makes his chance of hitting smaller.

Damage Bonus: The character's Strength can also modify his chances of doing damage to his opponent whenever he scores a hit with a melee weapon or an attack with his bare hands.

Weight: The number in this column on the table is how much weight, in pounds, the character can carry without being encumbered. (The effects of encumbrance are described in the chapter on Outfitting.)

Maximum Lift: This is the heaviest load, in pounds, that the character can pick up and hold at waist level. A character can't move more than a few steps while carrying a load like this. But if you need to lift part of a wrecked rocket hull off your partner, a

high Maximum Lift capability would be very important.

Strength Feat: This percentage figure defines the character's chance to perform some unusual act of strength—breaking down a heavy door, toppling a barrier, bending a metal object—at a suspenseful or dangerous time when his life or the lives of his friends might depend on it. (This reflects the reality that people with ordinary strength are sometimes capable of doing extraordinary things when they're in danger or under stress.)

Dexterity

A character's Dexterity (Dex) score is a measure of his hand-eye coordination, agility and reaction speeds, and other physical reflexes. Because Dexterity is an important part of piloting rockets, jetcars, and other 25th-Century vehicles, a high Dexterity is very important for rocketjock characters. A lot of other skills (see the chapter of the same name) are also related to Dexterity. As illustrated by Table 2, Dexterity can greatly affect a character's ability to succeed in combat with ranged weapons (lasers, heat guns, and other devices that can hit a target from a distance).

Table 2: Dexterity

	Reaction Bonus	Missile Bonus	Defensive Bonus
1	+6	-6	+5
2	+4	-4	+5
3	+3	-3	+4
4	+2	-2	+3
5	+1	-1	+2
6	0	0	+1
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	-1
16	-1	+1	-2
17	-2	+2	-3
18	-2	+2	-4
19	-3	+3	-4
20	-3	+3	-4
21	-4	+4	-5
22	-4	+4	-5

Reaction Bonus: This modifies the die roll used to determine initiative (see the chapter on Combat). A negative number means that the character is capable of acting quickly to gain initiative; a positive number means the opposite.

Missile Bonus: A high degree of hand-eye coordination makes the character a much better marksman. This value is added to the die roll made when a character attacks with a ranged weapon. A positive number increases the character's chance of scoring a hit.

Defensive Bonus: This number modifies the character's ability to avoid being hit, by changing his Armor Class (defined in the chapter on Combat). A negative number is good for the character, while a positive number increases his chance of being hit by an attack.

Constitution

Maybe your character is strong and fast, but how tough is he? Constitution (Con) measures physical toughness and also some forms of mental toughness, such as resistance to pain and hardship. Table 3 describes two important aspects of a character's Constitution.

Table 3: Constitution

	Hit Point Bonus	System Shock
1	-3	25
2	-2	30
3	-2	35
4	-1	40
5	-1	45
6	-1	50
7	0	55
8	0	60
9	0	65
10	0	70
11	0	75
12	0	80
13	0	85
14	0	88
15	+1	90
16	+2	95
17	+2 (+3)	97
18	+2 (+4)	99
19	+2 (+5)	99
20	+2 (+5)	99
21	+2 (+6)	99
22	+2 (+6)	99

Figures in parentheses are for warriors; see the chapter on Careers for more information.

Hit Point Bonus: Hit points are a measure of how much damage your character can take (more details are provided in the chapters on Careers and Combat). A character with a high Constitution receives an automatic addition to any die roll for gaining new hit points, while a character with an extremely low Constitution suffers a penalty to that die roll.

System Shock: This percentage figure represents the character's chance to withstand some kind of severe physical trauma—a sharp blow to the head or severe blood loss, for instance—that would otherwise cause unconsciousness or death. (More information on System Shock rolls, and some of the occasions when it is appropriate to make them, is given in the chapter on Combat.)

Intelligence

Intelligence (Int) measures how smart the character is. It is also an index of his memory, reasoning ability, wit, and cleverness. A character with low Intelligence would have trouble making complex plans, doing mathematics problems, or (at really low levels) even reading and writing.

A moderately high (at least) Intelligence score is mandatory for any player character in the XXVc™ game universe. After all, people who can't keep their wits about them—or forgot where they left them—aren't cut out to be heroic adventurers. (See the chapter on Careers for more information.)

The specific effects of Intelligence in the context of a game adventure are described in the chapter on Skills and in the section on Ability Checks at the end of this chapter.

Wisdom

The attribute of Wisdom (Wis) is basically a measure of common sense (which is *not* always the same as Intelligence). A character with reasonably high Wisdom knows enough to not stick his fingers into things without looking, that you can't get something for nothing, and that you shouldn't tease Buck Rogers about his age (491!). Wisdom is important for all player characters, but particularly for scouts and rogues, who typically spend a lot of time dealing with novel situations and unusual people.

The specific effects of Wisdom in the context of a game adventure are described in the chapter on Skills and in the section on Ability Checks at the end of this chapter.

Charisma

Charisma (Cha) is a measure of how persuasive and personable a character is. It's not necessarily an indication of how physically attractive the character is, but we all know that good leaders are generally also pleasing to look at (or, at least, they're not hideous).

If your character has an extremely high Charisma, he or she probably has the personality of a potential leader along with good looks; at the other end of the scale, a character with low Charisma is probably burdened not only with a bad attitude but also has an appearance to match.

However, don't assume that the two aspects of Charisma always go together like this. History is full of examples of effective leaders who were physically unimpressive (Napoleon, Hitler) and attractive people whose powers of persuasion and leadership ability were minimal (Marie Antoinette, General Custer). For characters whose Charisma is in the middle ground (the vast majority), the attribute comes from a combination of respectable appearance and pleasant or mildly forceful demeanor.

Charisma is useful for most characters, but is especially important for scouts (who use it to befriend animals and deal with new societies), rogues (who use it to charm their victims and talk their way out of things), and rocketjocks (who use it to sweet-talk romantic interests in spaceport bars!).

Tech

Tech (short for Technological Knowhow) is a special combination of Intelligence and Wisdom that pertains specifically to a character's affinity with machines and his instinctive or actual knowledge of how they work. However, it's not related *directly* to those other two attributes; it's quite possible for a character to have low Int and Wis and still have a high Tech score, or vice versa.

For a character with a low Tech score, the operation of a simple food dispenser might be a challenging task. Someone with a high Tech will walk up, give it a kick in the right spot, and get free meals for a month (we all know someone like this). Although a high Tech attribute is useful for all XXVc™ game characters (the 25th Century is a high-technology society), it is most important for engineers, who frequently deal with machines.

Ability Checks

A lot of things can happen to a character in a XXVc™ game adventure, and not all of them can be

covered by specific rules. That's where Ability Checks come in.

To determine the success or failure of a character's attempt to do something that's related to one of his abilities (Str, Dex, Con, Int, Wis, Cha, Tech) but isn't within the framework of the rules, roll 1d20 and compare the result to the character's score in that ability. If the die roll is equal to or less than the score, the attempt succeeds; if the die roll is greater than the score, the attempt fails.

For example . . .

The engineer has all he can do to keep the reactor from blowing, so he's tossing you a wrench and counting on you to tighten the bolt on the pressure plate next to where you're standing. Using the wrench is easy—but first you have to catch it. In this case, the referee might call for your character to make a Dexterity Check to see if you grab it, or he might have the engineer make the same kind of check to see how accurate the toss is . . . or, if the rocketjock at the controls is presently pulling the ship through a vicious turn, he might call for *both* of you to make checks.

You and your friends walk into the lobby of a dingy hotel, interested in resting your bones for the night. The guy behind the desk looks like he'd rather bite your arm off than talk to you. The lucky spokesman (hopefully, you chose the character with the highest Charisma) walks up and asks for a room. The referee calls for a Charisma Check to see how things worked out. If it succeeds, you get the room. If it fails, you don't. If it fails by a *lot*, you've got about three seconds to vacate the area before the guy starts filling the air with laser blasts.

Sometimes, the referee will tell a player what's happening and then have the player roll an Ability Check for his character. At other times, he'll simply ask for a 1d20 roll without telling the player what

it's for. Or he might roll the check himself, not telling anyone what's going on until it's over. All of these are Ability Checks, and they can be a referee's best friend whenever he wants to determine the outcome of some event without simply making the decision himself.

Alternatives

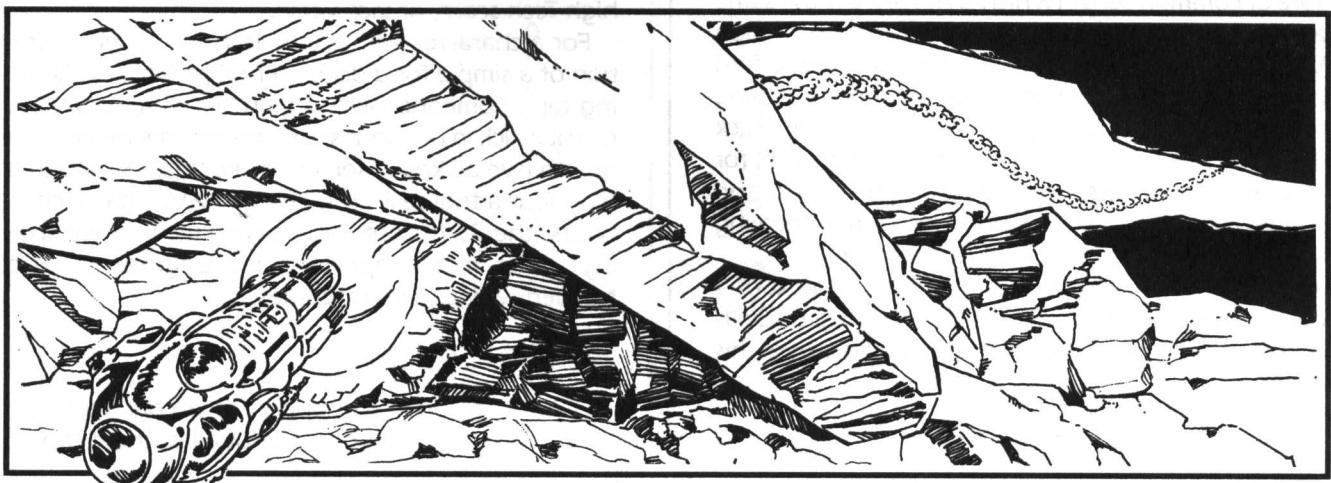
The method of generating attribute scores described at the start of this chapter—roll 3d6 and take down the result—tends to result in average scores. It's just as possible to get a 3 as it is to wind up with an 18, and most scores will be somewhere around the middle range of 10 or 11.

To improve your character's chance of getting off to a good start, you can—with the referee's permission—use one of these alternate methods:

1. Roll 4d6 for each score and discard the lowest result. (Your chances of getting a 3 are reduced by a factor of six, while your chances of rolling an 18 stay the same.)

2. Roll 3d6 twelve times, writing down each total. Then discard the lowest five and assign the remaining seven to your character's attributes. (Your chances of getting a 3 using this method are roughly 1 in 100 trillion.)

3. For each ability score, roll 1d6 and add 10 to the result. This produces numbers ranging from 11 through 16, producing a character who is neither exceptionally powerful nor exceptionally weak, and probably also enables the character to qualify for most of the occupations that are open to player characters (see the chapter on Careers).



Races

The next thing you have to do to create a XXVc™ game character is decide where he or she comes from. After a few hundred years and several generations of genetic alterations, this is pretty important, because most citizens of the 25th Century are now adapted to the worlds on which they were born.

Although all of these various types of people are called Martians, Venusians, Lunarians, and other colorful names, they're all still humans—closely related to the people of Earth, who are called Terrans.

But some of the major races of the 25th Century are the result of large-scale genetic engineering; they are not considered human but are called "gennies," which is a short term for "genetic mutants." Gennies are heavily modified so that they can live in the most extreme conditions: the bottom of the Venusian acid swamps, the hydrogen clouds of Jupiter, the depths of interplanetary space. If your character is a gennie, where you come from is of critical importance, because you may not be able to survive anywhere else.

Each character race discussed in this chapter is defined in a standard format, including information in each of these categories:

Physical Size: The height and weight of an average specimen.

External Covering: Skin color and texture, fur, scales, etc.

Eyes: Variations in color or shape, etc.

Ears: Variations in size or shape; special abilities.

Mouth: Shape and size; special notes, especially related to eating habits.

Nose: Shape and size; special abilities, especially related to breathing.

Genotype: The basic creature type, plus information on aspects that have been modified.

Cultural: Notes on the character type's society, including government, clothing, traditions, family life, etc.

Advantages: Significant ways in which the character race is superior to other races.

Disadvantages: Aspects of the character type that make it inferior to other races.

Role-playing Notes: Some brief advice on possible ways to portray a character of this race.

Check Your Options

Before settling on a race for your character, take a look through the rest of this chapter—the section below on racial modifiers, plus all of the individual race descriptions. Also, it would be a good idea to consult with your referee; if he's planning an adventure or a series of adventures to take place in a certain location, he may require you to create a character of a suitable race.

This brings up a point about how the XXVc™ game differs from other types of role-playing games. Because of the wide variety of environments in the XXVc™ game universe, you may not be able to use the same player character in every adventure you play. So, your referee might have you begin with a Terran, to use in a set-up adventure that opens on Earth. This character could travel to Luna, Mars, and lots of other places, as long as he has the proper equipment.

But if the referee's story eventually takes you to the ocean depths or the surface of Venus, it might be a good idea to switch to a Delph or a Lowlander character for the duration of that part of the saga. Then, when the story moves to another location, leave the Delph or the Lowlander behind—maybe you'll be back, and when you do return, your "specialized" character will be waiting for you.

Table 4: Racial Modifiers

	Str	Dex	Con
Terran	0	0	+1
Martian	-1	+1	-1
Lunarian	-2	+1	-1
Venusian	0	-1	+1
Mercurian	-1	+1	+1
Tinker	-2	+3	-2
Worker	+3	0	+3
Terrene	+2	+2	+2
Delph	+2	0	+1
Lowlander	+3	0	+1
Desert Runner	+2	+2	+1
Stormrider	+2	-2	+2
Spacer	0	+1	+2

Int	Wis	Cha	Tech
0	+1	0	0
0	-1	+1	0
+2	0	0	0
0	+1	-1	0
0	0	0	0
0	0	0	+3
-2	-1	-3	-1
-2	-1	-3	0
0	0	+1	-2
0	0	-3	+1
0	0	0	0
0	0	0	-1
0	0	0	-2

Racial Modifiers

As you can see by looking at Table 4, the combination of genetic engineering and environment affects your character's ability scores—no character comes through this part of the process without some alteration to the basic scores that you rolled in the previous chapter. After you make a race selection, check the table and modify your character's ability scores as indicated.

For example, let's use a character who ended up with the following attribute scores:

Str	12	Int	15
Dex	16	Wis	10
Con	10	Cha	11
Tech	9		

We've decided that this character will be a Martian. Referring to Table 4, we can see that his Martian heritage slightly raises his Dexterity and Charisma and lowers his Strength, Constitution, and Wisdom. After making the necessary adjustments, the character's attributes look like this:

Str	11	Int	15
Dex	17	Wis	10
Con	9	Cha	12
Tech	9		

If your choice of race causes your character's Strength, Dexterity, or Constitution to be altered, you'll need to flip back a few pages and make a note of the characteristics (Hit Bonus, Missile Bonus, etc.) from Tables 1 through 3 that are changed.

You can see that the racial modifiers on Table 4 range from -3 to $+3$, which is why Tables 1 through 3 include ability scores lower than 3 and higher than 18. No ability score can ever be reduced below 1, regardless of what Table 4 says, and an already high score can be boosted as high as 21. (In Tables 1 through 3, we've allowed for the possibility of Str, Dex, and Con scores of 22. This is a level that PCs can't attain, but which the referee might use for a super-powerful creature that he creates.)

A special note on modifiers to Charisma: Any change from the score generated by a dice roll only affects that race's Charisma when an individual of one race is interacting with a member of a different race. For example, a Lowlander has a -3 modifier to Charisma, so an individual with a score of 9 in that attribute has an effective Charisma of 6 from the viewpoint of a Martian, a Tinker, or a member of any other race. But the modifier is disregarded (specifically, for the purpose of an Ability Check) when one Lowlander is interacting with another member of the same race.

Your character's race also has an effect on his or her saving throws—statistics that determine how the character fares against special dangers such as explosions, radiation, and extremes of temperature. These aspects of each character race are covered in general terms in the following descriptions, but if you want more information, flip ahead and check out the section on saving throws in the chapter on Combat.

Terrans

"The descendants of a history both glorious and destructive, Terrans know better than anyone the power of rebirth and redemption. Theirs is the Homeworld of Man, and they are the root of us all."

—Badinger's History of the Solar System

Physical Size: 5 to 6 feet tall, 120–250 lbs.

External Covering: Smooth, relatively hairless skin, usually in shades of brown, dark brown, red, tan or beige.

Eyes: Human normal.

Ears: Human normal.

Mouth: Human normal.

Nose: Human normal.

Genotype: Terrans are the least gene-tailored of all human species; this makes them marginally adaptable to a wide variety of environments.

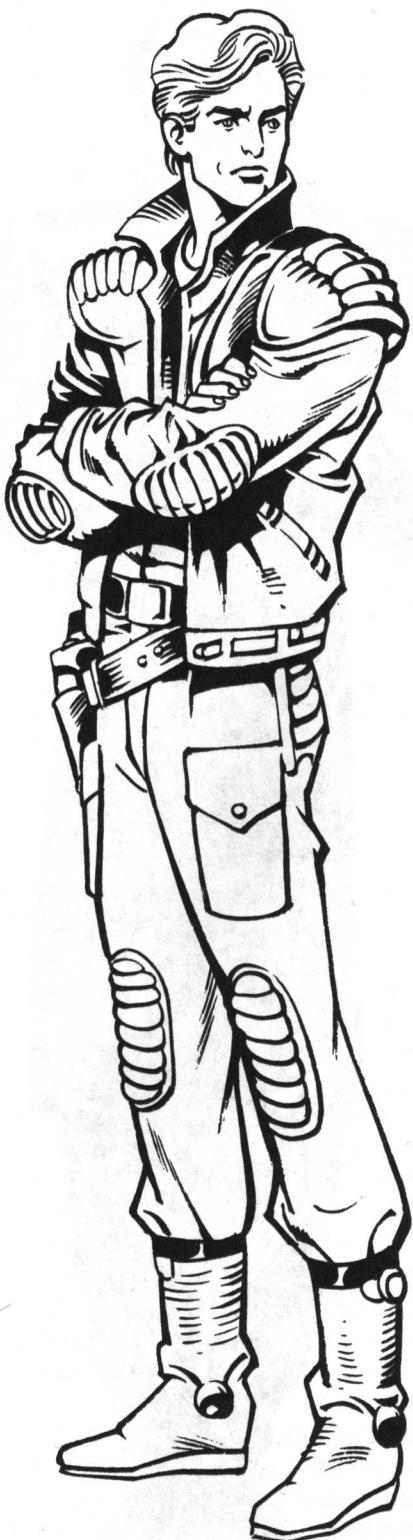
Cultural

If you come from Earth, you come from a mess.

Centuries of rampant pollution and war have reduced the planet to a wasteland in many areas. To top it off, in the 23rd Century, interplanetary war left most of Earth's cities in rubble, with gangs of semi-barbarians roaming the shattered ruins.

Life within these "sprawls" is violent, savage, and often short. Most survivors belong to a gang of some sort, organized around family lines or neighborhoods. These gangs are constantly at war with each other for whatever stores of food, weapons or tools can be found. Gangs are ruled by the most powerful. It's a tough, brutal life, with little chance of survival, much less advancement.

The luckiest Terrans come from one of the independent arcologies. These are huge fortress buildings, self-contained, with their own power plants, factories, schools and living facilities. Like the castles of the Dark Ages, the arcologies were built to withstand the collapse of civilization. With their massive



Terran

walls and powerful weapons, the arcologies are well able to stand off any attacks by roving mutant gangs.

The arcologies' greatest strength is also their greatest weakness. Isolated from each other behind their tall armored walls, the arcologies suffer from inbreeding, corruption, stagnation and overcrowding. Most arcology governments are oppressive regimes installed by the Martian overlords who have gained control of the planet. Other governments were left in place only because they agreed to sell out to the Martian raiders, trading their freedom for luxury goods and personal power.

Advantages: Terrans are extremely adaptable. They can live anywhere on Earth—a statement many other racial types can't make—and with basic body protection and breathing apparatus can survive indefinitely in a variety of hostile environments.

Disadvantages: From a comparative standpoint, Terrans are at a minor disadvantage in game terms because they have the smallest number of racial modifiers to ability scores and saving throws. But this is only a minor drawback, more than offset by their adaptability.

Role-playing Notes: A Terran player character is confident in himself and in his race's ability to eventually throw off the yoke of Martian oppression, but he is also a realist: If man is to regain his freedom, the process will be a slow one composed of many small steps. Play your Terran character with a combination of determination and patience, and you won't be far off.

Martians

"As the oldest surviving civilization in the solar system, the Martians have the sort of superior attitude and aloof manner that makes them appear to be terrible snobs."

—Badfinger

Physical Size: 6 to 7 feet tall, 120–200 lbs.

External Covering: Smooth, hairless skin, usually in shades of brown, red, tan or beige.

Eyes: Human-based, larger and more sensitive.

Ears: Human-based, somewhat larger.

Mouth: Human normal.

Nose: Human-based, with flaring nostrils.

Genotype: One of many races that are mildly altered from the human norm. Martians tend to be slender and fine-boned, with long legs (a product of

growing up in the low gravity of Mars). They have large, deep chests and noses with wide nostrils, improving their ability to breathe the extremely thin Martian atmosphere. Their eyes are large and sensitive to very low amounts of light, and their ears have been enlarged to better capture sound. The Martian upper classes also indulge in gene-tailoring for esthetics, so that many wealthy individuals are almost inhumanly beautiful.

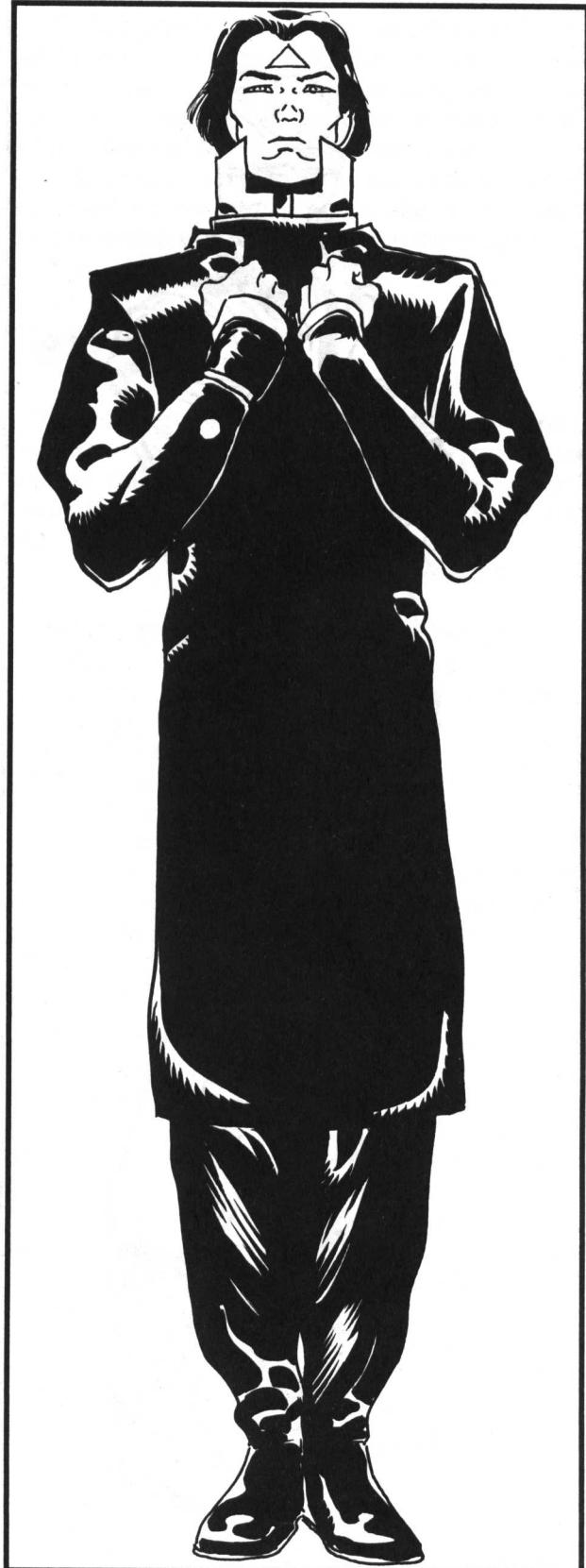
Cultural

As the oldest surviving and most advanced civilization in the solar system, the Martians have come to believe that they are the best of New Humanity, and that eventually all the rest of mankind will be their servants. Skilled in genetic engineering, they have already made the first strides along this dark and evil path by creating genetically altered slave races like the Workers and the Terribles, as well as building a mighty battle fleet that prowls space preying on weak and defenseless ships of the other planets.

Once a civilization of bold corporate pioneers and adventurers, the Martian society has degenerated into a rigid castehood of executives, managers, and workers. The executive culture of Coprates Chasm (the most extensively terraformed area of Mars) is glittering, decadent and martial. High-ranking men often dress in militaristic uniforms that double as business suits and sneer at the so-called "lesser planets." Upper-class Martian women are glittering social butterflies whirling through a round of gay parties that mask the savage intercorporate battles going on beneath the surface.

Every "civilized" Martian is tied to or affected in some way by RAM, a political/economic/military megalith descended from the mighty Russo-American Mercantile Corporation that was formed in the 21st Century. The Martian elite lives in massive pyramidal arcologies on the floor of Coprates Chasm, overlooking tranquil artificial lakes and forests. Their forms of entertainment are theater, film, parties, duels, and ice yachting.

Along the walls of the chasm live the managers, the middle-class functionaries of the Martian civilization. The manager cities are bleak, featureless malls with antiseptic plastic furnishings. Their main entertainments are watching the tri-dee, eating synthetic foods, and scrabbling for a few extra meals. There are no restaurants, movies or parks in the manager cities. Managers' lives are not uncomfortable—they live and work in clean apartments and offices—but they are also not fulfilling.



Martian

other planets. Beneath other domes are luxurious parklands dotted with slender, elegant white buildings. However, as with their spaceports, the Lunarians usually only use these beautiful low-gravity palaces to greet formal visitors from offworld, personally preferring the safety of their tunnels instead.

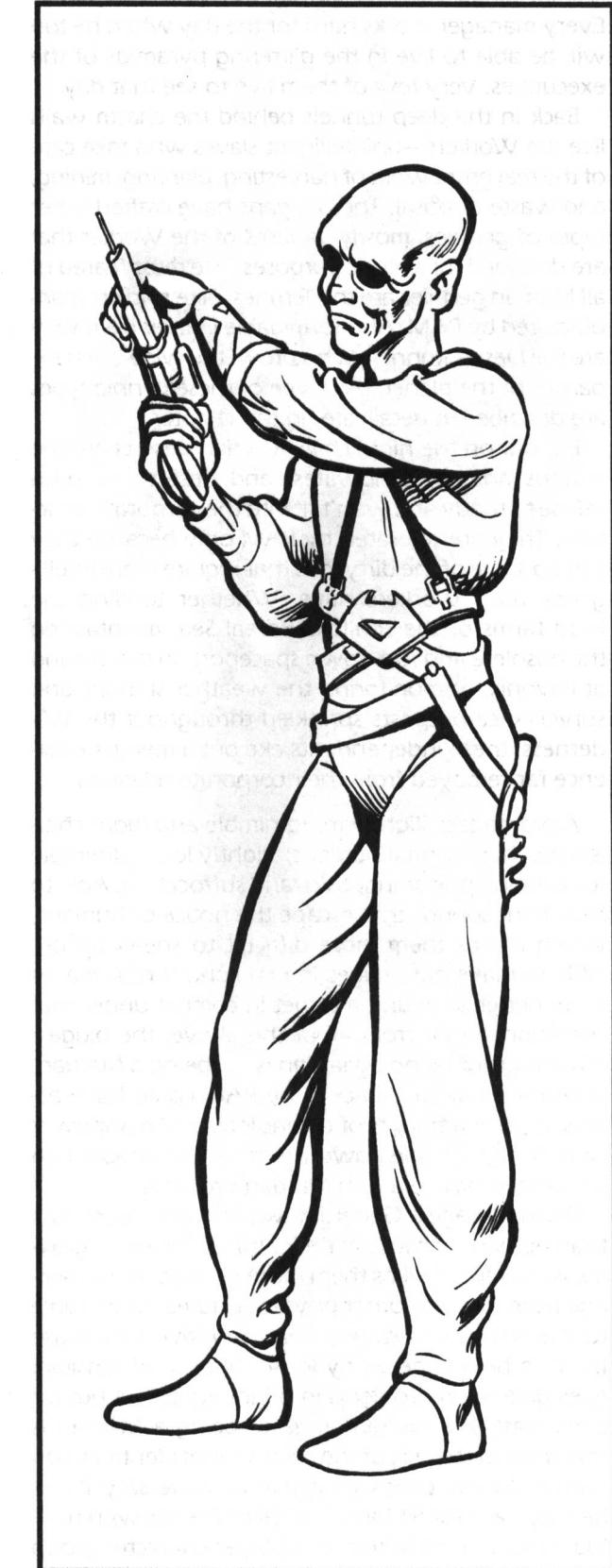
Although small and dimly lit, the Lunar tunnel cities are not uncomfortable. Bright murals adorn the fused stone walls, and small markets and meeting places are neatly fitted into alcoves along main passageways. Crowds of pleasant, quiet Lunarians throng these small mallways at all hours.

Practical but not stuffy, Lunarians enjoy music, art, theater and low-gravity sports. They wear simply cut clothing, usually adorned with bright scarves or other bold accents in primary colors. Much like the Indian caste marks of Old Earth, all Lunarians have a small triangular patch affixed to their foreheads. This patch is used to denote the rank, status and family of Lunar individuals.

Lunarians are stubborn, clannish and very aloof. They don't get into arguments often, but when they do, they show a bulldog tenacity. Competence is highly prized in their civilization, and the highest-ranking Lunarians are well known for their high intelligence and business savvy.

Advantages: Products of a culture that prides itself on cool-headedness (unless provoked), Lunarians are innately more intelligent than members of other races. Their more delicate frames give them a better Dexterity than normal humans. From living on an essentially airless world, they have developed a strong resistance to radiation and the threat of suffocation. Their large eyes enable them to see in almost total darkness (negating any combat penalties that would otherwise apply).

Disadvantages: Their smaller size makes them generally less strong and less physically tough than humans. They are slightly more vulnerable to temperature extremes and to the effects of toxic gases and poisons than humans are. The sensitivity of their eyes makes it impossible for them to stand long periods of exposure to bright light without wearing some sort of protective goggles. Because of their upbringing in the tunnels beneath the Lunar surface, all Lunarians suffer from agoraphobia (fear of open spaces). Whenever a Lunarian is not under a dome, in a ship, or otherwise enclosed by a structure or a vessel, he may be required to make Wisdom Checks (to see if he has the will power to fight off the fear). Failing this check will cause the character to be uncooperative, or even catatonic, until he is brought to a place where he feels safe.



Lunarian

Role-playing Notes: As a group, Lunarians are impersonal and standoffish, but a Lunarian player character is cut from a somewhat different mold. He'll have no trouble getting along in a group of mixed racial types—although he will resist any attempt to do something harmful to Luna or any of his kinfolk. In order to function as an adventurer in the outside world, a Lunarian will have conquered his agoraphobia to the extent that he needs to make Wisdom Checks much less frequently than an average Lunarian does, but this problem will still be something to keep in mind.

Venusians

"The Venusian looks inward, seeking answers in the immaterial. But be warned: A sleeping dragon awakened is a swift and terrible foe!"

—The Ishtarian Book of Seven Clouds

Physical Size: 5 to 6 feet tall, 120–250 lbs.

External Covering: Smooth, hairless skin, in shades of brown, tan or beige.

Eyes: Human-based, narrow and covered by a protective membrane.

Ears: Human-based, slightly smaller.

Mouth: Human normal.

Nose: Human normal.

Genotype: Mildly altered human. Venusians tend to be Asiatic in appearance, with small, narrow eyes and long, thick hair. The ears are smaller and close to the head; the eyes are gene-tailored with a clear nictitating membrane (it covers the eye when desired) to protect them against acid rains. Venus's heavy atmospheric pressure has produced a tendency toward heavier, stronger frames in its natives.

Cultural

Although Venus is primarily known for the theocratic civilizations of its main continent, Ishtar, there are really three different types of Venusian civilization.

The Aerostaters are primarily traders and herds-men. Hovering high above the smoky black storms of Venus in their dirigible-cities, the Aerostaters are somewhat disdainful of the Ishtarians, whom they consider spacy monastics. Their civilization is that of a race of aerial gypsies, full of flashy, flowing clothing, rugged but friendly manners, and tough, open people.

With daily acid rains and lightning storms, Aerostaters don't go out of their floating domains too of-



Venusian

ten, so their clothing is light and loose. Aerostater entertainment runs to large, friendly parties with lots of wine and dancing. As in other nomadic cultures, there are many festivals, family rites, superstitions, traditions and legends to tie the group together. This social nature extends everywhere—entire areas of the Aerostates are devoted to huge rooms full of cushions, where citizens gather to eat, discuss events, and trade.

The residents of the southern continent, Aphrodite, are primarily farmers and miners, living on huge fiefs controlled by several hereditary families. These Aphrodite Families are descended—literally—from the original Venusian colonists who occupied only the atmosphere above the planet's surface. The hard lives of the Aphroditians have made them stubborn, hot-tempered people, jealous both of the gypsy ways of the Aerostaters and the relatively easy life of the Ishtarian theocrats.

The Aphroditians are shrewd traders whose estates provide most of the mineral and farm exports of Venus. The members of the wealthiest Families entertain with lavish parties and balls, while the lower classes are content to amuse themselves with strong drink, gambling, and savage brawls.

The Ishtarians produce plastics, medicines, biogenetics and light industry; however, their chief advantage over other Venusian civilizations is their domination of ground-to-space (and back again) transportation. The nucleus of the huge Ishtarian trade fleet is made up of the original Venusian warships from the old System States Alliance, upgraded and reinforced by newer cruisers. Although the Aerostaters do have the facilities to allow small ships to land on and take off from their floating cities, the Ishtarians accommodate heavy vessels from their sophisticated spaceport at New Elysium, the capital of the Ishtar Confederation. Ishtarian cruisers and transports are the largest of their type in the solar system, and every vessel is heavily armed. With this clout, Ishtarian convoys can travel with impunity anywhere in the solar system, handling the trade of all three Venusian civilizations for a modest percentage.

While the center of the Ishtarian community is the Temple, where the Elders of the Faith meet to discuss important matters, the Ishtarian civilization is not by any means as puritanical as their simple loose robes and muted color schemes might suggest. Wine shops, communal baths, esthetic arts, and theater are everywhere, while more physical activities include exhibitions of traditional ritual combat and martial arts. Ishtarian cities often have huge auditoriums where community "entertain-

ments" are held. There is room for great poets, singers and ceremonial warriors, as well as great priests.

Advantages: Sturdier body construction gives Venusians a slight advantage in Constitution (although, all races considered, this is not remarkable). Generally introspective and not prone to snap decisions, Venusians have higher Wisdom than most other races. Accustomed to the acidic environment and high temperature of their home planet, they are resistant to poisons and extremes of heat.

Disadvantages: Delicate or abrupt movements are harder to accomplish in high atmospheric pressure; as a result, Venusians have lower Dexterity than humans. The same personality traits that give them higher Wisdom also cause them to have slightly lower Charisma. They are especially vulnerable to cold, as might be expected, and because they're accustomed to having *lots* of air to breathe, they are more easily harmed by the threat of suffocation.

Role-playing Notes: A Venusian player character can be either an Ishtarian, an Aphroditian, or an Aerostater (game-related characteristics are the same for all three types). If a group of PCs contains Venusians of different types, then it will be necessary for those characters to overcome or forget about their cultural differences and work together for the sake of the group.

Mercurians

"Coming from their rough-hewn beginnings, Mercurians place a much higher value on esthetics than many of the other colonial races."

—Badlinger

"Good taste can't be bought. Bad taste can."
—A Martian's-eye View of Mercury

Physical Size: 5 to 5½ feet tall, 120-250 lbs.

External Covering: Smooth, hairless skin, usually in shades of brown, dark brown, red, tan or beige.

Eyes: Human normal.

Ears: Human normal.

Mouth: Human normal.

Nose: Human normal.

Genotype: Mildly altered human. Mercurians are a polyglot mixture of Terrans (mostly), Martians, and a few Venusians. Because of interbreeding over the years since the planet was settled, the distinctive Martian and Venusian physical traits (eyes and ears) have been "humanized" to the point where they are for practical purposes nonexistent. Mercurians are

gene-tailored for stockiness, which saves space in their underground warrens, but their other distinctive characteristics are more a product of environment than genetics.

Cultural

Each of Mercury's four cultural groups is descended from refugees of Earth, Mars and Venus, who established solar power around this ovenlike world in the early 24th Century. These energy-collector satellites, called Mariposas, now provide most of the energy needs of the entire solar system.

As could be expected, the Mariposa owners and operators soon became extraordinarily rich from selling power to other planets; however, great wealth didn't necessarily confer great taste on these rough-hewn spacemen. Their asteroid cities are monuments to gaudy expense, literally exploding with tinsel towers, baroque mansions, bad copies of Renaissance statues, and low-taste bric-a-brac. These Sun Kings, as they now call themselves, dress in a wide variety of styles depending on their personal tastes; Arabian Nights robes exist side by side with 16th-Century doublets, while others affect the styles and tastes of the more fashionable Coprates or Lunar jet sets.

The Sun Kings wield a tremendous amount of power over their planet-bound relations. While others live on the planet and mine its ores, they actually own the land, distributing the profits from offplanet trade as they see fit. This autocratic system has made the Sun Kings unpopular with other Mercurians.

The warren cities beneath the planet's surface are the homes for the rank and file of Mercury, known as Miners. Unlike the Lunar tunnel cities, the warrens of Mercury are actually huge systems of caves, a network occasionally broken by enormous spacedocks with semi-transparent retractable domes at surface level. Within the warrens are buildings, parks, factories and transportation systems much like those found in any surface-dwelling civilization. Because of this "underground openness" and the fact that they do come to the surface to operate their mining machines, the Miners do not suffer from the problem with agoraphobia that is common to Lunarians.

In style, Miners are somewhat like the Sun Kings, but on a more modest scale. Lacking the money for a full show of gaudiness, they are well enough off to wear a lot of gold, flashy clothing, and expensive gadgets.

The Musicians are the equivalent of a merchant class. These are the people who operate the stores and other businesses both in the warrens and on the

Mariposas and other orbital colonies. They are considered harmless by the other groups of Mercurian society, but their numbers are significant enough to make them a factor in issues involving the planet's population as a whole.

Culturally related to the Musicians but professionally quite different are the Desert Dancers, nomadic wanderers who actually live on the surface in huge rolling arcology-buildings called track cities. These track cities were created in the early days of the colonization of the surface, designed to travel between the vast solar power arrays scattered around the planet. The Dancers move around, tending to repairs to the solar collectors and doing occasional mining—but always careful to stay on the side away from the sun, so they don't get bombarded by the incredibly intense solar radiation. More pragmatic than the warren dwellers and the Sun Kings, they wear loose, Arabian-style clothing, affect very little jewelry, and are usually armed with the traditional Mercurian version of the mono knife, called a technodagger.

Oddly enough, the Musicians—despite their name—are not particularly accomplished in music and other fine arts. It is the Desert Dancer civilization that is known for its skill in the performing arts; Dancer poets, writers, artists, and bards are highly prized systemwide, and proceeds from tours and performances are a major source of the track cities' income.

Advantages: Mercurians are unique among the human races in having heightened Dexterity and Constitution. They are highly resistant to radiation and extreme heat.

Disadvantages: Because their solar collectors and mining machines remove the need for them to do a great deal of physical labor, Mercurians are slightly less strong than normal humans. They are more vulnerable to extreme cold than any other human race.

Role-playing Notes: A Mercurian player character can be from any cultural group, but is probably not a high-ranking member of the Sun Kings hierarchy; such a character would have little reason to travel and would be more concerned with keeping an eye on his wealth than doing heroic deeds to help others. On the other hand, it's easy to imagine that a Miner or a Musician might become disenchanted with his life and decide to join a group of adventurers. Perhaps the best choice for a Mercurian PC would be a Desert Dancer who has some kind of performing skill and habitually goes on "concert tours" to other planets. This would be an excellent cover for the entire PC group, easily explaining why they move from place to place so frequently.

Gennies

"13. What vat did you crawl out of?"
—1,001 Things Not to Say to a Gennie

Genetic mutants, or "gennies," represent the most extreme type of genetic experimentation in the 25th Century. Unlike the mildly gene-tailored human races (Martians, Lunarians, Venusians, Mercurians), gennies are extensively altered—still recognizable as coming from human stock, but often that's where the resemblance ends. Most gennies are specifically designed to survive in a certain environment, which often means that they find it difficult or impossible to adapt to other types of living conditions.

Because gennies are so heavily altered from the human norm, it is impossible for them to interbreed with any other species of human. This has been used as an argument by bigots among the human races to justify the gennies' status as "lower life forms."

Tinkers

"If Tinkers were bigger, they might rule the solar system—as long as they could do it from inside an air duct."

—*Gilbert's Guide to Gennies*

Physical Size: 2 to 3 feet tall, 60–80 lbs.

External Covering: Smooth, soft, humanlike skin, covered in soft gray fur.

Eyes: Human-based, very large and sensitive.

Ears: Human-based, small and pointed.

Mouth: Primate-based, small, with slightly pointed teeth.

Nose: Human normal, snubbed.

Genotype: Tinkers were originally bioengineered (by a division of RAM) to work in small, cramped areas such as the tunnels, ducts, and hatchways in space stations, asteroid colonies and rockets. Their huge eyes allow them to see clearly in almost total darkness. Through crossing with small anthropoid species such as lemurs and gibbons, they have long, sensitive fingers and a longer reach than normal humans. In addition, as an unforeseen but pleasant by-product of the gene-manipulation process, Tinkers have a unique combination of curiosity and technical skill, giving them an almost uncanny ability to fix, modify and build things. They make very good engineers (although at two or three feet in height, most of them have problems living up to the "tough guy" image of the engineering fraternity).

Cultural

The Tinker culture is based around tools, machines and the manipulation of symbols. Books, especially texts on engineering and hard science, are especially dear to them; whenever a group of Tinkers bands together, they will inevitably begin to assemble a large library of books, film chips, and gadgets. Their packrat nature makes them reluctant to throw anything out; it might be "useful" later.

Comfort is another important part of Tinker life. Individual Tinker residences are small, warm warrens (the inside of an orbital colony's heating duct will do just fine), filled with treasured items, comfortable clothes, well-worn books, and collections of odd knickknacks. Tinker clothes are bright, warm, and usually have dozens of pockets for holding tools, instruments and spare parts.

The center of Tinker culture is the Nest, a community of between five and ten Tinkers, most of whom are related. A Nest is often started in a normal (human-scaled) room, and extends through air ducts and secret passages until it may encompass hundreds of feet of corridors and tunnels. The Nest is ruled in a rough but generally democratic fashion, with the eldest and most skilled Tinkers overseeing boisterous group meetings during which important issues of the Nest are discussed.

Advantages: By and large, Tinkers are the most dexterous and most technically proficient of all races. Their eyes are as sensitive as those of Lunarians (negating penalties for operating in darkness). In combination with their small size, these attributes make Tinkers capable of doing a myriad of tasks that no one else can accomplish.

Disadvantages: Although strong and sturdy for their size, Tinkers are weak and frail compared to all other races. They are the most vulnerable of all races to being hurt by explosions and electrical shock. Because they thrive on living inside closed-in spaces, they suffer from a mild form of agoraphobia (see the section on Lunarians for more details); a Tinker must make a Wisdom Check whenever he spends 24 consecutive hours in a wide-open environment.

Role-playing Notes: Tinkers have grown accustomed to people thinking of them as pets—and they hate it! A Tinker player character is in a prime position to help change that image, with high Dexterity that makes him valuable in combat and high Tech to keep a ship and everyone's equipment in top condition. "We couldn't have done it without you" is a statement that every Tinker loves to hear from his companions.

Workers

"The Worker leads a simple life, and in that respect has the envy of every other intelligent species."

—*Gilbert's Guide*

Physical Size: 4 to 5 feet tall, 150-300 lbs.

External Covering: Leathery, rough skin, similar to humans, but tinted a distinct shade of gray.

Eyes: Small and dark.

Ears: Small and close to skull.

Mouth: Wide and thick.

Nose: Human normal.

Genotype: Workers are the general, all-round grunts of the RAM oligarchy. As a group, they are simple, relatively unintelligent, and unimaginative. They are bred for strength at the expense of other attributes, with short muscles anchored to an extra-heavy skeleton. Supposedly, this genotype derives from a cross between human and gorilla or chimpanzee stock, but rumor has it that RAM scientists actually backbred human stock, singling out latent genes of *Homo habilis* (the predecessor of *Homo sapiens*). They sure look it.

Creating the first Workers, back in the early days of the breakthrough in genetics, was expensive. But RAM scientists brought down the long-term cost by tailoring the Worker to reproduce quickly and often. Worker females give birth after a six-month gestation period (roughly the same as that of a baboon, instead of the nine-month period for a human), and young Workers reach physical maturity in only seven years.

Cultural

What culture the Worker subtypes have has been primarily created by RAM. There are no politics, religion, or science in the Worker lifestyle. Worker communities resemble medium-security prisons, with everyone in the crew watched over by a small contingent of armed guards. Daily life has three basic components: Food (nutrient pastes served in the cafeteria), rest (in dormitories with few if any creature comforts), and work. Workers who perform better than others do get some simple rewards and incentives: better-tasting food, a larger living space, more unsupervised "free time."

Worker gennies can be found in many places throughout the Solar Alliance—the basic genotype has been sold over and over again, with few changes. Usually skin tints vary, so that others can tell where the Worker has come from. Mercurian

Workers are bald, slightly more human-looking than other types, and have yellowish skin. Martian Workers have hairy bodies and reddish skin. Workers in the Asteroid Belt are more apelike than Martian Workers and have a bluish skin tint.

Although Workers are primarily thought of as things rather than people, the brighter ones often manage to escape the barracks and make it to freedom. These refugees easily find work in occupations where strength and constitution are important, such as warrior and scout. But their lives are spent in constant fear of being captured by one of their former overlords and of being dragged back into slavery.

Advantages: Workers have a better combination of strength and durability than any other race.

Disadvantages: The mental abilities (including technical skill) of Workers are poorer than those of any other race. As a way of keeping them under control, many Workers are engineered so that they must have a special type of food paste to stay healthy—and that food is only available at the work camp where they're stationed. (Going without the special food will cause the Worker's Strength and Constitution to drop by 1 point per day; if either score reaches 0, the Worker dies. No matter how weak he is, a Worker will recover back to full strength in one day after getting a new supply of the special food.)

Role-playing Notes: Not all Workers are mindless clods, and a Worker player character will always be one of at least moderate intelligence (8 or higher). Rather than "belonging" to some other character, a Worker PC is an independent personality, capable of making his own decisions. Still, he will instinctively thrive on hard labor—willing to take on any physical job and see it through. Most Worker player characters do not need special food to survive, which makes it possible for them to travel along with an adventuring group.

Terrines

"The only thing more fearsome than a Terrine is a bad-tempered Terrine. Unfortunately, all of them are bad-tempered all of the time."

—*Gilbert's Guide*

Physical Size: 6 to 7 feet tall, 250-300 lbs.

External Covering: Leathery, sandpaper skin, with callus plates over groin, chest, abdomen and inner limbs.

Eyes: Small, with variable pupils; somewhat cat-like. The vision range is very acute and stretches from

bright light to near pitch black.

Ears: Large, cupped, and catlike, capable of folding back along the skull.

Mouth: A narrow slit with sharp fangs. Speech is a guttural, combat-oriented language.

Nose: Two thin slits, which can be closed fully.

Genotype: While there are several different variations of Terrines, the primary model, described here, is used heavily in RAM combat units throughout the Alliance. This model was designed specifically for use on Earth (which is how the name was derived), but can exist in any environment where a human can survive.

Terrines are created to do one thing well—kill. Shark genes provide a sandpaperlike skin and hardened plates of cartilage over critical areas. The skull is bald and heavily armored with extra-thick cartilage, with brow ridges protecting the catlike eyes. The entire skeleton is massively built. Hard spurs of horn project from the heels and elbows, and the hands and feet are tipped with retractable talons. Muscles are long and ropy, with boosted reflexes. All Terrines are double-jointed.

Cultural

Terrines have a culture designed for them by their RAM overlords. It is a brutal, savage culture, based around individual combat units, in which only the strong survive. Terrines are conditioned to obey anyone of the distinctive Martian genotype (a tall frame, thin features, typical body coloration and scent). Although Terrines are less intelligent on the whole than other races, all of them have a high degree of vicious animal cunning. Anyone who underestimates even a "stupid" Terrine usually doesn't live long enough to regret it.

Like Workers (with whom they share a lot of background), Terrines live in barracks and are given food paste for their basic nutritional needs. One major difference from Workers is that Terrines are respected (make that feared) members of RAM's military force. They wear uniforms with patches denoting their unit and rank. However, they usually have no names and are known only by group and individual serial numbers.

The Terrine way of life is centered around power, pain, and punishment. They are indoctrinated to believe that RAM Martians are the highest form of life, Terrines the second highest, and all other humans and gennies a distant third. During training, each new Terrine must undergo pain and brutality until he is hardened to the toughness of steel. The first test of fitness for a novice Terrine is to plunge a knife into his

own belly and survive the test. Almost all of them do.

Like Workers, some of the smartest Terrines decide to escape from their overlords, choosing to pursue careers as freelance mercenaries.

Advantages: Terrines have better physical attributes (Str, Dex, Con) than any other race and a high degree of resistance to any kind of special attack form. A Terrine's tough skin gives it a natural Armor Class of 7, and if he doesn't have a better weapon to use, he can attack twice per round with his claws for $1d6 + 3$ points of damage per attack. (See the chapter on Combat for explanations of Armor Class and attacking.)

Disadvantages: Terrines have poorer mental faculties (Int, Wis, Cha) than most other races. Even the most intelligent Terrine can't deny his heritage and is subject to the Terrine battle rage: Whenever a Terrine gets involved in combat, he must make an Intelligence check. Failing the check means that he will fight to the death or until he is knocked out (perhaps by a companion who doesn't want him to go down fighting).

Role-playing Notes: A Terrine PC will be of the renegade type, and will always be of at least moderate Intelligence (smart enough to be a warrior or a scout). He is still subject to battle rage, but because some of his pro-RAM conditioning has worn off, he is allowed an extra Intelligence check (maybe even another beyond that, if the referee permits it) if the first check fails.

Delphs

"After decades of trying to develop a relationship with the dolphin, mankind came up with a different way of achieving the same goal: the Delph."

—*Gilbert's Guide*

Physical Size: 7 to 8 feet tall, 200–400 lbs.

External Covering: Rubbery skin, with a coating of blubber underneath. The skin is usually patterned in shades of blue, gray or black.

Eyes: Human normal.

Ears: Pinholes recessed far back on the skull. The forehead contains a spongy tissue filled with oil that serves as a receiver for sonar signals.

Mouth: Thin lips with pointed teeth. The tongue is short and thick. The upper palate is slightly altered to allow the delph to make and project a clicking sound that is detectable by other Delphs' sonar hearing.



Delph

Delph speech has a whistling, breathy quality.

Nose: Short and flat, with interior valves that close to provide a watertight seal.

Genotype: The first major gennie type created, human-based with seal and dolphin characteristics, Delphs are designed to live in the ocean depths of Earth, coming up every so often to breathe. Large lungs, improved circulation, and a small "backup" chamber in the heart allow Delphs to stay underwater for periods up to two hours. The limbs are short, and the fingers and toes webbed. Delphs are all double-jointed and can rotate their ankles through more than 90 degrees, allowing them to use their feet as a "tail" for propulsion and steering while swimming.

Delph males are hairless; females have long, black hair on their heads that streams out behind them when they swim. A Delph infant, too small to swim as fast as his parents, can entwine himself in his mother's hair and be towed along when she is on the move.

Cultural

Delphs are designed to tend the vast fish ranches and kelp beds of Earth. Despite some rather drastic modifications, they remain basically human in appearance and attitude. Delphs can and will eat anything that a normal human eats, but prefer raw seafood and kelp.

Delphs have the full range of human emotions, and are one of the most psychologically balanced of the gennie subtypes. Much like their dolphin relatives, they are playful and easily amused, often joining adventuring parties for companionship or just curiosity.

Their society is mobile; individuals have very few possessions except for a loincloth, a weapon or two, and a couple of prized baubles (Delphs are fond of jewelry). What cities they have are primarily huge, openwork rafts, with as many rooms below water as above. These communities drift along with the ocean currents, often accompanied by herds of whales or dolphins. Delph society is a series of loosely structured clans, with the eldest member leading each "pack."

Advantages: Primarily because of their size, Delphs are generally stronger than humans. Their playful, easygoing nature makes them more charismatic than most other creatures. They have considerable resistance to almost all forms of special physical attacks.

Disadvantages: As a product of heredity and society, Delphs are not technically proficient. They have

very little tolerance for extreme heat. Most importantly, a Delph is restricted by the need to be in or near water at all times. If a Delph has not been fully immersed in water for eight hours, he or she immediately loses 1 point of Str, Dex, and Con and another 1 point from each attribute for every additional hour. If any one of those attribute scores reaches 0, the Delph dies. Ten minutes of being underwater once every eight hours is enough to prevent the loss of points, and one hour of submersion will bring a weakened Delph back to full vigor.

Role-playing Notes: The need for water is a limitation on what a Delph player character can do and where he or she can go. (Although it is possible to put a submersion tank aboard a ship to allow a Delph to travel in safety, this is not customarily done.) The key to role-playing a Delph PC is to be carefree and inquisitive—but not to the point where you endanger yourself or your companions.

Lowlanders

"The ultimate example of irony, the Lowlander is perhaps the most remarkable genetic achievement of all—and also the gennie that has the potential to become the biggest enemy of all humankind."

—Gilbert's Guide

Physical Size: 4 to 5 feet tall, 200–300 lbs.

External Covering: Scaly, heavily armored skin.

Eyes: Very large, black or green, with variable pupils; somewhat catlike. The vision range is very acute and stretches from bright light to near pitch black.

Ears: Cup-sized tympanic membranes on either side of the elongated skull.

Mouth: A narrow slit with either large molars (vegetarian types) or hundreds of sharp needles (predator types). Speech is a sibilant hissing, with clicks interspersed.

Nose: Two thin slits, which can be closed fully. There are also gill-like ruffs around the neck; these are used only when the creature is submerged.

Genotype: Lowlanders are an extensively modified race, human-based but having many reptilian aspects. The skin is armored and scaled; the body is thick, squat and heavily muscled. The skull is extremely elongated, stretching back in a bulge back over the neck, and reinforced by a powerful, over-long neck. Extra-flexible vertebrae allow the Lowlander to fully rotate the head like an owl.



Lowlander

Cultural

Lowlanders are one of the most advanced gennie cultures. Originally designed to be terraformers working with machinery on the Venusian surface, they have recently rebelled and are now pursuing their own agenda. This turn of events occasionally prompts a Lowlander to leave the Venusian surface to interact with the non-gennie inhabitants of Venus (whom they call Uplanders). However, the vast majority of Lowlanders remain devoted to their day-to-day occupation: tending to the unique agriculture of the Venusian surface, which is the sole source of the raw materials for two rare and highly desired drugs, gravitol and lifextend (see the Medicine section of the *Technology Book* for more information).

The Lowlanders are supremely well-adjusted—they like the way they are, they enjoy the weather, and they think their culture is wonderful. What they don't like is change of any sort—and this change includes the Uplander plan to terraform the entire surface of Venus and make it habitable for them instead of for Lowlanders. For this reason, Lowlanders get very belligerent when someone different comes into their domain, unless someone can convince them that the visitors mean no harm.

Advantages: Lowlanders were engineered for strength and enhanced technical expertise (so that they can operate and repair the specialized devices they use in their work). They are virtually immune to the effects of extreme heat, highly resistant to toxins and poisons, slightly less resistant to most other forms of physical trauma. The sensitivity of their eyes is a benefit when they are fighting in near darkness. They are the only race, at present, that can survive without special protection and function well in the acidic swamps that cover most of the surface of Venus.

Disadvantages: Because of their appearance, Lowlanders have a deficiency in charisma when dealing with other races. They are especially susceptible to suffocation (since they're accustomed to extremely high atmospheric pressure) and to trauma caused by exposure to extreme cold. In order to survive in something other than their native environment, Lowlanders must wear helmets and breathing packs to provide the high pressure, acidic atmosphere they breathe. A Lowlander breathing apparatus is good for 72 hours (3 days) before its storage tanks need to be replenished—but a Lowlander will die if deprived of his breathing apparatus for only 10 minutes.

Role-playing Notes: A Lowlander PC will not leave the surface of Venus except for a very good reason, probably involving the welfare of all Lowlanders.

Because of this limitation, it's very difficult to use a Lowlander player character through a series of adventures that take place in different locations. (The same is true of other gennie types described later in this chapter.) We recommend that the Lowlander be used as a player-character type only in special situations.

Desert Runners

"Mars, for all its technological marvels, is still a planet composed mostly of wilderness. And in that wilderness, the Desert Runner reigns supreme."

—*Gilbert's Guide*

Physical Size: 6 to 7 feet tall, 150–200 lbs.

External Covering: Short, thick fur, usually in a rust red or ochre yellow shade. Mottled bands of black or deep brown cover the fur, breaking the pattern up for better hiding ability. A thin layer of fat undercoats the skin.

Eyes: Very large, black or green, with variable pupils; somewhat catlike. The vision range is very acute and stretches from bright light to near pitch black.

Ears: Large, rising to points on either side of the narrow skull. A wide membrane unfolds the ear like an umbrella, making the hearing very acute. A Martian Desert Runner can hear a man crossing sand at a distance of more than five miles.

Mouth: Wide, generous mouth, with longish fangs mixed with normal human teeth. Desert Runners can eat human food of all types.

Nose: Short and pug-shaped, with slitlike holes that can close to keep out dust. Sense of smell is not particularly acute, since the thin atmosphere of Mars makes it tough to track prey by scent.

Genotype: Martian Desert Runners were one of the first fully engineered gennies, designed to compete in the savage conditions of the Martian plateaus. As these regions were seeded with wandering herbivores and scavengers, Desert Runners were employed as "sheepdogs," moving the great, slow meat-beasts on their migrations from temperate to equatorial regions, and thinning the ranks of weak or diseased animals.

The Desert Runner genotype mixes elements of canine and feline stock with a basic human form; like wolves, they are able to lop on all fours for days, yet like cats, they have long claws for fighting (tool use is not hindered by the hand-claws, which are retractable). The body is elongated and light, with the legs able to propel the Martian Desert Runner in

great leaps over the sands. The toes are webbed and tipped with long, retractable talons. The webs are covered with tufts of hair, making the feet into ideal "sandshoes." The chest is deep and covered with powerful muscles. A silky "mane" of hair covers the head and upper body, often decorated with braids and interwoven trinkets.

Cultural

The Desert Runner genotype was designed by one genetics house, which then sold the basic pattern to various food divisions of RAM. Each division wanted its herds of herbivores to prosper. Therefore, each Desert Runner variant was instilled with a fierce sense of territory that centers on one particular herd. There are roughly seven subtypes, distinguished by fur color and pattern but otherwise physically identical. Runners are aggressive to the extreme, not only between types, but also within the groups.

The Desert Runner social unit is an extended pack, usually ruled by two or three packmasters—large males who have ascended to dominance the hard way. Competition within the pack is fierce and bloody. The pack is nomadic, living in a way somewhat similar to the Plains Indians of the 18th and 19th Centuries; the main living structure is a portable domelike tent designed to be buried under the sand during the fierce dust storms. Weapons are simple crossbows, knives, and the occasional technological castoff taken from a human body. Clothing is made of tanned skins, with styles and colors varying widely between groups. Most Runners wear some form of leather body armor, crafted from the hides of the beasts they shepherd. Copper and gold ornaments, earrings, and jewelry are common.

Advantages: Runners are bred for enhanced strength and dexterity. They are remarkably resistant to extreme cold and are not easily affected by most other forms of physical trauma. Their leather armor, for the vast majority of Runners who wear it, gives them an effective natural Armor Class of 8. (A Desert Runner who has leather armor will never be found without it.) Instead of an attack with a weapon, Runners can use their claws in hand-to-hand combat, doing $1d6+1$ points of damage on a successful hit. (When their claws are retracted, they do $1d4$ points of damage with bare-hand attacks, just as most other characters do; see the section on Brawling in the Combat chapter for details.)

Disadvantages: Runners cannot tolerate extreme cold, and they are at a slight disadvantage (Charisma penalty) when dealing with members of other races. Their most significant limitation is their need to wear



Desert Runner

special masks or helmets to lower the pressure of the air they take in whenever they are somewhere other than the surface of Mars. When exposed directly to high-pressure atmosphere (such as on Earth or Venus, or in the tunnels of Luna or Mercury), a Desert Runner will lose 2 points of Strength per round and will die if that attribute score reaches 0. For a Runner in weakened condition, putting on one of the special breathing masks or helmets will negate the entire Strength loss in 1 round. In an airless environment, a Runner needs a breathing apparatus with a self-contained air supply, just as other air-breathers do.

Role-playing Notes: A typical Desert Runner character will almost never leave the surface of Mars. However, a player character of this race can occasionally be found elsewhere—as long as he is guaranteed a constant supply of breathable air (several spare masks close at hand). In order to get along with other members of an adventuring group, a Desert Runner PC will suppress his natural aggressiveness toward them and take it out on the opposition instead.

Stormriders

"In a few short years, we may come to realize that the Stormrider was man's most brilliant genetic achievement. And this might not be seen as good news."

—Gilbert's Guide

Physical Size: 15 to 20 feet tall/long, 800–1,200 lbs.

External Covering: Smooth, leathery skin, in muted violets, reds and oranges. Slightly transparent at the ends.

Eyes: Very large, pupilless. The vision range is very acute and stretches from bright light to infrared.

Ears: Cup-sized tympanic membranes on either side of an elongated skull. The membranes are sensitive to radar, sonar, and radio waves.

Mouth: Wide and lipless, with small teeth. Stormriders derive most of their nourishment from floating algae cultures and the herds of livestock they cultivate.

Nose: One thin slit, which can be closed fully.

Genotype: One of the most ambitious gennie types, the Stormriders combine ray and shark genes with a human foundation. The arms and legs are merged into long, batlike wings, with only the fingers and lower legs extending. The chest is deep, with a central "keel" (prominent breastbone).



Stormrider

Cultural

Developed as herders and terraformers, the Stormriders of Jupiter are one of the most nonhuman of the gennie species. Little is known of their technology or social structure, and these topics are the subject of great debate. The Stormriders, however, aren't talking.

Their cities are vast, open structures of living balloons, domes and spinnerettes, riding the boundary layers of atmospheric pressure. For all their alienness, the Stormriders are closest in temperament to the humans of the Venusian Aerostates, with whom they maintain an active trade of aerial technology and information.

The Stormriders' economy is based on the genetically altered livestock they raise and sell to other civilizations in the Outer Worlds. They trade foodstuffs for technology—both the mechanical and the genetic kind. Deep within their cities, the Stormriders are conducting genetic research of their own, mostly related to combining organic parts and machinery. Coupling this knowledge with the technology they are getting from the Aerostates, it may only be a matter of time before the Stormriders leave Jupiter in their own organically based spaceships.

Advantages: As with most gennie races, Stormriders' physical attributes are improved over those of humans. In order to cope with the unearthly environment they live in, Stormriders are highly resistant to toxins and poisons, extreme cold, and electrical shock. They are the only gennie race capable of flying without external power.

Disadvantages: Because their arms and legs are so heavily modified, Stormriders are the least dextrous of all races. Their strange appearance is a hindrance (Charisma penalty) when dealing with members of other races. Their wings are rather delicate, making them vulnerable to damage from explosions. They are especially susceptible to suffocation, and whenever they are away from the high atmosphere of Jupiter they must wear special breathing devices that supply the combination of gases they require. A breathing device can keep a Stormrider alive and strong for up to 10 hours before its tank needs replacing. If deprived of this apparatus, a Stormrider is affected the same as a Desert Runner (see the "Disadvantages" section of that entry). Stormriders can fly only in dense atmospheres, such as on Venus or Jupiter.

Role-playing Notes: Almost without exception, Stormriders spend their entire lives in the atmosphere of Jupiter. This makes it difficult to role-play a Stormrider PC for an extended period of time. However, a

band of player characters who visit Jupiter may find a Stormrider to be a welcome short-term addition to their group.

Spacers

"Spacers approach the line that separates man from machine. Some would say they have stepped over it."

—*Gilbert's Guide*

Physical Size: 5 to 6 feet tall, 150–200 lbs.

External Covering: A smooth, silvery skin, with a biocybernetic aluminum outer layer. Black patches (heat retainers) appear on the body at will, to collect energy. There is a blubber layer between the outer skin and the internal organs.

Eyes: Very large, also silvery in color, and covered with a hard outer lens.

Ears: None.

Mouth: A small slit. Spacers communicate by sign language, or, if they are commonly around humans, by means of a special translator around the neck, activated by their body's natural electrical currents. The mouth is used only to ingest water or powdered rock.

Nose: None. Spacers breathe from small airholes just under the jawline. This oxygen intake is supplemental to their normal air source, produced by their intestinal flora.

Genotype: Spacers are the most inhuman of all the gennie races. They are designed to live for extended periods in space without special suits or environments. A specially developed type of algae inhabits the stomach and intestinal tract, converting thermal energy, water and minerals into oxygen and nutrients for its Spacer host.

Spacers also have a highly reflective skin, with a thin aluminum coating sprayed on at birth. This coating helps protect them against radiation and cosmic rays. Much as a chameleon changes its color, a Spacer can cause black patterns to appear on its back and chest, creating areas where heat can be accumulated. The Spacer simply turns itself toward the nearest heat source to gather energy. If energy or water are scarce (beyond the orbit of Jupiter), a Spacer can get energy from exposure to battery-powered lamps or other low-level radiation sources.

Spacers have no special movement ability; most move by physically propelling themselves from rock to rock. A rare few have obtained space belts that they can use to cut the time of especially lengthy trips.



Spacer

Cultural

Spacers have no real culture—they are solitary souls, usually living in asteroid fields and ring systems, where they comb the rocks for water, minerals, and trace elements. To pay for tools and personal gear, they locate important deposits of iron, gold, copper, and radioactive minerals for the human miners of these regions. Occasionally, several Spacers will band together for company and mutual cooperation, but these random gatherings are far from a true civilization.

Advantages: Spacers have a higher constitution than most other races, and a life of working with tools gives them enhanced technical ability. They are never affected by the threat of suffocation, and are almost impervious to most other forms of physical trauma.

Disadvantages: A Spacer must have a special translator in order to communicate verbally with anyone, including another Spacer. If a Spacer goes 48 hours without being exposed to a source of sunlight or radiation (a simple lamp will do), it will die of starvation.

Role-playing Notes: Despite their alien nature, Spacers can exist virtually anywhere in the solar system and thus could be part of a group of on-the-move player characters. However, because their mentality is so different from that of humans and other races, it is very rare that a Spacer will leave the solitude and security of his normal life in search of action and opportunity.

Important Details

By choosing a race, you've taken a big step toward defining your character. Now, before you move on to the next chapter, take a few minutes to add some small but important touches.

Gender and Age

Is your character male or female? Young, middle-aged, or getting on in years?

Although we often use "he" in these rules to refer to characters in general, instead of "he or she," that word choice is merely for the sake of simplicity. Don't get the idea that the game is slanted in favor of male PCs; in fact, there is no difference in the XXVC™ game rules between male and female player characters. However, the sex of your character could be very important in the context of an adventure—a female PC might have better luck negotiating with a male non-player character, and vice versa. Don't make this de-

cision lightly, and don't automatically choose to play a member of your sex. Having a character of the opposite sex is a good way to add another interesting facet to your role-playing experience.

Usually, beginning player characters are young adults—they've reached an age when they have to decide what to do for a living. You can decide exactly how old your character is, if it matters, or you can simply express his or her age in general terms (late teens, mid-20's, etc.).

Name and Nickname

Your character could have a normal-sounding name, such as Bob or Sue. But seeing as this is the 25th Century, you probably will want to pick something more exciting.

Of course, a Terran name might just be Robert or Susan—Terrans are proud of their long history and traditional names. Martians tend to have names that are combinations of Russian and English derivation, such as Harrison Kirovsky or Vladimir Jones. Mercurians favor Arabic-sounding names such as Kemal and Rashad, while Venusian names are often melodious combinations with a certain Indian or Chinese flavor. Gennies usually have simple, descriptive names, like Scar, Streaker, or Black Barney. (When your ancestors were grown in a vat, family names aren't so important.)

Even if your character has an ordinary "real" name, he or she can use an exciting and descriptive nickname. A character who calls himself Blackhand Starbuck will automatically stand out as a force to be reckoned with. So will someone with a memorable name such as Sweetbeam or The Comet Kid. A nickname can also be related to a character's interests or career. It's pretty easy to visualize a scout named Tracker or an engineer called The Fixer.

Put some thought into choosing a name. It should tell something about the character and his background. It should also be a name you like, because (we hope) you and your character are going to be using it for a long time.

Personality

You don't have to work up a complete history and psychological profile of your character (although some people find this a lot of fun), but at the least you ought to give your character a distinctive personality by coming up with some quirks.

Quirks are the outstanding habits, likes, dislikes, and traits of a character. They help you get a handle on how the character thinks, and what he or she cares about in life. A quirk could be something like "He hates to eat fish" or "She's very stubborn."

For example, a player named Angie is creating a character named Leanna Pascal. Angie knows that Leanna is very smart and dextrous (from her ability scores). She decides to give Leanna these quirks: First of all, Leanna is a compulsive reader; she'll read anything she can get her hands on. Leanna is also vain—she's been known to stop and straighten her hair in the middle of a firefight. Finally, Leanna is a little afraid of flying. Whenever she climbs into a rocket, she thinks about the possibility that something bad will happen to the ship.

How do all those quirks come into play during an adventure? Try this for an extreme example: Leanna is a passenger on a spaceliner. To get her mind off her fear of flying, she pulls out a book as soon as the liner leaves port. She gets so engrossed in what she's reading that she doesn't notice the whispers being exchanged by the two men seated right in front of her. After a couple of hours, she's finished reading the book and has nothing else to occupy her time, so she decides to head for the ladies' room and freshen up a bit. While she's there, she hears a commotion in the passenger compartment. She peeks out the door to find that the men who were sitting in front of her have hijacked the ship—and she's the only one who can do anything about it!

Careers

If you're not part of the gene pool, then you must be part of the labor pool.

—25th-Century slogan

Okay, you've got a character. He has a lot of characteristics that make him unique, and a lot of potential.

But what he hasn't got yet is a job.

Jobs in the XXVC™ game rules are called careers. A career is the profession your character has chosen to take up in this future world of high adventure, and is the source of his skills, his experience, and his cash flow. Player characters have six careers to choose from:

Rocketjocks: Right-stuff rocket pilots who can outmaneuver and outromance anyone in space.

Warriors: Professional fighters who lead teams or armies into battle.

Scouts: Planetary explorers and loners with a special talent for survival.

Engineers: Tough rocket-engine technicians who can fix anything . . . or so they claim.

Rogues: Gamblers and information traders who play both sides against the middle.

Medics: 25th-Century physicians who can perform incredible medical feats.

Characters as a Team

As you can see, these careers mesh neatly together to create a well-rounded adventuring team. Rocketjocks fly the ships, engineers keep things running, warriors handle the combat, scouts lead the expeditions into uncharted territory, and rogues handle the sneaky stuff. Meanwhile, the medic is there to put everyone back together again before the next battle.

Because teamwork is an essential part of the enjoyment of a role-playing game, it's a very good idea for all of the players in a group to choose careers for their characters so that the group has a lot of variety and not too much overlap. Five rocketjocks can't fly one ship at the same time, and four engineers would have an equally hard time keeping busy. Six warriors might be able to waltz through any combat situation, but without a rocketjock and an engineer they can't get to where the action is.

The referee of your playing group may have

something to say about the careers he wants the PC group to contain, based on the types of adventures he has planned to throw at you. No matter what type of adventure is ahead of you, though, the 25th Century is a tough and dangerous place where teamwork counts.

Before you read more about the career choices, we need to introduce you to experience levels, hit points, and skills—three aspects of any career that are vitally important.

Experience Levels

Experience levels are a rating system to give you an idea of how accomplished your character is in his career. Beginning PCs start as 1st-level characters and work their way up by earning experience points (XP), which the referee awards for successful achievements during an adventure. (*Players note: The last section of this chapter discusses experience points—and should only be read by someone who wants to become a referee.*)

When a character's experience point total is high enough, he advances to a higher experience level. Higher-level characters have more and better skills, a greater ability to hit an opponent in combat, and a higher chance of survival than lower-level characters. Warriors and medics also gain special career-related abilities as they rise in level.

Each career has its own "price tag" for increasing in levels. The experience-point tables (Tables 6-11) for the careers reflect the fact that it's often harder to get better, more powerful, and more renowned in one career than another. (For example, a brain surgeon vs. a truck driver. Or a medic vs. a rocketjock.) Each table goes up to 12th level; attaining each higher level requires as many experience points as it took to reach the previous level. For instance, it takes 880,000 XP for a character to become a 13th-level rocketjock—the 440,000 for 12th level plus 440,000 more—and the requirement for 14th level is $2 \times 880,000$, or 1,760,000. Player characters, and the non-player characters they encounter, seldom will attain such extremely high levels.

Hit Points and Hit Dice

Hit points represent how much damage a character can absorb before he's killed. Hit points can be restored through rest and healing, although this process is accelerated by proper medical treatment.

When a character is hurt, he loses hit points. (This topic is fully covered in the chapter on Combat.) If a character's hit-point total is reduced to 0, he is dead.

Every time a character rises in experience level, he gains more hit points. The increase is variable, depending on the career of the character and the number rolled on a die. (Specifics for each career are covered later in this chapter.)

Every character and creature in the XXVc™ game universe that can be engaged in combat has either a specific number of hit points or a certain number of Hit Dice (abbreviated HD). The HD classification is most often used for non-player characters and creatures that aren't defined in terms of a career (and thus, aren't capable of rising in level as player characters are).

When you see a reference to a "3 HD" creature, for instance, what this means is that the creature's hit points are determined by rolling three dice (either 3d6, 3d8, or 3d10, depending on how powerful the creature is). The creature's Hit Dice designation also relates to its ability to score hits in combat—meaning, in essence, that a 3 HD creature fights as well as a 3rd level character.

Skills

A lot of the differences between careers have to do with what characters are and aren't capable of: their skills, or lack thereof. In this chapter (especially in the section on Changing Careers), you'll find references to career skills, general skills, and Skill Checks. In the next chapter, you'll get a better understanding of these terms and a better appreciation for how each career is different from the others.

If you're a newcomer to the XXVc™ game and you have definite ideas about what you want your character to be able to do, you might take a short look at the next chapter after you review your character's career possibilities. If this isn't the first character you've created, then you already have a general idea of the skills that are directly connected with each career.

The Choices

There are six careers to choose from in the XXVc™ game world, but it's rare when a character actually has that many choices, because each career has certain requirements for "admission." Take a look at Table 5. Find a career you want to know about, and then look at the line beneath that name to see which races are eligible to take up that career. Examine the whole table to see all your choices, and then make a preliminary decision.

Now, compare your character's ability scores to the "Ability Scores" entries for that career on Table 5. The numbers given are minimum requirements. If the character's ability scores meet or exceed all of them, then that career is one of his possible choices.

In the unlikely event that your character's ability scores are too low to qualify for any career, your referee might use two possible solutions: To get into a specific career, adjust any scores for required abilities—up or down—to the minimum (just as if you had rolled the bare minimum to begin with). To try your luck all over again, pick up the dice and roll a new set of ability scores. The referee may use one of these solutions or come up with a different way to tackle the problem.

What if . . .

If you had your heart set on playing a certain type (career) of character, you may be disappointed to find out that your hero doesn't meet the requirements.

Don't despair too much. Your referee will certainly be willing to let you back up a step and rearrange some ability scores so that your character does qualify. And you have some consolation: From now on, you'll have at least a general idea of what it takes to get into a certain career, and when you create other characters you can tailor them for a class you want to play.

Table 5: Career Requirements

	Str	Dex	Con	Int	Wis	Cha	Tech
Rocketjock	—	13	—	11	—	12	—
	Human*, Delph, Desert Runner, Spacer						
Warrior	10	8	10	8	—	—	—
	Any except Tinker and Stormrider						
Scout	—	—	8	8	9	8	—
	Human* only						
Engineer	10	—	12	8	—	—	13
	Human*, Tinker, Lowlander, Desert Runner						
Rogue	—	13	—	8	9	13	—
	Human* only						
Medic	—	12	—	12	12	—	—
	Human*, Tinker						

— = No minimum requirement

* = Includes Terrans, Martians, Lunarians, Venusians, and Mercurians

The Rocketjock

"So I let him move in for the kill, then pulled a zero-gee roll, cut inside his pass, and walked out of the bar with the girl."

—Overheard in several rocketjock hangouts

Combine the Red Baron, Eddie Rickenbacker, and "Pappy" Boyington. Put him behind the controls of a nuclear-powered bullet screaming into combat at Mach 9, armed to the teeth. What have you got? A rocketjock in his element.

Cocky to the extreme, rocketjocks know they're the coolest humans in the universe. They can outfly, outfight and outromance any three mere mortals, and they're the first to tell you so. Rocketjocks can fly anything—from huge passenger liners to tiny fighters—and do it better than anyone else could.

Piloting a rocket calls for fast reflexes and smart decisions, and keeping up the image is also important. A rocketjock must have above-average scores in Dexterity, Intelligence, and Charisma.

The perfect example of a rocketjock, of course, is Buck Rogers. Some people in the solar system know this already. Others have yet to learn.

Ability Score Requirements: Dex 13, Int 11, Cha 12

Eligible Races: Human, Delph, Desert Runner, Spacer

Dice for Hit Points: 1d6 per level through 9th; +2 hit points per level at 10th and higher

Special Abilities

The rocketjock gets a +10 bonus to all Skill Checks involving piloting or driving.

For every even-numbered level attained, the rocketjock receives a +1 adjustment to Charisma (to a maximum of 21) when dealing with someone of the opposite sex and the same race.

Table 6: Rocketjock Levels and XP

Experience Level	Needed to rise from lower level	Total XP when attained
1	0	0
2	1,250	1,250
3	1,250	2,500
4	2,500	5,000
5	5,000	10,000
6	10,000	20,000
7	20,000	40,000
8	30,000	70,000
9	40,000	110,000
10	50,000	160,000
11	60,000	220,000
12	220,000	440,000



The Warrior

"Actions speak louder than words. Grenades speak louder than actions."

—An anonymous warrior

The ship-smashing and planet-busting weapons of the 25th Century have added a new dimension to combat, but most battles are still won or lost on a man-to-man basis. There is still a need for soldiers, and for men and women to lead those soldiers. That's where the warrior comes in.

A warrior is a character who has devoted his life to mastering the skills of combat. A warrior is more than just a fighter; he is also a tactician, a strategist, and a leader.

Because warriors are well trained and accustomed to harsh fighting conditions, they can withstand damage more easily than other career types. (Warriors are the only characters who use 1d10 for hit points.)

Ability Score Requirements: Str 10, Dex 8, Con 10, Int 8

Eligible Races: All except Tinker and Stormrider

Dice for Hit Points: 1d10 per level through 9th; +3 hit points per level at 10th and higher

Special Abilities

The warrior is formidable in combat even without a weapon; he can attack twice per round with bare fists and score 1d6 points of damage (plus his Strength bonus, if any) on each hit.

For every even-numbered level he attains, a warrior receives a +1 "specialization bonus" for a weapon of his choice, which is applied to attack rolls and damage rolls whenever the warrior uses that weapon. These bonuses can be applied to the same weapon (to a maximum of +3), or they can be spread out among various weapons.

A warrior with exceptional Constitution (17 or higher) receives an improved Hit Point Bonus whenever he rolls a die for new hit points; see Table 3.

When a warrior reaches 8th level, he is both skilled and famous enough to attract a following of 11-20 (1d10+10) like-minded soldiers or mercenaries, known as the warrior's company. Members of the company will follow the warrior's orders as long as they are treated fairly. They may be motivated by a thirst for adventure, experience, money, or even ideological beliefs. (The company does not automatically show up as soon as the warrior reaches 8th level, and may not appear at all. Details are left up to the circumstances of your XXVc™ game world and the decision of the referee.)

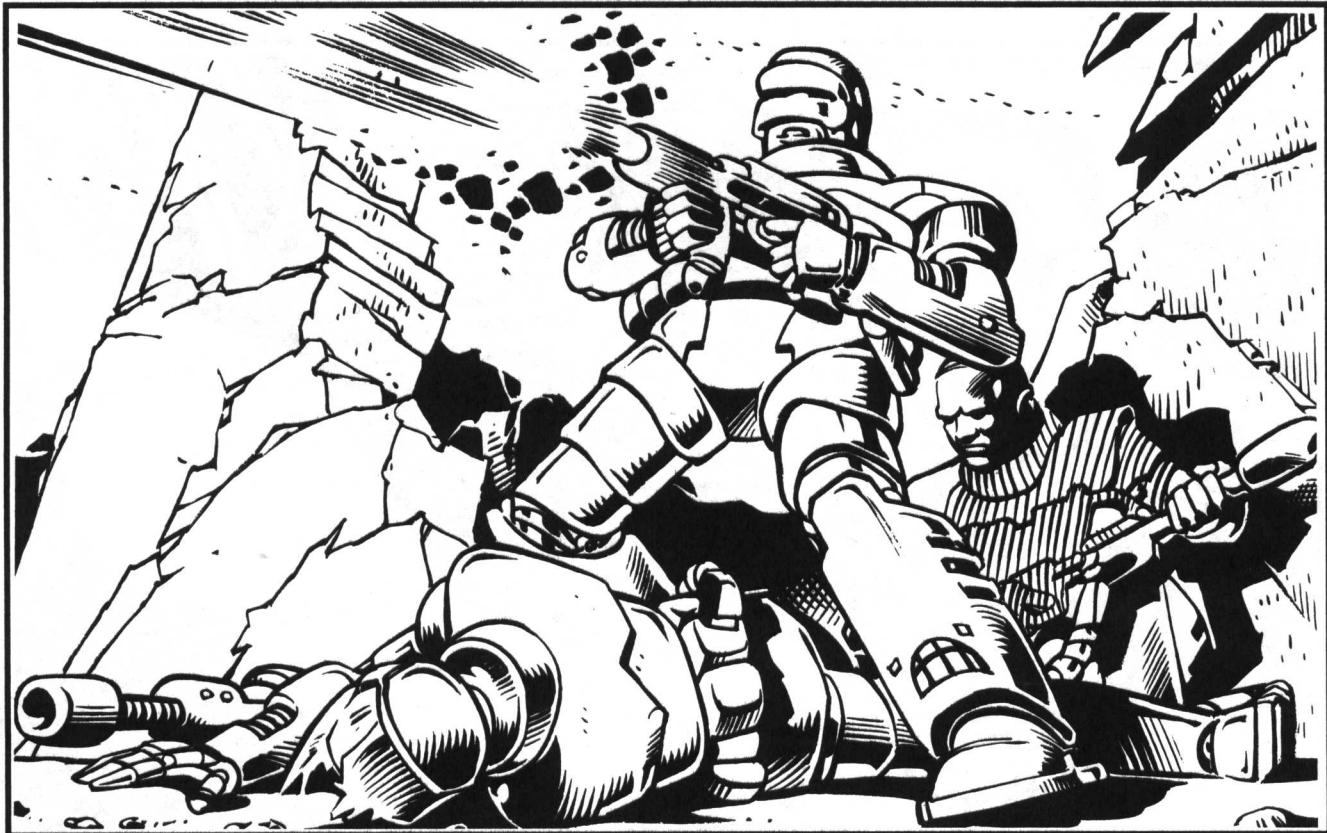


Table 7: Warrior Levels and XP

Experience Level	Needed to rise from lower level	Total XP when attained
1	0	0
2	2,000	2,000
3	2,000	4,000
4	4,000	8,000
5	8,000	16,000
6	16,000	32,000
7	32,000	64,000
8	61,000	125,000
9	125,000	250,000
10	250,000	500,000
11	250,000	750,000
12	250,000	1,000,000

The Scout

"We dropped him off stark naked in the middle of the desert. He walked out."

—Overheard while swapping scout stories

In the wild lands of the solar system, a special kind of adventurer has emerged. The scout has evolved out of the activities of planetologists and explorers of the early colonial age. A scout is tough, resourceful, and has an amazing ability to live off the land—no matter how alien that land is. He is the 25th-Century equivalent of Daniel Boone, Kit Carson, and Admiral Perry rolled into one package.

Scouts are always in the forefront of any colonizing effort or assault wave. Dropped onto a new world, a scout will soon identify and deal with any possible dangers. Scouts are also skilled planetologists, and can often deduce important information about a region from a few clues. These abilities are reflected in the scout's Planetology and Planetary Survival Skills.

Having to hunt for survival makes the scout skilled in tracking in a wide variety of environments. Scouts also specialize in moving silently through any terrain.

Often the first people to enter an unknown wilderness, scouts may encounter many types of dangerous animals or unknown civilizations, requiring a great deal of empathy with nonhuman viewpoints. This reflects itself in the scout's ability to befriend unknown animals or strange humanoids.

Ability Score Requirements: Con 8, Int 8, Wis 9, Cha 8

Eligible Races: Human only

Dice for Hit Points: 1d8 per level through 9th; +2 hit points per level at 10th and higher

Special Abilities

For every experience level attained, a scout receives a +5 bonus to any Skill Checks related to his career skills (+5 at 2nd level, +10 at 3rd, +15 at 4th, etc.). Although other characters can learn to do the things a scout does, it's almost impossible for them to be as skilled as a scout is in these areas.

Table 8: Scout Levels and XP

Experience Level	Needed to rise from lower level	Total XP when attained
1	0	0
2	2,250	2,250
3	2,250	4,500
4	4,500	9,000
5	9,000	18,000
6	18,000	36,000
7	39,000	75,000
8	75,000	150,000
9	150,000	300,000
10	300,000	600,000
11	300,000	900,000
12	600,000	1,500,000

The Engineer

"So then, the Port Inspector says, 'This ship isn't fit to haul garbage.' They had to hold me back, or I woulda wrapped a wrench around his head."

—One engineer to another

An engineer isn't as cocky or flashy as a rocket-jock, but he's got at least as much pride and toughness. It takes a special breed of character to hunker down in the cramped confines of the power deck, nursing those big atomic engines through the Asteroid Belt. You have to be tough enough to crawl out on the hull to patch a damaged fin in the middle of a cosmic ray storm, then come on in and get the reactor back on line in time for the pilot to make a soft landing (definitely the best kind).

The most important attribute for an engineer is Tech, followed closely by Constitution and Strength. Most engineers also have above-average Intelligence. Venusians, Mercurians, and Lowlanders make good engineers because of their resistance to extreme heat. A Desert Runner who leaves his natural habitat might start a career as an engineer be-

cause of his race's high tolerance for radiation. The career is also open to members of several other races.

Engineers are adept at squirming into tight places to get at hard-to-repair parts. (For obvious reasons, Tinkers are better at this aspect of engineering than other characters.) They usually prefer the dim, red-lit confines of a ship's power deck, with its thundering engines and hissing pumps.

Engineers love machines. They have great respect for fine workmanship, and good tools are considered with near reverence. Although an engineer may be grubby and bad-tempered and have plenty of unpleasant personal habits, his rocket engines will always be kept in the best condition possible and clean enough to eat off (but don't consider doing that—he's likely to wrap a wrench around your head for trying!).

Ability Score Requirements: Str 10, Con 12, Int 8, Tech 13

Eligible Races: Human, Tinker, Lowlander, Desert Runner

Dice for Hit Points: 1d8 per level through 9th; +2 hit points per level at 10th and higher

Special Abilities

Because he's accustomed to handling the tools of his trade, an engineer can always pick up a hand-held implement (wrench, pry bar, etc.) and use it as a weapon with a +2 bonus to his attack roll. A tool used as a weapon causes 1d6 points of damage on a successful hit, or perhaps more (referee's judgment) if the tool is especially large or heavy. Except in cases of life or death, an engineer will not let another character use his tools as weapons, and even if this is done, other characters don't get the attack bonus.

Table 9: Engineer Levels and XP

Experience	Needed to rise from lower level	Total XP when attained
1	0	0
2	1,250	1,250
3	1,250	2,500
4	2,500	5,000
5	5,000	10,000
6	10,000	20,000
7	20,000	40,000
8	30,000	70,000
9	40,000	110,000
10	50,000	160,000
11	60,000	220,000
12	220,000	440,000

The Rogue

The customer is always right—as long I agree with him.

—Favorite rogues' slogan

Every society has a contingent of characters who get by on wit, stealth, and behind-the-scenes power rather than hard labor, loud talk, and visible clout. In the 25th Century, these characters are called rogues, and they are among the most colorful denizens of a colorful age.

Some rogues are willing to work for the highest bidder, disregarding considerations of good versus evil. Rogues who become adventurers (player characters) do have a definite sense of ethics and morals—they target their dirty deeds against the cause of evil. No matter what their motives, all rogues have the same method of operation.

A rogue doesn't always work in direct or obvious ways. He isn't much for strong-arm tactics—his area of expertise is usually as a cat burglar, information broker or spy. Some rogues, such as Ardala Valmar (see her NPC Profile Card), have created entire corporate empires through information trading.

Many rogues have entertainment skills, giving them a cover for their true profession and enabling



them to make a living between "missions" by giving performances. Especially among the culture-starved satellites of the Outer Worlds, such skills are highly prized.

Because so much of a rogue's livelihood depends on impressing, convincing, and fleecing other people, a high Charisma score is essential. The requirement for Dexterity is equally high—without fast reflexes and light fingers, a rogue just isn't a rogue.

Ability Score Requirements: Dex 13, Int 8, Wis 9, Cha 13

Eligible Races: Human only

Dice for Hit Points: 1d6 per level through 9th; +2 hit points per level at 10th and higher

Special Abilities

Rogue characters get a +10 bonus to Skill Checks for any of their career skills (see the next chapter).

Table 10: Rogue Levels and XP

Experience Level	Needed to rise from lower level	Total XP when attained
1	0	0
2	1,250	1,250
3	1,250	2,500
4	2,500	5,000
5	5,000	10,000
6	10,000	20,000
7	20,000	40,000
8	30,000	70,000
9	40,000	110,000
10	50,000	160,000
11	60,000	220,000
12	220,000	440,000

The Medic

If it's not broken, don't fix it.

—The Medics' Code

When the warrior looks like a Swiss cheese, the rocketjock's spread himself and the cruiser all over the desert, and the engineer's glowing like a night light, the medic has the job of getting them back to normal. Until the next time.

Although much of 25th-Century medicine is automated, the job of a medic still involves the personal touch. This is especially true of an adventurer (player character) who is a medic, since much of his work occurs in places where the finest

of computers and machinery might not be available.

A medic can engage in combat and (like most people) has some skill in areas not related to his profession. But whether he's part of a group of adventurers or spends all his time in the research lab, a medic's primary function is to heal and cure. That takes Intelligence, and practically every medic is well above average in this ability. Medics who are members of an adventuring group also need high Dexterity and Wisdom, for taking fast action and making good decisions under fire.

The training of a medic is long and ongoing. Not all of the skills of his craft are available to the beginning medic; sometimes he must have a minimum level of ability in a certain skill before he can practice a more difficult one.

Ability Score Requirements: Dex 12, Int 12, Wis 12

Eligible Races: Human, Tinker

Dice for Hit Points: 1d6 per level through 9th; +2 hit points per level at 10th and higher

Special Abilities

Theoretically, anyone can learn to fly a rocket ship or fix an engine. But only a medic can learn the skills directly related to his career—diagnosing, healing, and curing.

A medic is the only type of player character who can operate a drug fabricator or an autosurgery. (See *The Technology Book* for descriptions of those devices.)

Table 11: Medic Levels and XP

Experience Level	Needed to rise from lower level	Total XP when attained
1	0	0
2	1,500	1,500
3	1,500	3,000
4	3,000	6,000
5	6,000	12,000
6	12,000	24,000
7	24,000	48,000
8	48,000	96,000
9	96,000	192,000
10	192,000	384,000
11	384,000	768,000
12	768,000	1,536,000

Changing Careers

"I'm sooooo confused!"

—Leanna Pascal, rogue/medic

People don't always do the same thing all their lives. Sometimes they decide to start out on a new career path. Any character in the *XXVc™* game can change careers, as long as his ability scores are high enough to qualify for the career he wants to enter.

For instance, if your rocketjock character reaches a high enough level to satisfy you and has the required scores in Dex, Int, Wis, and Cha, he can begin a new career as a rogue. However, a character can make a career change only when he is between adventures. (Finish the current playing session, which must also be the conclusion of your character's latest adventure. Make the change during "off hours," and start the next playing session with the changed character.) Also, a player character can only change careers *once*—there's no going back, and no such thing as a three-career character.

The character begins at 1st level in the new career and gains experience as a 1st-level character, but retains the hit points and THAC0 number he had attained in his previous career. (More information about THAC0 numbers can be found in the chapter on Combat.) Experience points are *not* accumulated from one career to the next.

The character immediately gains hit points when he switches careers, rolling the type of die (1d6, 1d8, or 1d10) that pertains to the new career. He continues to gain a random number of hit points at each new experience level until he has rolled a total of 9 dice for hit points, including the dice he rolled in his previous career. After that, he gets the standard increase (+2 or +3) for the career he is in, just as if he had attained 10th level in that career.

His THAC0 number remains the same during his advancement in the new career, until he gets to a level where the THAC0 for the new career is better (lower) than his current THAC0. After that, his THAC0 number continues to change according to the schedule for the new career.

A character's career skills and other career-related advantages are always based on his current occupation, with previous advantages (such as Skill Check bonuses) being lost as part of the change. When a character chooses a new career, his old career skills become general skills. These skills can still be improved—except in the case of a character who changes from a medic to something else. He gets to keep his medic skills, at their current ratings, but can't improve them.

The process works much the same in reverse: Any general skills that are career skills in the new career are automatically converted into that category at their current ratings. (They can now be improved more quickly because of their status as career skills.)

In all other respects, the character is treated as if he was just beginning his professional life at 1st level.

For example, let's look at Leanna Pascal, a character who began as a medic because she thought that was the right thing to do. After earning 6,000 experience points and reaching 4th level in that career, she decides to follow her instincts instead and become a rogue.

She gets to keep the 14 hit points she gained as a medic. She uses the same type of die (1d6) for hit points as a rogue, and immediately rolls for more hit points to mark the beginning of her new career. She uses 1d6 for additional hit points through 5th level as a rogue; at that point she will have rolled 9 dice for hit points (4 as a medic, 5 as a rogue), and from then on she gets a straight +2 addition to her hit points for every new level she attains.

The THAC0 number for a 4th-level medic is 18. Leanna gets to use that number throughout the early stages of her new career, and it won't change until she reaches 7th level as a rogue.

Next, her medic skills are moved over to her general skills list, and she acquires the career skills of the rogue: Hide in Shadows, Move Silently, Fast Talk/Convince, Pick Pocket, Open Lock, Bypass Electronic Security, Climb, and Notice. She already had Fast Talk/Convince and Notice as general skills, so she gets to transfer them into career skills and keep the Skill Points she had spent on them.

Because she's no longer a medic, she can't improve her medic skills, but she can continue to use them at the ratings they currently have.

Leanna says goodbye to her 6,000 XP; she must start over at 0 and gain all of her experience as a rogue from now on. She can refer to herself simply as a rogue or as a rogue/medic. (In a two-word career description, the new career is always listed first.)

Once a medic with a promising future, Leanna Pascal is now a 1st-level rogue—but one who happens to have a bunch of hit points and several skills that rogues aren't supposed to know. No wonder she's a little confused to begin with... but she'll get used to her new career very soon.

Experience

Note: The remainder of this chapter is for the referee's eyes only. If you're a player, skip ahead to page 46.

One of the most important tasks you'll face as a referee is the awarding of experience points to player characters. You're in charge of determining when a PC deserves experience points for his actions, and also deciding how large that reward should be.

In this section of the rule book, we'll give you some advice and some guidelines to get you started. But be aware, right up front, that *specific* decisions about XP awards are entirely up to you. Because no two groups of PCs, and no two adventures, are ever the same, it's impossible for us to say exactly how many XP you should hand out in a certain situation.

If you're a little apprehensive after reading that last paragraph . . . well, don't be. You'll see that the general ideas are pretty easy to grasp, and once you've gotten a handle on how the process works, you'll have little trouble making decisions that are right for you and your group of players.

Success

That's the key word in any decision about experience points. Think in terms of what the PCs succeeded in doing during an adventure or some part of an adventure, and you've automatically identified the actions that might be deserving of XP awards.

Being victorious in combat is one obvious form of success. Whenever the PCs defeat an opponent or a group of bad guys, they should receive experience points.

Performing some task that's critical to the completion of the mission is also a form of success. This may involve decoding a secret message, winning a race from Mars to Luna, repairing a damaged radio and using it to call for help, or doing one of a multitude of other things, depending on the adventure you're running and what the PCs need to do in order to succeed and survive.

Success can also be defined in smaller ways—making a good decision, impressing or befriending a non-player character, using imagination instead of brute force to solve a problem. Running away from a heavily armed squad of RAM troopers won't get the PCs any experience points for victory in combat,

but you might want to give them some credit for having the sense not to bite off more than they can chew.

Don't be *too* liberal in your definition of success. If the PCs are walking down one side of the street and a squad of RAM troopers is moving past them on the other side of the street, the characters don't deserve an XP award for avoiding combat with the troopers. But if those soldiers draw their weapons and order the PCs to stop for "inspection," it's a different story. Now the characters have a decision to make, and if they make the right one, they deserve credit for doing so.

From that example, you can see that the definition of success is closely tied to challenges and decisions. Characters can only achieve success (in terms of XP awards) when they also have a chance of failing. Meeting a challenge, overcoming an obstacle, choosing from a variety of options—all of these things require *active* decisions and specific actions on the part of the PCs.

Another example: Deciding what to have for dinner is no big deal when you're choosing from a menu in a restaurant. But let's make the decision into a challenge—you're lost in the wilderness, nearly starved, and your menu consists of two clumps of plants. You know that one of the plants is poisonous . . . but which one? By making a Planetary Survival Skill Check, you can identify the plant that's safe to eat—and if you succeed, you earn experience points for being equal to the challenge.

Advancement

A player character needs to earn experience points in order to advance to a higher level in his chosen career. While experience *points* are nice to get, a character's experience *level* is what it's all about. Players will be eager to have their characters rise in level so that they can have improved skills and be more formidable in combat. They'll want to earn experience points frequently, and they'll want the rewards to be sizable so that it doesn't take *too* long to get from one level to the next.

It's only natural for players to be concerned about how fast their characters improve. But they should understand that, as the referee, you have a great deal of control over how quickly PCs advance in levels. In addition, there are a couple of "control mechanisms" built right into the rules. To be sure that your players don't get any fundamentally wrong ideas about level advancement, make sure that they understand these two facts:

1. Characters can only advance in levels during the time between adventures.
2. A character can only advance one level at a time, regardless of how many experience points he has earned in the adventure that was just concluded.

If you follow those two rules, plus the advice given above on *when* to award experience points, then the control you have over level advancement is a matter of *how much* of an award you give for each action that deserves one.

Take a look back at the XP tables for the various careers described earlier in this chapter. Sometimes the numbers differ from one table to another, but all of the tables have one basic feature in common: It's a lot easier (in raw numbers of XP needed) for a low-level character to advance than it is for a high-level character.

That's the first clue about how your reward system should work. As a character rises in level, he becomes capable of overcoming stronger opponents and meeting tougher challenges. When he succeeds, he should receive a larger XP award to reflect that difference in strength. Actually, the system is pretty similar to the way careers and wages work in the real world: When you start out, you have a lot to learn, and you aren't expected to do things that are beyond your ability. You get paid for what you do—not much at first, but as you get better at your job, your salary goes up. Now you're doing things that are more important—tasks that you weren't even capable of earlier in your career. The higher you rise in your profession, the longer the distance to that next salary bracket (level), but you're also making a lot more money (XP) than you used to make, so the climb isn't as long as it would be otherwise.

To the framework of the career XP tables, add these two rules of thumb:

1) A group of player characters should not go through more than five or six consecutive playing sessions without at least one PC attaining a new level.

2) After about 45 or 50 playing sessions, at least one member of the PC group should be a 9th-level character, but no character should be higher than 9th level.

What's a playing session? It can be a single adventure, played from start to finish in one sitting. More often, a playing session covers just part of an adventure—a few chapters out of a larger story. This is especially true of long and complex adventures designed to test higher-level PCs; it may be im-

possible for you and the players to spend hour after hour getting through the whole thing. It's safe to say that almost all playing sessions will last at least two hours; even a simple and straightforward adventure can easily take that long.

Rule of thumb number 1 is designed to keep you from being hesitant about advancing your PCs. If you don't hand out experience points liberally enough to keep things moving, level-wise, your players may think you're being stingy and they won't enjoy the game as much as they would if your rewards were more generous.

Rule number 2 covers the other extreme, keeping you from moving characters up the ladder too quickly. If you're too generous with XP awards, experience points will lose a lot of their value and players may become bored because they think the game isn't challenging enough. Worse yet, you'll be obliged to keep creating stronger and stronger opponents that have a chance of standing up to the super-powerful PCs you've helped to create. If the player characters keep surviving and succeeding, there will come a time when the only thing left for them to do is have a showdown with the baddest bad guy in the solar system. But if that day arrives after only a handful of playing sessions, then what are you (and those characters) going to do for an encore?

Especially if your players are newcomers to the game, it's not a bad idea to move their characters through the lower levels fairly quickly. You can try setting things up so that—assuming they succeed in what they're supposed to do—some or all of the PCs will get from 1st to 2nd level in only a couple of playing sessions. It's encouraging to new players, and gives a sense of security even to experienced players, for them to get some immediate and definite benefits from the hard thinking and hard fighting their characters are doing—as long as they understand that gaining levels isn't always going to be as easy as it starts out to be.

The Numbers

Like it says at the start of this section, we can't tell you exactly what to do in any particular situation when it might be appropriate for you to award experience points. But here are some *general* guidelines.

Overall Success

Achieving the ultimate goal of a mission . . .	1,000
Achieving a major subgoal	750

When all is said and done, each PC in a group of adventurers usually deserves some overall credit for succeeding at what the group was supposed to do—possibly in addition to any awards the individuals received along the way. The figures given above are the roughest approximations of any of the numbers in this section—possibly too high for 1st-level characters (many of whom could jump almost to 2nd level on this reward alone) and almost certainly too low for characters who have attained high levels (8th and above) and are taking on missions of great difficulty and great significance by that time.

If you don't want low-level characters to advance by leaps and bounds, give them *only* an overall award for success in an adventure or a major part of an adventure and make the size of that award exactly what you want it to be. As the PCs rise in experience and need a lot more points to get from one level to the next, you can start rewarding them for specific actions (see the rest of this list), and give them an overall award as well if you so desire.

Use of Skills

Succeeding at an Impossible Skill Check	500
Succeeding at a Difficult Skill Check	300
Succeeding at an Average Skill Check	100
Succeeding at an Easy Skill Check	25

The numbers for these rewards are geared toward lower-level characters, whose skills aren't too well developed yet. As a character rises in level and gets better at many of his chosen skills, you may decide to eliminate rewards for Easy and Average checks that are related to skills in which the character has a high rating. And in general, whenever a character has a better than 50% chance of succeeding at a Skill Check, you should think twice about handing out large amounts of experience points for such an action.

Using a skill in an unusual way	200
Using a skill in a unique way	350

If a player is inventive enough to use one of his character's skills in an unusual way (something you didn't expect him to try), the character deserves an XP award whether or not his Skill Check is successful. (Add this award to whatever you give out for succeeding at the check, or give this award anyway even if the check fails.)

Wise Choices

Correct decision in a crucial situation	350
Correct decision in an important situation	150

These numbers are pretty closely related to the

Skill Check numbers given above, which means they're also geared to lower-level characters. (In general, we're assuming that making the right choice in a crucial situation is a little tougher to do than succeeding at a Difficult Skill Check.)

To the Victor . . .

Of course, characters also get experience points for success in combat—and in this case, the awards are specific. The numbers on Table 12 (below) are constants that apply no matter what the level of the victorious character is. For instance, if a PC defeats a 3rd-level NPC (or a creature that has 3 Hit Dice), the player character earns 75 XP. If the odds were against the PC and he managed to succeed partly because he used a skill or made a wise decision, he may qualify for an additional award.

Using these specific numbers helps to ensure that high-level characters don't get a lot of experience points simply by beating up on less powerful opponents. A 10th-level character who takes aim on a 1st-level NPC and wins the battle with one shot gets a grand total of 15 XP. At that rate, if that's all he does, it will be a *long* time before that character sees 11th level.

Table 12: XP Awards for Combat

Level 1	15	Level 7	450
Level 2	40	Level 8	625
Level 3	75	Level 9	850
Level 4	125	Level 10	1,150
Level 5	200	Level 11	1,500
Level 6	300	Level 12	2,000

Winning in ship-vs.-ship combat

Base award	Opp. Tonnage \times 20
Plus	(Opp. Speed - Speed) \times 100
Plus	(Opp. Tonnage - Tonnage) \times 2
Plus	(Opp. Wpns - Wpns) \times 200
Plus	Individual combat awards (optional) (as above)

Minimum award	Opp. Tonnage \times 10
---------------	--------------------------

These calculations can be a little complex, because there are so many variables involved in ship-vs.-ship combat. Basically, the system works this way: If the PCs are fighting from a slower ship, they get more credit for defeating the faster one. If they're on a larger ship, they get less credit for beating a smaller one. If their ship is more heavily armed than the enemy ship, they get fewer points than they would if the ships were evenly matched or if the enemy had more weapons.

In addition to the XP awards that are related directly to the differences between the two ships, you may choose to add individual combat awards from the table preceding the one above, especially if the enemy ship was manned by pilots and gunners who were of higher level than the PCs.

In the above table, "Opp. Speed" and "Opp. Tonnage" are the figures for the enemy ship; "Speed" and "Tonnage" are the figures for the ship the player characters are fighting from. "Opp. Wpns" and "Wpns" are the *number* of weapons each ship has, regardless of what types of weapons they are or how much damage they do.

If the ship that wins the combat is a great deal larger than the opposing ship, the total of the above calculations will be a very low number (usually less than zero). In such a case, the crew members of the winning ship receive only the minimum XP award of the opponent's Tonnage \times 10 and do not receive any bonus awards for individual combat.

Here are three examples to illustrate how the arithmetic works (see the Ship Data Cards in the XXVc™ game box for numbers and details):

Joe the rocketjock, at the controls of a NEO Starfire fighter, blasts a Krait fighter to smithereens. Joe's XP award is figured as follows:

Krait's Tonnage (10) \times 20	200
Difference in Speed (+2) \times 100	+200
Difference in Tonnage (-5) \times 2	- 10
Difference in Wpns (0) \times 200	0
Total award	390

A group of PCs, aboard a scout cruiser similar to the *Rogue*, manage to disable and then destroy a medium cruiser similar to the *Maximus Argyre*:

Medium cruiser's Tonnage (150) \times 20	3,000
Difference in Speed (-2) \times 100	- 200
Difference in Tonnage (+120) \times 2	+ 240
Difference in Wpns (+8) \times 200	+ 1,600
Total award	4,640

A heavy cruiser similar to the *Chryse* happens to encounter a Krait fighter. Before you can say "Battle Stations," the cruiser opens fire and the combat is over. Because the fight was such a mismatch, the crew of the heavy cruiser receives only the minimum award for victory against the fighter:

Krait's Tonnage (10) \times 20	200
Difference in Speed (+6) \times 100	+ 600
Difference in Tonnage (-490) \times 2	- 980
Difference in Wpns (-19) \times 200	- 3,800
Total	- 3,980
Minimum award (Krait's Tonnage \times 10)	100

As you can see from the last example, it almost doesn't pay for a big ship to take on a little one, at least not from the standpoint of earning XP. The situation is the same as for a high-level character who engages low-level characters in individual combat: If the crew of a heavy cruiser does nothing but zip around the solar system beating up on fighters, those characters are going to climb up the experience-point ladder at a very slow rate.

To get you started and to keep you from having to make all the possible calculations, Table 13 provides the XP awards (not including individual combat awards) for head-to-head combat involving eight of the different ship types listed on the Ship Data Cards. You'll see that some of the point totals are awfully high—but in most cases those are awards you'll never have to worry about making. (After all, how likely is it for a single Starfire fighter to defeat a battler?) The numbers on the high end of the table are provided mainly for comparison purposes, to give you an idea of just how tough it is for a small ship to win against a big one.

Table 13: XP Awards for Ship-vs.-Ship Combat

Winning Ship	Losing Ship							
	Krait	Starfire	Scout	Med. Cr.	Trans.	Hvy. Cr.	Liner	Battler
Krait fighter	200	*150	540	4,580	6,180	14,180	11,880	157,180
Starfire fighter	390	300	730	4,770	6,370	14,370	12,070	157,370
Scout cruiser (<i>Rogue</i>)	260	170	600	4,640	6,240	14,240	11,940	157,240
Med. cruiser (<i>Argyre</i>)	*100	*150	*300	3,000	4,600	12,600	10,300	155,600
Transport	*100	*150	360	4,400	6,000	14,000	11,700	157,000
Hvy. cruiser (<i>Chryse</i>)	*100	*150	*300	*1,500	*3,000	10,000	7,700	153,000
Space Liner	*100	*150	*300	3,700	5,300	13,300	11,000	156,300
Battler (<i>Tharsis</i>)	*100	*150	*300	*1,500	*3,000	*5,000	*5,500	100,000

* = Minimum award

Group Awards

It's usually obvious when an individual PC deserves an XP award of his very own—it was *he* who succeeded at the Skill Check or made the wise decision. At other times, it's equally obvious when success was the result of group activity and teamwork. When the whole group deserves a reward (such as when they attain the goal of an adventure or a major mission within the adventure), all you have to do is give each PC a certain amount of experience points. Often, this amount will be the same across the board; sometimes, depending on circumstances, you might have a reason for giving more points to some characters than to others.

As a general rule, whenever the PCs are acting as a group, each of them deserves some portion of a group reward—even if they don't all do the same things on the way to attaining a particular goal. One common example of this situation is ship-vs.-ship combat: Even if not every player character in the crew was piloting the ship or manning a weapon, each PC in a well-coordinated group probably had a role in bringing about the victory. When the battle is over, figure out the XP award that the group deserves for defeating the enemy ship and then divide those points up among the characters—either evenly, or on a sliding scale according to how well you think each PC performed.

Extra Credit

The advice we've presented earlier in this section will cover a lot of your needs when you have to decide when an individual or a group deserves experience points and how much of an award to make—but that's not all there is to the system. You also have to allow for rewards for achievement and performance that can't be neatly slipped into a particular category.

Most of the time, "extra credit" awards have something to do with teamwork, cooperation, and good role-playing. (These concepts are fundamental to enjoyment of the game, but because they're not precise quantities, it's difficult to attach constant point values to them.) When an adventure or a part of an adventure comes to a close, ask yourself the following questions about the player characters and the players:

Did they work together in their attempt to succeed?

Did the characters help each other in times of danger, risking harm to themselves or making sacri-

fices in order to do so?

Did the players "stay within" their characters, making an honest attempt to role-play according to the abilities and personalities of those characters?

If you can answer "yes" to any of those questions, then some or all of the characters are probably entitled to an extra credit award. If you do give out extra points, we recommend that you limit the reward (per character) to no more than 10% of what you determined the award for overall success would be.

And one more important point: When you give out extra credit, be sure to let the players know you're doing it—and why their characters are getting the bonus. This is an effective way to encourage the players to keep doing these Good Things in the future.

The Proper Order

There's no denying that experience points and experience levels are an important aspect of the XXVc™ game. Although it's not possible to "win" a role-playing game the same way that someone can win a game of checkers or chess, there is a need for a way to gauge the success of the players, and that's the need that is filled by the experience-point system.

However, you have to be careful not to let the quest for experience points obscure the *real* point of the game—which is, simply, to have fun. If you give your players excitement and enjoyment through the adventures you run and the way in which you run them, experience points and levels will not be their principal motivation for getting together to play the game—and that's as it should be. Excitement and enjoyment are not related to the levels of the PCs in the player group; they're related to the challenges that players and their characters face as they go on adventures in the world of the 25th Century.

As long as both you and your players keep things in their proper order—fun ahead of "winning"—every one of you will get the most possible out of the XXVc™ game.

Skills

"Wow. Sure made a big crater when he hit."

"Yeah. Slow learning curve. . . ."

**—Two would-be rocketjocks,
viewing a training film**

While your character's attribute scores can give you an idea of his general capabilities, they won't give you a good idea of the specific abilities that come from training. The only way to cover that is through skills—abilities that your character has taken the time to learn specifically; to practice and study until he can do them better than the average guy hanging around the spaceport.

Why do you need skills? Skills come into play whenever your character is trying to do something that requires a certain amount of expertise to accomplish.

In other words, what we call attempting a Skill Check.

Skill Checks

Any time a character wants to do something out of the ordinary, he will need to attempt a Skill Check for that particular task by rolling a percentage (2d10, designating one die as the tens digit and the other as the ones digit, with "00" representing a result of 100). The player attempting the Skill Check must roll lower than his character's skill rating in the particular task in order to succeed.

Automatic Success/Failure: A roll of 01–05 will always succeed on a Skill Check—as long as the character has at least 1 point in the specific skill. Likewise, a roll of 96–00 will always be an automatic failure, no matter how many points the character has in the skill.

Modifying Skill Checks

"Hmmm," you think to yourself. "But not all tasks are equally easy." Right. Skill Checks are modified by how tough the achievement is to accomplish. For example, it's pretty simple to change a light bulb. But try changing a light bulb on top of a greased pole in the middle of a thunderstorm while a gang of troopers takes potshots at you with lasers! Just got a lot harder, didn't it?

The chance of succeeding at a Skill Check is modified by increasing or reducing the required dice roll

for the attempted task (round all decimal values down):

Easy: Skill rating \times 2

Average: Normal skill rating

Difficult: Skill rating \times $\frac{1}{2}$

Impossible: Skill rating \times $\frac{1}{4}$

For example, with a 95 rating in the Pilot Rocket skill, it's no problem for an ace to land his cruiser on Venus (an Average task, requiring a dice roll of 01–94). But add an acid storm with 400 mph winds, and the task moves up to Difficult. The ace now has a skill rating of 47 (rounded down) and needs a roll of 01–46 to land safely. Throw in a RAM fighter squadron or some previous hull damage, and the task is now Impossible. The ace has a rating of 23 and must roll 01–22 to succeed.

Rating the difficulty of the task is, of course, the responsibility of the referee. (Once a character has accomplished a Difficult or Impossible task, it may—at the discretion of the referee—be easier for him to do the same thing a second time.)

Skill Points

Skill points are the "cash" that a character spends on building up his skills. Beginning at 1st level, and every time thereafter that the character advances a level, he automatically receives a certain amount of skill points with which to buy new skills or increase old ones.

Exactly what do you buy with those skill points? That's where career skills and general skills come in.

Career Skills

These are groups of specific skills that are directly related to a character's occupation. There are eight career skills for each career, as listed on Table 14.

Career Skill Points

You improve your character's career skills by spending career skill points, dividing those points between your eight career skills in any way you want (subject to the limitation described below). A beginning character gets 40 career skill points, and every time he advances in experience level he receives 40 more.

You don't have to allocate points to every career skill, but you can't put more than 15 points into any single career skill at one time. It is possible for a career skill rating to exceed 100 (and you may want to "load up" on certain skills, to improve your chances of succeeding at a Difficult or Impossible Check).

Table 14: Career Skills Lists

Rocketjock	Engineer
Drive Jetcar	Jury Rig
Drive Groundcar	Maneuver in Zero G
Maneuver in Zero G	Notice
Notice	Repair Electrical
Pilot Fixed Wing	Repair Life Support
Pilot Rocket	Repair Mechanical
Pilot Rotorwing Craft	Repair Nuclear Engine
Use Rocket Belt	Repair Rocket Hull
Medic	Rogue
Diagnose	Bypass Security
Life Suspension Tech	Climb
Treat Critical Wounds	Fast Talk/Convince
Treat Disease	Hide in Shadows
Treat Light Wounds	Move Silently
Treat Poisoning	Notice
Treat Serious Wounds	Open Lock
Treat Stun/Paralysis	Pick Pocket
Warrior	Scout
Battle Tactics	Animal Riding
Demolitions	Befriend Animal
Leadership	Climb
Maneuver in Zero G	Move Silently
Move Silently	Notice
Notice	Planetary Survival
Repair Weapon	Planetology
Use Rocket Belt	Tracking

Special Abilities

As described in the chapter on Careers, certain types of characters get special benefits when attempting Skill Checks related to some or all of their career skills.

If your character is a rocketjock, now's the time to remember that he receives an automatic +10 bonus to any Skill Check involving piloting or driving. That includes Drive Groundcar, Drive Jetcar, Pilot Fixed Wing, Pilot Rocket, Pilot Rotorwing Craft, and Use Rocket Belt.

If he's a scout, keep in mind that he receives a +5 bonus to any Skill Checks related to his career skills for every experience level he attains (+5 at 2nd level, +10 at 3rd, +15 at 4th, etc.).

And, if he's a rogue, he receives a +10 bonus to Skill Checks for any of his career skills.

For a rocketjock or a rogue, simply start the character with an automatic rating of 10 in any career skill where he gets a bonus. Then take your first 40 career skill points and dole them out. For a scout, remember to add 5 to all of his career skill ratings every time the character advances a level.

Starting Career Skills

As an example of how to allocate career skill points, we'll use Flint the rocketjock. At the beginning of his career, he decides to concentrate on the Pilot Rocket skill and to ignore (for the time being) Maneuver in Zero G. As a 1st-level character, he ends up with the following career skill ratings:

Career Skill	Points Used	Bonus	Total Rating
Drive Jetcar	2	10	12
Drive Groundcar	3	10	13
Maneuver in Zero G	0	0	0
Notice	10	0	10
Pilot Fixed Wing	2	10	12
Pilot Rocket	15	10	25
Pilot Rotorwing Craft	3	10	13
Use Rocket Belt	5	10	15
Points spent	40		

General Skills

General skills are learned through outside interests not directly related to the character's occupation; they may be hobbies, skills from extra jobs, or abilities picked up from knocking around the solar system.

A beginning character gets 20 general skill points, and the character receives 20 more every time he advances a level. These points can be put into any skill that is not a career skill for that character, with one major exception: A character cannot take any medic skills as general skills.

As with career skills, no more than 15 points can be put into any general skill at one time. A beginning character must select (and put points into) anywhere from four to six general skills. Every time the character advances a level, he can add one general skill to his list. A general skill rating may not exceed 80.

Starting General Skills

Let's go back to Flint the rocketjock as he decides what general skills he will have at the start of his adventuring career. Going for versatility, he makes the following selections and point allocations:

General Skill	Points Used
Astronomy	2
First Aid	5
General Knowledge	3
History	2
Leadership	3
Repair Nuclear Engine	5
Points spent	20

Skill Ratings

How good your character is at a particular skill is represented by his rating in that skill. A skill rating is composed of two parts: the points that a character has allocated to the skill (which we've covered above), plus an added benefit that we call the attribute bonus.

The Attribute Bonus

Not all characters are created equal. Every character has a set of attribute scores that are different from every other character's, and every skill is directly related to one of five attributes: Dexterity, Intelligence, Tech, Wisdom, or Charisma. (The related attribute for each skill is listed in the skill descriptions that are presented later in this chapter.)

For instance, since the Pilot Rocket skill is related to Dexterity, a rocketjock with a high Dexterity score will obviously have an advantage over a pilot of equal skill but with a lower Dexterity. This advantage is called the attribute bonus, and it works like this:

Whenever a character attempts a Skill Check, his chance of success is increased by the amount of his score in that skill's related attribute. In our example above, let's assume that Flint the rocketjock has a Dexterity score of 17. That means that he gets to add that number to his skill rating whenever he tries to use a skill that is related to Dexterity. The addition is made *before* the skill rating is increased or reduced to reflect the difficulty of the task.

For example, Flint's highest level of skill is in Pilot Rocket. To his base rating of 25, he adds his 17 Dexterity for an overall skill rating of 42. After making the adjustments for Skill Checks of varying difficulty, he knows that his chances of success are as follows:

Type of Check	Roll	
	Adjusted Rating	Needed for Success
Easy (x 2)	84	01-83
Average (x 1)	42	01-41
Difficult (x 1/2)	21	01-20
Impossible (x 1/4)	10	01-09

The attribute bonus has another special use for player characters. When a character wants to do something related to a certain skill but doesn't have any points in that skill, he can still attempt a Skill Check using only his attribute bonus as a skill rating. This is known as "winging it," and is one of the abilities that separates player character adventurers from run-of-the-mill citizens.

As a 1st-level character, Flint has no points in one

of his career skills (Maneuver in Zero G, which is a Dexterity skill), but he can still attempt a Skill Check related to that skill by using only his attribute bonus:

Type of Check	Attribute Bonus	Roll Needed for Success
Easy (x 2)	34	01-33
Average (x 1)	17	01-16
Difficult (x 1/2)	8	01-07
Impossible (x 1/4)	4	01-03

Note that Flint does not benefit from the "automatic success" rule (as stated earlier) on an Impossible Check, because he has not spent any points on his Maneuver in Zero G skill.

He can also try to "wing it" in any other skill—Fast Talk/Convince, Swimming, Mathematics, or a host of others—in which he has no points. The only exception, again, is for medic skills, which can only be attempted by a character who has chosen that career.

Ability Checks

Earlier in these rules, we introduced the concept of ability checks—using one of a character's attribute scores against a roll of 1d20 to determine whether he succeeds at something he tries to do that's related to one of his basic abilities. An ability check is not made the same way as a Skill Check, and it's important for the referee and the players to understand the difference.

When a character tries to do something that is related to a skill, he makes the attempt as a Skill Check. When he attempts a feat that does not directly relate to a skill, it's an ability check.

For an illustration of the difference, refer back to the earlier example of a character making a Dexterity check to see if he catches a wrench that's tossed to him. Since there is no skill that relates directly to a character's ability to make the catch, his success is determined by an ability check. On the other hand, if a character is riding a horse and sees a barrier looming in front of him, his success at getting the animal to jump the barrier (or to stop before colliding with it, if it can't be jumped) is determined by a Skill Check for Animal Riding. His Dexterity may help him to succeed, but his overall level of skill is what matters most.

Another example: Flint is scurrying around in the back alleys of Ceres Spaceport, a place he's pretty familiar with, trying to avoid a group of thugs who are trying to capture him. He might be able to escape if he leaps into a trash container that he knows is just around the next corner. (A Wisdom check will determine whether his choice was a good one or not.)

However, if the action is taking place in a location that Flint isn't very familiar with, he'll need to make a Notice Skill Check to see if he realizes (as he runs toward it) that the trash bin is there.

Most of the time, it will be easy for the referee to decide which kind of check is appropriate. In a case where it's tough to figure out which kind of check applies, a Skill Check always takes precedence over an ability check.

Skill Descriptions

The skills listed in the rest of this chapter are those commonly known to player characters living in the universe of the 25th Century. They are grouped on Table 15 according to their related attributes—except for medic skills, which are listed separately because of their special nature. (All medic skills are related to the medic's Tech attribute.)

Prerequisites

Several skills are described as having prerequisites; in other words, a character must have a certain minimum rating (not including his attribute bonus) in some other skill or skills before he can spend any points on the skill in question. Some of the medic skills are good examples of this rule: For instance, a medic cannot put any points into Treat Serious Wounds until he has allocated at least 30 points to Treat Light Wounds.

Also, it is not possible for a character to "wing it" in a skill that has prerequisites until the character has fulfilled that requirement. A medic with at least 30 points in Treat Light Wounds could use his attribute bonus (his Tech score) to make a Treat Serious Wounds attempt, even if he has no points in the latter skill. But if he has less than 30 points in Treat Light Wounds, then he can't try to Treat Serious Wounds at all (or if he does try, the attempt will automatically fail).

Table 15: Overall Skill List

Dexterity Skills

Acrobatics	Move Silently
Animal Riding	Paint/Draw
Climb	Pick Pocket
Drive Groundcar	Pilot Fixed Wing Craft
Drive Heavy Ground Vehicle	Pilot Rocket
Drive Jetcar	Pilot Rotorwing Craft
Drive Motorcycle	Pilot Ship/Submersible
Hide in Shadows	Play Instrument
Maneuver in Zero G	Swimming
	Use Rocket Belt

Tech Skills

Bypass Security	Repair Electrical
Commo Operation	Repair Life Support
Cook	Repair Mechanical
Demolitions	Repair Nuclear Engine
First Aid	Repair Rocket Hull
Jury Rig	Repair Weapon
Open Lock	Sensor Operation
Repair Computer	

Medic Skills

Diagnose	Treat Light Wounds
Life Suspension Tech	Treat Poisoning
Treat Critical Wounds	Treat Serious Wounds
Treat Disease	Treat Stun/Paralysis

Intelligence Skills

Astrogation	Law
Astronomy	Library Search
Battle Tactics	Literature
Biology	Mathematics
Botany	Memorize
Chemistry	Metallurgy
Composition	Mimic
Cryptography	Navigation
Design Engineering	Physics
Disguise	Planetology
Economics	Programming
General Knowledge	Ship Lore
Geology	Speak/Read Language
History	

Charisma Skills

Act	Fast Talk/Convince
Animal Training	Hypnosis
Befriend Animal	Intimidate
Distract	Leadership
Etiquette	Sing

Wisdom Skills

Notice	Shadowing
Planetary Survival	Tracking
Read Lips	

Dexterity Skills

Acrobatics

The skill necessary for performing balancing, juggling, and other unusual feats of physical dexterity.

Animal Riding

The skill of controlling an animal that is large enough and strong enough to be ridden by a member of a player character race and has been specifically trained to carry a rider. The list of animals includes—but is certainly not limited to—horses, elephants, camels, bulls, and varieties of those species that have been gene-engineered for use on certain planets. A character encountering an unfamiliar type of riding animal for the first time must make all Skill Checks (mounting, getting the animal to go in a certain direction, etc.) as either Difficult or Impossible for the first hour of riding.

Career skill for scouts.

Climb

The skill of climbing walls, mountains, or other vertical surfaces without falling, and without the aid of ropes or other equipment. The steepness and slipperiness of the surface is taken into account by the difficulty that the referee assigns to the task: Ascending the outside of a gently sloping dome with lots of handholds and footholds is probably Easy (requiring only a single Skill Check for success), while getting to the top of a tall building with a smooth outer surface may be Impossible (and may require a new Skill Check for every round of movement). A character's rate of movement while climbing is one-fourth of his normal Movement Rate, adjusted up or down according to the difficulty of the task.

Career skill for rogues and scouts.

Drive Groundcar

This skill allows the character to drive any type of small, wheeled ground vehicle.

Career skill for rocketjocks.

Drive Heavy Ground Vehicle

The required skill for driving tanks, heavy trucks, tractors, and other large ground vehicles.

Drive Jetcar

This skill allows the character to drive any type of small vehicle using jet propulsion for movement. (For a description of the jetcar and its capabilities, see *The Technology Book*.)

Career skill for rocketjocks.

Drive Motorcycle

A character with this skill may drive any type of powered two-wheeled or three-wheeled vehicle.

Hide in Shadows

The ability to use cover, shadows, and darkness to avoid detection. Succeeding at a Skill Check means that the character is effectively invisible (cannot be hit in combat, cannot be seen, etc.) for as long as he remains hidden. As soon as he takes some tangible action (attacking, moving, calling out to an ally), the benefit of being hidden is negated.

Career skill for rogues.

Maneuver in Zero G

Characters with this skill are adept at moving in a zero-gravity environment, using handholds and body movements to steer themselves. A character without this skill, or one who fails a Skill Check, in a combat situation receives a penalty to his Armor Class, which makes him more likely to be hit by an opponent's attack (see the chapter on Combat for details).

Career skill for rocketjocks, warriors, and engineers.

Move Silently

The skill of silent movement through brush, gravel and other types of terrain in which it is difficult to move from place to place without making noise. Skill Checks must be made every round (one minute) for as long as the character continues to move. Succeeding at these checks has the same effect as succeeding at Hide in Shadows (see above); failing a check means that others in the area will be aware of the character's location.

Career skill for warriors, rogues, and scouts.

Paint/Draw

A character with this skill is proficient in using paints, charcoals, or other artistic media to produce pleasing, recognizable artwork. A useful skill for rogues, who often conceal the true nature of their occupation by posing as creative artists (and may actually be good enough at this skill to earn a living at it even if that was all they did).

Pick Pocket

This skill is used to take small items from other people's pockets, clothing, purses, or other personal locations. If the would-be victim is guarding against the possibility of having his pocket picked, a successful Notice Skill Check (see below) will cause the attempt to fail.

Career skill for rogues.

Pilot Fixed Wing Craft

This skill is used to pilot any type of fixed wing, jet or propeller-powered aircraft.

Career skill for rocketjocks.

Pilot Rocket

A character with this skill can pilot a rocket ship of any type, in or out of atmosphere.

Career skill for rocketjocks.

Pilot Rotorwing Craft

This skill is used to pilot "Dragonfly" rotor vehicles, helicopters and other vehicles that fly by means of rotating blades. (For a description of the Dragonfly and its capabilities, see *The Technology Book*.)

Career skill for rocketjocks.

Pilot Ship/Submersible

This skill is used to pilot seagoing ships, small submersible vehicles, and other aquatic craft.

Play Instrument

This skill allows a character to play one musical instrument of his choice. Instruments of similar design or type may also be played by succeeding at a Skill Check at a difficulty level one level higher than normal. Another good skill for rogues to have (see "Paint/Draw" above).

Swimming

Characters with this skill are capable of swimming at a moderate pace (one-fourth their normal Movement Rate) through calm waters by making an Easy Skill Check. Failing a Skill Check means that the character cannot move under his own control and is in danger of death by suffocation (drowning) unless he is assisted or rescued.

Use Rocket Belt

Characters with this skill are able to maneuver while wearing a rocket belt or a space belt better than someone who is not as skilled.

Career skill for rocketjocks and warriors.

Tech Skills

Bypass Security

The skill of tracing and neutralizing electronically based alarm systems, including cameras, microphones, pressure sensors, and other alarms.

Career skill for rogues.

Commo Operation

A character with this skill is adept at using communication devices, and at diagnosing possible malfunctions or problems in those devices. This skill also

increases a character's chance of punching a communication signal through adverse conditions, such as jamming or asteroid fields, and of tracing a communication signal to its source.

Cook

The character is adept at the preparation, presentation and storing of food, either in the raw state or in prepackaged concentrates.

Demolitions

A character with this skill is adept at using, installing, and defusing grenades, bombs, and other pyrotechnic devices. On a successful Skill Check, a grenade or a bomb (same as a grenade in damage potential) does maximum damage. If the character or someone else in the group succeeds at a Notice Skill Check, it may be possible for the character to detect and/or disable a bomb or some other kind of timed explosive device.

Career skill for warriors.

First Aid

The character is capable of providing minimal first aid: stopping bleeding, bandaging wounds, or otherwise stabilizing a noncritical condition. Successful use of this skill allows the character to cancel 1d6 points of damage that some character (including the character using the skill) has suffered during a combat encounter that is underway or has just ended. This skill is usable only once per character during any combat encounter (additional attempts on the same character will automatically fail).

Jury Rig

The character has the ability to temporarily fix a damaged or malfunctioning component, no matter what type of device or ship component it is. A Jury Rig Skill Check will cancel up to 2d10 points of damage to any ship component. However, jury-rigged repairs are not permanent, and will fail in 1d6 rounds. When this occurs, a second Skill Check may be made on the damaged component at one difficulty level higher.

Career skill for engineers. Prerequisites: Repair Mechanical 10 and Repair Electrical 10.

Open Lock

The skill of picking or opening mechanical locks, barred gates, and other non-electronic fasteners.

Career skill for rogues.

Repair Computer

A character with this skill is adept at maintaining and repairing computer systems, and diagnosing electrically based problems. This does not allow the

character to program a computer, however. A successful use of this skill fully repairs a computer.

Prerequisite: Repair Electrical 40.

Repair Electrical

A character with this skill is adept at repairing electrical circuits, working with electrical components, and diagnosing electrically based problems. A successful use of this skill cancels 2d10 points of damage to a ship's sensors, or fully repairs any other smaller electrical component.

Career skill for engineers.

Repair Life Support

The skill of repairing and maintaining life support systems. A successful use of this skill cancels 2d10 points of damage to the life support systems of a ship or some other self-contained environment (such as a pressure tent).

Career skill for engineers. Prerequisites: Repair Mechanical 25 and Repair Electrical 30.

Repair Mechanical

A character with this skill is capable of repairing machinery—devices that rely primarily on mechanical (rather than electronic) components. A successful use of this skill cancels 2d10 points of damage to a

ship's controls, or fully repairs any smaller mechanical device.

Career skill for engineers.

Repair Nuclear Engine

The character is adept at the repair, upkeep and installation of nuclear rocket engines and related subsystems, as well as diagnosing problems and modifying engine designs to a limited extent. A successful use of this skill restores 2d10 to damaged ship engines.

Career skill for engineers. Prerequisite: Repair Mechanical 10.

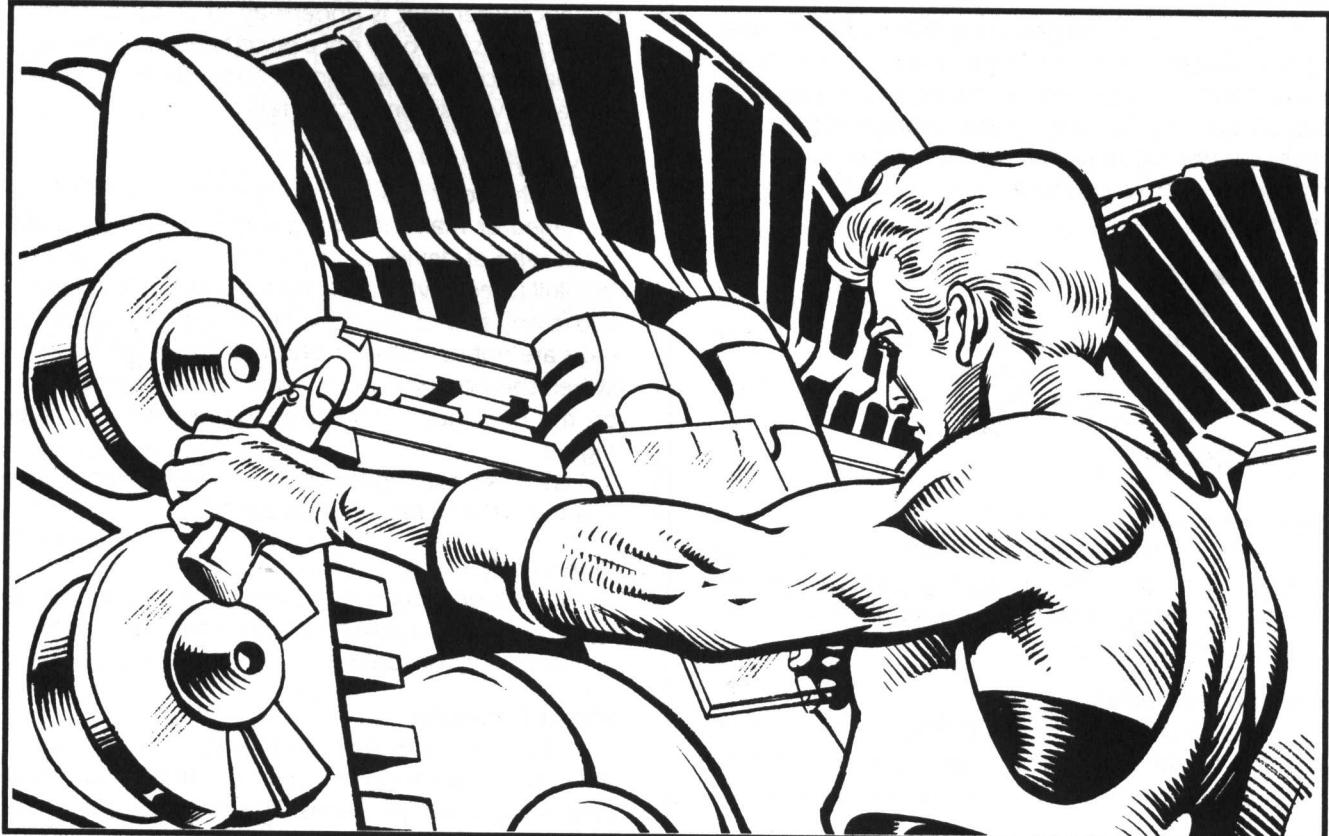
Repair Rocket Hull

The character knows how to patch, restructure and otherwise modify rocket ship hulls, especially after battle damage. A successful use of this skill cancels 3d10 points of damage to the hull.

Career skill for engineers. Prerequisite: Repair Mechanical 10.

Repair Weapon

A character with this skill is able to restore a damaged weapon to full normal capability. If he has access to tools, the Skill Check is made at an easier degree of difficulty than it would otherwise require. This skill will not recharge a weapon that is out of



power, or make a weapon usable if it's out of ammunition.

Career skill for warriors.

Sensor Operation

The skill of operating rocket ship sensors (see the chapter on Rocket Ships for details). This skill also increases a character's chance of locating hidden astral bodies, tracking/evading rockets, and diagnosing sensor system problems.

Medic Skills

Note: All of the skills in this section are career skills for medics, and cannot be learned by any other type of character.

Diagnose

A medic with this skill is able to identify the specific cause of another character's (or his own) ailment. The difficulty of the Skill Check is related to how obscure the ailment is and how much time the medic is willing or able to spend doing his diagnosis. Making a successful diagnosis in 1 or 2 minutes is always Difficult or Impossible; in 3 to 5 minutes, it may be an Average task; and in more than 5 minutes, it may be Easy (if, in the referee's judgment, the ailment is obvious and not likely to be confused with some other illness). The skill is only necessary for identifying illnesses or internal injuries, and is not necessary to determine the nature of an external wound.

Life Suspension Tech

The character is adept at maintaining and operating suspended animation devices, and of diagnosing possible malfunctions or problems with the equipment. If successfully used (on an Average Skill Check) within five rounds after a character has been reduced to 0 hit points, a life suspension device will keep the character from dying. Later (up to 1 year afterward), the medic can attempt to restore hit points to the patient. However, a second Life Suspension Skill Check (this one at an Impossible level) must be made to successfully revive the patient before hit points can be restored. If this check is failed, the patient dies.

Treat Critical Wounds

A medic with this skill is able to treat extremely severe injuries. Successful use of this skill restores $3d8 + 3$ hit points. Treatment time required is 10 rounds. Frequency of use is the same as for Treat Light Wounds (see below), with the additional limitation that the medic cannot use this skill and another Treat Wounds skill on the same patient during any

single battle. The medic can use this skill on himself, but only with great difficulty (requiring an Impossible Check to succeed).

Prerequisite: Treat Serious Wounds 40.

Treat Disease

Once a successful Diagnose Skill Check is made, the medic knows the proper treatment for curing a given illness. Successful use of this skill usually restores the patient to full function in $1d10 + 2$ hours. Treatment time required is 10 rounds.

Prerequisite: Diagnose 25.

Treat Light Wounds

The medic has mastered the surgical techniques of his craft well enough to treat minor injuries: flesh wounds, laser burns and other types of minimal damage. Successful use of this skill restores $1d8$ hit points to the patient—but the patient cannot regain hit points that would put his total above his normal maximum. Treatment time required is 1 round. This skill can be used once, but no more than once, on any single individual during or immediately after any single combat encounter. (A medic in a group with four companions can treat each of them, and himself if necessary, one time for every battle that the group is involved in.)

Treat Poisoning

After a successful Diagnose Skill Check, the medic will know the proper treatment and antidotes for any extremely lethal poison or dose of radiation. Successful use of this skill usually restores the patient to full function in $1d10 + 1$ rounds. Treatment time required is 1 round.

Prerequisite: Diagnose 15.

Treat Serious Wounds

At this level, the medic has enough skill to deal with broken bones, concussions, serious weapon wounds and burns. Successful use of this skill restores $2d8 + 1$ hit points. Treatment time required is 3 rounds. Frequency of use is the same as for Treat Light Wounds (see above), with the additional limitation that the medic cannot use this skill and another Treat Wounds skill on the same patient during any single battle. The medic can use this skill on himself.

Prerequisite: Treat Light Wounds 30.

Treat Stun/Paralysis

With this training, the medic knows how to treat the effects of sonic stunners, paralyzation drugs and other types of paralyzing agents. This skill will not cure paralyzation caused by injury. Successful use of

this skill usually restores the patient to full function in 1d4 rounds. Treatment time required is 1 round.

Intelligence Skills

Astrograph

The character has a working knowledge of how to calculate a spaceship course, plot the movement of astronomical bodies, and take sights on the stars.

Prerequisites: Astronomy 20 and Mathematics 25.

Astronomy

The character has a working knowledge of planets, stars and other heavenly bodies. He can locate and identify constellations and planets through a telescope, and knows basic astronomical facts such as planet distance, size and composition.

Battle Tactics

The character knows the basic principles of success in small-group combat: concentrate fire in a small area, don't let yourself get isolated, and so forth. On a successful Skill Check, he can use hand signals and brief verbal instructions to direct the other members of his group during a firefight on the ground against a group of enemies. Each other member of the group who can see or hear the character gets a +1 bonus to his chance of hitting with a weapon attack. Using this skill takes, in effect, no

time; the character can attack or perform some other action in the same round.

Career skill for warriors.

Biology

The character has a working knowledge of biology, classification of animals, and biochemistry.

Botany

The character has a working knowledge of plant classification, structure, and history.

Chemistry

The character is capable of working out formulas and is adept at performing experiments, mixing chemicals, and discovering new formulas.

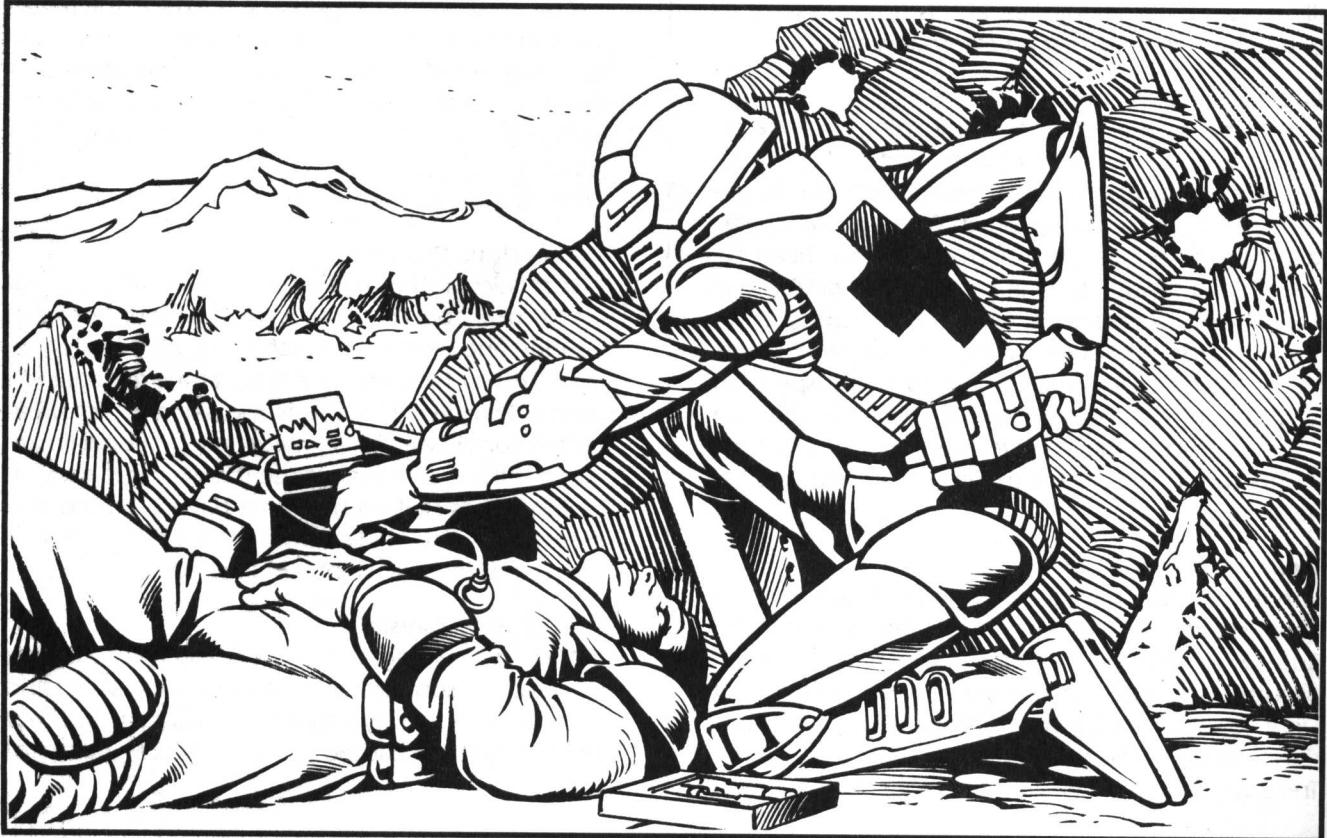
Composition

The character can write musical scores (if he has at least 20 points in Sing or Play Instrument) or create salable works of writing or poetry (if he has at least 20 points in Literature).

Prerequisite: Technically, none; the character can take this skill and put points into it at any time. However, he can only use this skill after he has put at least 20 points into one of the skills mentioned in the preceding paragraph.

Cryptography

The character has an extensive knowledge of



codes and cyphers, both past and present. He can decipher or create codes for many applications.

Design Engineering

The character is capable of designing bridges, buildings, airfields, monuments, and other works of civil engineering.

Disguise

The skill of using makeup, prosthesis equipment, and other techniques to assume the visual identity of another person.

Economics

The character has a working knowledge of basic economics. He can set up a business, market products, invest in stocks, and formulate business transactions and is capable of simple bookkeeping.

General Knowledge

This skill allows the character to know basic, everyday facts; current events, well known history, general gossip and trivia. Equivalent to a basic "lore" skill.

Geology

The character has a working knowledge of rock formations, minerals, geological strata and volcanic action.

History

The character has a widely based knowledge of history, including ancient and modern events.

Law

This skill allows the character to have a working knowledge of the law, as practiced in space and on individual worlds of the solar system. He may possibly act as legal counsel with sufficient skill and the approval of the local government.

Library Search

This skill covers the ability to use a computer or data file to search out specified information. The user has sufficient knowledge of research procedures to locate files, uncover facts, and present them in a usable fashion.

Literature

The character has an extensive knowledge of literature, both past and present.

Mathematics

The character is capable of performing complex mathematical operations, deducing theorems and calculating most math problems, as well as creating new mathematical formulas.

Memorize

The ability to remember information and useful facts.

Metallurgy

The character has an extensive knowledge of metals, ores, and metal foundry techniques. Given proper tools, he can forge small parts, fabricate small metal objects, and know what metals can be used for what applications.

Mimic

The ability to mimic the vocal patterns and sounds of others. This includes not only human voices, but also animal and environmental sounds.

Navigation

The character has a working knowledge of how to calculate a course on a planet, using sightings of stars and other landmarks.

Prerequisites: Astronomy 15 and Mathematics 25.

Physics

The character is capable of working out complex physics formulas, theorems and problems.

Planetology

The character has a working knowledge of the conditions of the planets of the solar system, including typical animals to be found, hazards to be avoided, notable geological or climatological factors, and history of human exploration.

Career skill for scouts.

Programming

The character is adept at programming computers, both planetside and on rocket ships.

Prerequisite: Mathematics 10.

Ship Lore

The character has extensive knowledge of rocket ships and their history. He may use this skill to know facts about a particular ship's armament, layout and special abilities, if any.

Speak/Read Language

The character is able to speak and read any specified language. (All characters know English, which is the universal language of the solar system, but many foreign tongues do exist, both on Earth and on other worlds.) This skill must be retaken for each new language to be learned, and can be taken as many times as desired.

Charisma Skills

Act

The character is capable of memorizing lines, taking on characterizations, and playing a part.

Animal Training

The character has the ability to teach animals relatively simple tricks, based on the intelligence of the

animal, if he first makes a Befriend Animal Skill Check (see below).

Prerequisite: Befriend Animal 20.

Befriend Animal

The character has the ability to make wild animals feel comfortable and unafraid in his presence. Befriended animals may actually choose to help the character, defending him from attack or finding him food and shelter in the wild.

Career skill for scouts.

Distract

The character is able to provide a diversion by attracting the attention (of guards, etc.) away from the actions of another character.

Etiquette

The character has the ability to fit into a cultural group, avoid insulting or inappropriate behavior, and recover gracefully from social blunders.

Fast Talk/Convince

The skill of talking others into doing what you want them to do, using voice, mannerisms, persuasive arguments and occasionally sex appeal. As with Hypnosis (see below), this skill cannot be used by one player character on another player character. The effect lasts for a maximum of 1d6 minutes.

Career skill for rogues.

Hypnosis

The skill of using voice tones, hand movements, and vocal commands to mesmerize others. A successful Hypnosis Skill Check may allow the user to implant reasonable commands or suggestions in the mind of the hypnotized party. (Note: This skill is not usable by one player character on another player character, and can only work against a non-player character or creature that can understand the suggestion or command being implanted. Also, the recipient must be willing to be hypnotized. The hypnotic effect lasts for a maximum of 1d10 hours, and can be broken by the skill-using character at any time.)

Intimidate

The character is able to create an aura of menace around himself, such that others must make a saving throw against paralyzation or be too terrified to move. The effect lasts for a maximum of 5 rounds, or is spoiled sooner if the intimidating character takes some tangible action (such as moving away from the affected character or creature, attacking, or using some other skill). As with Hypnosis (see above), this skill cannot be used by one player character against another player character.

Leadership

The character has the skill of leading groups of all sizes, both in combat situations and in group activities. A successful Leadership Skill Check allows the character to give orders and be obeyed—as long as the ones he is ordering are willing to be led. If the Skill Check is failed, the character must wait at least 1 day before attempting to use the skill on the same character or group (and, at the referee's discretion, the next check may be made at a higher degree of difficulty).

Career skill for warriors.

Sing

The character has the ability to sing in a pleasing manner.

Wisdom Skills

Notice

The equivalent of a trained observer skill, allowing the character to be aware of clues, events, traps, or other significant information.

Career skill for rocketjocks, engineers, rogues, warriors, and scouts.

Planetary Survival

The character has a working knowledge of how to survive in wilderness conditions on all planets of the solar system. He or she knows what foods are edible and where they can be found, how to trap native game, locate shelter and drinking water.

Career skill for scouts. Prerequisite: Planetology 10.

Read Lips

The ability to discern the essence of a conversation by watching the lip movements of others, as long as the conversation is in a language that the character understands.

Shadowing

The ability to follow people in urban areas without being observed. This skill is primarily a stealth-based activity, as opposed to Tracking (see below), which is an observational skill.

Tracking

The ability to find, interpret and follow tracks and signs in a wilderness environment.

Career skill for scouts.

Outfitting

The only two questions that matter when buying gear: First, can you afford it? Second, can you afford not to have it?

—*The Spaceman's Survival Guide*

Your character has attributes, a race, a career, and skills. The last step in his creation is to give him the tools of his trade: the weapons, armor and gear he'll need to adventure. This process, called outfitting, depends upon a lot of factors, not the least of which is money.

Cash and How to Get It

While credit cards and bank drafts exist in the 25th Century (such as the Firste Luna BankCard and the RAM Credit Directorate chip), most transactions are done with hard currency. Although different planets have different monetary systems and types of coins, a standard denomination of currency—the credit—is used to describe prices and payments throughout the solar system. (For more information on this subject, see the "Money" section of *The World Book*.)

A beginning character always needs money to buy his starting equipment. To determine how much cash he starts with, roll 1d10 and multiply the result by 200 credits.

As your character goes through more and more adventures, he's obviously going to run out of that starting capital fast. To earn more money, he might sign on as a crew member on a rocket ship, or decide to undertake a few dangerous jobs for hire. Or perhaps he'll get together a stake and prospect for rare metals in the Asteroid Belt. Getting more money is usually a major motivation for the novice adventurer.

Things to Buy

You've got the cash; now you need some stuff to spend it on. It's time to take a look at the things you'll need to be a well-equipped adventurer.

(Many of the items that are mentioned in this chapter have full descriptions in *The Technology Book*.)

Weapons

This category should be at the top of every adventurer's shopping list. You can be sure that the bad guys you come up against are going to have weapons, and most of them aren't going to have mercy on you if you're unarmed.

The cost of weapons runs all the way from nothing (for the nearest hunk of wood or length of pipe) up to several hundred credits. You almost certainly won't be able to afford the really expensive stuff right away, because even if you have a lot of cash, there are still other things you also need to spend money on.

In addition to the descriptions in *The Technology Book*, you'll find out more about weapons in the next chapter of this book. If you're creating a character for the first time, it might be a good idea to read ahead and learn more about the capabilities of various weapons before you make your choice. (And, of course, the same goes for the other kinds of gear you'll be buying.)

There's only one more point that we need to make here, and that has to do with "ordinary" weapons such as knives, swords, daggers, and darts. Even though they're not as expensive as some of the flashier damage-dealing devices you can buy, you shouldn't overlook their usefulness . . . and their one big advantage: They don't run out of ammo or power like the fancier weapons do. If you've got the rest of the gear you really need and you have an extra 10 credits to spare, buy a knife; when you're far from home and about to be set upon by a bad guy who's intent on ripping your head from your body, that knife will do you a lot more good than those 10 credits would.

Almost as important as the weapon(s) you choose is the armor you buy. If you have no protection at all, there's still a decent chance that you won't be hit by every weapon attack that an enemy

Share the Wealth

What happens if your die roll for money is pitifully low and you feel as though you can't afford the bare necessities?

All is not lost. If your character is one of a group of adventurers (as he should be), then chances are that someone else in the group rolled a high number for starting cash and can afford to lend you some.

As a last resort, your referee may be able to solve your problem by coming up with a way for you to earn some quick cash before you actually begin your first full-fledged adventure.

Armor

Almost as important as the weapon(s) you choose is the armor you buy. If you have no protection at all, there's still a decent chance that you won't be hit by every weapon attack that an enemy

makes—but nevertheless, it's a good idea to have something standing between you and what the bad guys are trying to do to you.

The price of armor is generally related to the amount of protection it provides. Examine all of the cost figures for both weapons and armor, and see what combination gives you the best benefit for the money you have to spend. If you can buy better armor by settling for a slightly less expensive weapon, then it's usually not a bad idea to make that decision—a live character with a laser pistol is much more of a threat to the enemy than a dead one with a rocket pistol.

Gear

This category includes all the useful items an adventurer may need to tackle the challenges of the 25th Century. Gear ranges from the ordinary (but sometimes very handy) coil of rope to sophisticated devices such as the plasmatorch and the bioscanner.

Before you commit yourself to buying specialized gear, you might want to see just what sort of adventure you'll be taking your character into after he's been outfitted. If you have some money you don't need to spend right away on armor or weapons, keep it in your pocket until your first adventure gets under way, and then buy what you think you'll need to help you succeed.

For instance, if your first job is an underwater salvage operation, you'll be glad you saved enough money to buy a gillmask. But if you have to lower yourself down the side of a cliff to rescue a hostage from a ravine, that ordinary coil of rope will be the best friend you ever had.

Some of the sophisticated devices of the 25th Century are described in *The Technology Book*. Other pieces of gear, of the more ordinary sort, are included on Table 17 but aren't spelled out in great detail. (Items such as a backpack, a water jug, and a shovel haven't changed much—if at all—since the 20th Century.)

Encumbrance

Before you start loading down your character with as much hardware as he can afford, remember that things not only have a cost, but also a weight. After all, even the strongest character can only carry so much stuff.

Take a look back at Table 1 (or on the appropriate place on your Character Record Sheet) and note the "Weight" figure that corresponds to your charac-

ter's Strength score. This is the amount, in pounds, of the weapons and gear that your character can carry before he is affected by encumbrance.

Note, however, that armor being worn is *not* counted against your character's "Weight" figure. (His entire body is helping to support the weight of his armor, and he isn't actually *carrying* it.) But if you want to lug around an extra spacesuit for some reason, the weight of that item does count against the total amount you can carry.

A character who is carrying a load greater than his Weight figure is *encumbered*, and as long as that condition continues, he can only move at one-half of his normal movement rate (see the next chapter for details on movement). In no case can a character carry more than twice his Weight figure; if he tries to do this, he simply won't be able to move.

Weight and Gravity

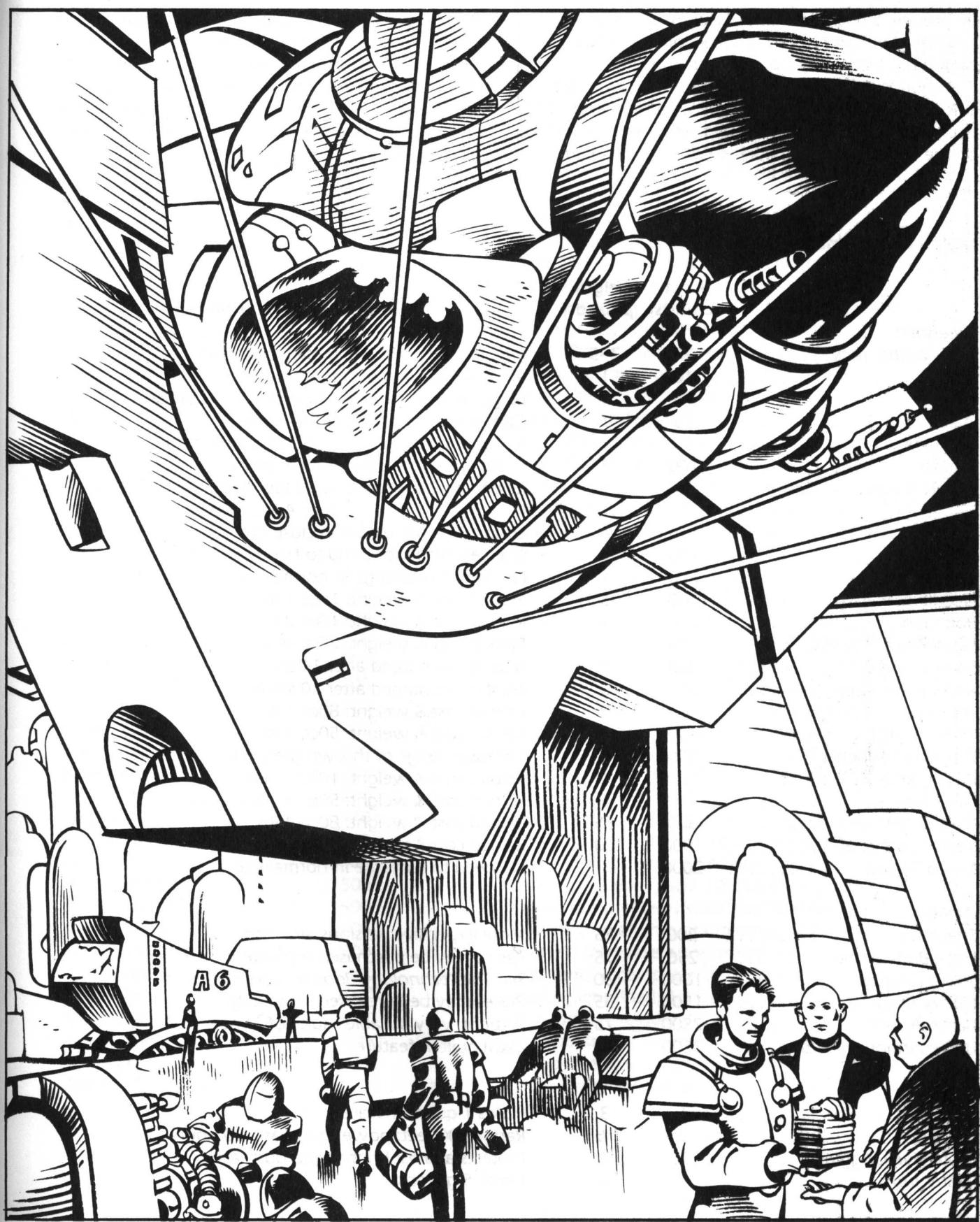
That was the bad news; here's the good. The Weight figures on Table 1 are related to Earth gravity, which means that in almost any other place you might go throughout the solar system, you can carry more weight than you can on Earth—because on a world with lighter gravity, everything weighs less.

The figures for Gravity given in the planet descriptions in *The World Book* will enable you to compute how heavy a load your character can carry on other worlds. For convenience, we'll repeat the figures for the Inner Worlds as part of Table 16. To calculate your character's Weight figure on another world, use the "Weight Multiplier" column on this table and round up the result to the nearest pound. For instance, a character with a Strength of 11 can carry 45 pounds on Earth. In the gravity of Venus (multiplier 1.1), his Weight limit goes up to 50 ($45 \times 1.1 = 49.5$, rounded up).

Table 16: Gravity and Encumbrance

Planet	Gravity (% of Earth normal)	Weight Multiplier
Mercury	33%	× 3
Venus	90%	× 1.1
Earth	100%	× 1
Luna	16%	× 6
Mars	38%	× 2.5

In a location with negligible gravity or no gravity (such as on an asteroid, or out in deep space), a character's carrying capacity is theoretically unlimited because everything is weightless. However, in a weightless environment as well as in conditions



of gravity, there's still the question of volume to consider: You can't handle a collection of stuff that's simply too big to pick up and haul around.

Although the XXVc™ game doesn't include specific rules for determining the volume of a load of equipment, dimensions and sizes are given for most of the objects your character will want to carry.

Based on those dimensions and sizes, your referee will let you know if the equipment your character is carrying has too much volume for him to be able to handle it smoothly. If your character tries to carry a lot of large, lightweight objects, you may find that he is encumbered even though his load is still under his Weight limit.

Table 17: Equipment List

	Cost (credits)	Weight (pounds)	Information/Description
Weapons			
Club, bottle, rock	0	2-5	Free for the grabbing in many locations
Knife	10	1	4" blade, also usable as a tool
Dagger	15	1	Larger than a knife, not designed for tool use
Dart	15	1/2	Can be retrieved after being thrown
Grenade	50	1	Various types; see Combat chapter for details
Cutlass	100	4	Lighter and less lethal than a sword
Desert Runner Crossbow	100	4	Reload cost & weight: 5cr, 2 lbs. (bolts) 10cr, 4 lbs. (shells)
Polearm	120	4	Long shaft, not usable in close quarters
Sword	150	6	The best blade for hand-to-hand combat
Mono Knife	200	1	No need to recharge in normal use
Needle Gun	200	3	Reload cost & weight: 10cr, 1 lb.
Bolt Gun	250	2	Reload cost & weight: 10cr, 2 lbs.
Laser Pistol	300	1	Reload cost & weight: 25cr, 1/4 lb.
Sonic Stunner	300	2	Must be recharged after 14 shots
Microwave Gun	350	2	Must be recharged after 10 shots
Heat Gun	400	2	Reload cost & weight: 80cr, 1 lb.
Rocket Pistol	400	3	Reload cost & weight: 50cr, 1 lb.
Grenade Launcher	500	3	Increases range of thrown grenades
Rocket Rifle	500	6	Reload cost & weight: 100cr, 2 lbs.
Laser Rifle	600	5	Reload cost & weight: 50cr, 1/2 lb.
Plasma Thrower	800	35	Reload cost & weight: 80cr, 4 lbs.
Rocket Launcher	1000	30	Reload cost & weight: 100cr, 2 lbs.
Mono Sword	2000	1	No need to recharge in normal use
Armor			
Spacesuit	200	25	More expensive versions available
Light Body Armor	250	15	Pieces may be purchased separately
Smart Clothes	1000	30	See <i>The Technology Book</i> for accessories
Heavy Body Armor	1500	35	Pieces may be purchased separately
Battle Armor	2500	75	Airtight, very durable "suit" of armor
Battle Armor w/Fields	3000	80	Extra built-in features
Gear			
Canteen	1	3	Holds 1 quart of water
Flashlight	2	1/2	Range 100 feet; power pack lasts 20 hours
Protective Goggles	2	1/2	Protects against bright light, dust, acid
Water jug	2	6	Holds 5 gallons

Table 17: Equipment List (cont.)

	Cost (credits)	Weight (pounds)	Information/Description
Messkit	5	1	Cooking pot, frying pan, bowl, cup, knife, fork, spoon
Shovel	5	1	Lightweight plastic shovel for digging
Carryall	10	1	Small 1' x 2' backpack/carrybag
Personal radio	10	1/2	Higher cost, lower weight for better models
Telephone	10	1/2	Basic unit; others cost more
Iceaxe	20	1	Lightweight plastic axe for climbing
Rope	25	1	300 ft. coil, 1/4" diameter, supports 1,000 lbs.
Camplight	30	1 1/2	Powerful electric light on pole; illuminates 200 ft. radius
Ration Pack	30	2	1 week's food for one human
Snowshoes	30	2	Lightweight plastic shoes for travel on snow or sand
Breather Helmet	40	1	For Runners, Lowlanders, Stormriders Replacement tank for Lowlander helmet costs 20cr
Spacer Translator	40	1	Electronic voicebox for Spacers
Aerosol Mist Grenade	50	1	Single "defensive" projectile
Aerosol Mist Shell	50	2	Pack of 5 "defensive" shells
Backpack	50	2	Holds 40 pounds or 6 cu. ft. of gear
Chaff Shells	50	2	Pack of 5 "defensive" shells
Infrared Goggles	50	1	Allows user to see in darkness
Tracer/bug	50	—	About the size of a grain of rice; signal range 50 miles
Plasmatorch	60	1	Hand-held cutting torch; fuel lasts for 1 hour
Swim fins	60	2	Increases swimming movement by 50%
Inertial Compass	70	1/2	Can locate direction and position on any planet
Videophone	75	5	Basic personal unit; others cost more
Sleeping bag	100	3	Holds 1 man; rated to -50°F.
Macroglasses	150	1/2	Advanced binoculars; more expensive versions available
Tech Tools	150	3	Small leather case with basic tools
Compdex	200	3	Portable personal computer; printer module costs 50cr
Gillmask	200	5	Allows underwater breathing indefinitely
Powerpack Charger Unit	200	10	Recharging pack for weapons, tools
Rocket Motor Tools	200	8	Large case with vise grips, adjustable wrenches, gloves
Scrambler	200	1/2	2" x 5" x 1"; stops bugs and tracers from operating
Skis	200	5	Light plastic skis plus poles
Pressure Tent	250	5	Protects two men; larger sizes available
Bioscanner	400	2	Extra memory modules cost 50cr each
Watchbox	400	3	Mobile robotic security device
Drug Fabricator	500	5	Chemical supply pack: 1000cr, 8 lbs.
Tech Scanner	500	2	Diagnoses problems with electrical devices
Atomic Generator	600	10	Powers a small ship or building for 72 hours
Fieldfence	900	8	Protects from lasers and smart bullets
Autosurgery	1000	15	Mechanical, computerized "doctor" for simple chores
Rocket Belt	1000	10	Fuel pellet reload: 100cr, 1 lb.
Space Belt	1000	8	Gas canister reload: 20cr, 1 lb.
Dragonfly	15000	1000	One-passenger vehicle
Skimmer	20000	1200	Two-passenger vehicle
Jetcar	35000	2000	Three-passenger vehicle

Combat

"I thought we were fighting RAM warriors, not alien monsters."

—*Buck Rogers*

"Those are RAM warriors."

—*Black Barney*

Loaded up with gear, your character is ready to conquer the solar system. He's got the skills he needs to get the job done, and he's rarin' to go. Now it's time to get into some real trouble.

Let's talk about combat.

The Combat Round

In every fight situation, there are moments where someone takes a swing and someone else dodges. In a single battle involving several characters on each side, there could be dozens of these exchanges going on every minute. Trying to keep track of all these events would soon degenerate into chaos, as player characters, NPCs, and creatures all ran around attacking, defending, yelling, reloading (and so on) at one time. In order to organize all of this activity, which is necessary so that the referee and the players can maintain control of the game, we break all of the action in a battle into combat rounds.

A combat round is a one-minute segment of time, in which all of the participants in a combat encounter have a chance to act. Generally, every character can select one action from the list of possible choices. In one round, a character might do any one of the following things:

- Make an attack
- Defend against an attack
- Reload a weapon
- Run for cover
- Bandage a wound
- Radio another character for help

... or perform some other simple action. (Some actions don't take up any time at all. For example, a character could probably yell out an order, drop a weapon, or mutter a curse at his opponent without affecting anything else he was doing.)

Sometimes an action will take longer than a minute, such as repairing a weapon, dealing with a serious wound, or activating and using a device. (Unless a rule specifies how long an action takes, this judgment is up to the referee.) Most of the time during combat, your character will be involved in high-speed, high-risk activity and won't want to—

or be able to—take the time to perform actions that take more than one round.

Who Goes First (Initiative)

Now that we have a way of measuring time, the next trick is to make sure that everything doesn't happen at once. That's where initiative comes in. Before each round of combat, all the participants in a combat will roll 1d10. (Players roll for their characters, the referee for all the others.) Characters will then act in order of lowest roll to highest. If more than one combatant has the same initiative number, then their actions occur simultaneously. (It's quite possible to strike an enemy, for example, just as he hits you with his own attack.)

A character's success at gaining initiative can be modified by circumstances. Perhaps one character had a better (lower) initiative roll than another, but he's up to his neck in water. All other things being equal, he probably isn't going to be able to act faster than a character standing on dry ground with his weapon drawn. The factors that can modify a character's initiative roll are summarized on Table 18. (Remember, a low number is better, so that a negative modifier is a good thing.)

Table 18: Initiative Modifiers

Dexterity 15	-1	Encumbered	+2
Dexterity 16	-2	Knee deep water	+2
Dexterity 17-18	-3	Slippery ground	+2
Dexterity 19-20	-4	Chest deep water	+4
Dexterity 21-22	-5	Climbing, swimming, Weapon out and ready to use	+2
	-2	entangled, other- wise hindered	+3
		Alien environment	+6

Note that some of the modifiers could cancel each other out; for instance, a character who's encumbered (+2) but has his weapon ready to use (-2) has a net modifier of 0. Most of the entries on the table are pretty specific, but some may still be subject to the referee's interpretation, especially "Alien environment": An air-breathing character who's underwater but wearing a gillmask might have a modifier of +2 or +3 instead of +6; the same goes for a Martian, accustomed to low atmospheric pressure, who's fighting from an airborne platform several thousand feet above the surface of Earth. Also, the referee may introduce other modifiers based on special circumstances: If you've just startled an enemy by popping up out of a hiding place, he won't be able to react as quickly as if he was prepared for combat.

Movement

Sometimes, a character will want to spend a round moving from one place to another instead of fighting. To determine how far he can run (or swim, or fly) in one round, refer to Table 19. The figures given there describe how far, in feet, a character can move in one round.

Table 19: Movement Rates

	Run	Climb	Swim	Air
Human	600	150	300	—
Tinker	480	120	240	—
Worker	360	90	180	—
Terrene	720	180	360	—
Delph	480	120	600	—
Lowlander	480	120	240	—
Runner	840	210	420	—
Stormrider	360	90	180	1200
Spacer	600	150	300	600

Being able to cover only 600 feet in one round (for a human) might not seem like much of an achievement—but remember that this is movement in a combat situation, not on a running track. While he's moving, your character is also dodging weapon fire, leaping over fallen foes, pausing to hack at intervening brush, and doing a lot more than just running.

The figures in the "Climb" and "Swim" columns on Table 19 represent movement rates for more or less ideal conditions: a fairly gentle slope with handholds and footholds, calm water with little or no current. If you're trying to get up a steep or slippery incline, or trying to swim in turbulent water, the referee may reduce your movement substantially below the figure given on the table.

How to Hit (THAC0)

The basis for combat in the XXVc™ game is THAC0 (*thay-coh*), which is a short way of saying

"To Hit Armor Class Zero." Every combatant has a THAC0 number, which expresses his chance of being able to hit a target on a roll of 1d20.

Two factors affect this number: the career of the attacker and his level (or, for creatures, the type of Hit Die they use). A medic of a certain level is obviously not going to be as adept at handling a heat gun than a warrior of the same level would be. But a very experienced medic might be a better gun-slinger than a really green warrior.

Table 20 gives the basic THAC0 numbers for all of the major character and creature types in the XXVc™ game universe.

Reading the Table: The numbers on the table represent the minimum 1d20 roll you need to hit an opponent. For instance, a 6th-level warrior needs to roll a 15 or higher to hit an opponent with Armor Class 0, while any 1st-level character can only score a hit against Armor Class 0 on a result of 20. (If that seems awfully tough—and it is—don't get too concerned. As you'll see later, most of your opponents have an Armor Class that's a lot worse than 0, and there are other conditions that can improve your chance to hit above what's indicated by the table.)

Automatic Failure: There's one hitch to this system—no matter what your actual THAC0 number is in any situation, a die roll of 1 is an automatic miss. (Nobody, not even a super-high-level warrior, is perfect.)

Armor Class

Now you know what die roll your character needs to hit Armor Class 0. But what is Armor Class and how does it fit into combat?

Armor Class is a number used to represent how tough someone is to hit with a weapon. This doesn't just mean whether you hit his armor, but whether you actually get past the dodging and heavy protection to do damage to the guy inside. Armor Class (abbreviated AC) is measured on a

Table 20: THAC0 (To Hit Armor Class Zero)

Level or Hit Dice of Attacker	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Warriors, Scouts, Creatures using d10 for Hit Dice																				
20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
Rocketjocks, Rogues, Creatures using d8 for Hit Dice																				
20	20	19	19	18	18	17	17	16	16	15	15	14	14	13	13	12	12	11	11	
Medics, Engineers, Creatures using d6 for Hit Dice																				
20	20	20	18	18	18	16	16	16	14	14	14	12	12	12	10	10	10	8	8	

scale from 10 (ordinary clothing) to -2 (the best possible battle armor); the lower the number, the better the AC.

Full descriptions of all the armor types in the XXVc™ game are given in *The Technology Book*. On Table 21, we've summarized the basic types and the Armor Class they provide to the wearer.

Table 21: Armor Class

Type	AC
None	10
Light Body Armor	7
Spacesuit	6
Smart Clothes	4
Heavy Body Armor	2
Battle Armor	0
Battle Armor with Fields	-2

The Attack Roll

From Table 21 you can see that To Hit Armor Class 0 really means "the number you'll need to roll to hit someone in Battle Armor." Fortunately (from the standpoint of the attacker), very few characters and creatures in the XXVc™ game world are that well protected. If the Armor Class of your target is something other than 0, then you adjust your THAC0 number by the amount of the difference, getting a new number that you use when making your *attack roll*.

For instance, a 1st-level character attacking someone wearing light body armor (AC 7) needs an attack roll of 13 to score a hit (20 - 7), instead of the attack roll of 20 he would need to hit someone with AC 0. All of a sudden, attacking just got easier... but remember that your opponents also benefit from the same kind of adjustment!

Another important adjustment to your attack roll, for characters of extremely high or extremely low Strength, is the number in the "Hit Bonus" column of Table 1. Your character adds this number to his die roll whenever he's trying to hit with a melee weapon—but not with a ranged weapon, such as a laser pistol, that does damage from a distance.

And there's also an adjustment for attacks with ranged weapons, based on your character's Dexterity; see the "Missile Bonus" column of Table 2 to determine whether your character's attack roll is modified when he uses a ranged weapon. (More information about the different types of weapons and the damage they cause is given later in this chapter.)

Armor Class Modifiers

In addition to being variable according to the kind of armor someone is wearing, Armor Class is also affected by other factors. These modifiers are summarized on Table 22.

Table 22: AC Modifiers

Target is or has:	AC modified by:
25% hidden by cover	-2
50% hidden by cover	-4
75% hidden by cover	-7
90% hidden by cover	-10
25% hidden by concealment	-1
50% hidden by concealment	-2
75% hidden by concealment	-3
90% hidden by concealment	-4
Dexterity 15	-1
Dexterity 16	-2
Dexterity 17	-3
Dexterity 18-20	-4
Dexterity 21-22	-5
In dim illumination	-2
In darkness	-4
Dexterity 1-2	+5
Dexterity 3	+4
Dexterity 4	+3
Dexterity 5	+2
Dexterity 6	+1

The entries for Dexterity on Table 22 are taken directly from the "Defensive Bonus" column of Table 2. As you learned when you were creating your character's attributes, someone with a high Dexterity has an improved chance of being able to dodge or avoid an attack (and vice versa, for someone with a low score).

If a target is taking advantage of cover—peering out from around a the corner of a building, crouching on the other side of a stone wall, etc.—then he gets a benefit to his Armor Class. The referee will judge how effective the cover is, and will apply an Armor Class modifier if one is appropriate.

Concealment is different from cover; a character benefiting from concealment is somewhat obscured from view but not actually protected by a physical object. Smoke, fog, and blowing sand are all forms of concealment; so are dim illumination and darkness, but those conditions are listed separately on the table of modifiers because they have a special meaning in the game. Characters of certain races have the ability to see in reduced light or even in darkness. If you're one of those characters, or if one of them is attacking you, then the AC modifier for

that condition does not apply—but some other form of concealment might still be a factor.

Parrying/Dodging

Another way to lower (improve) your AC is to parry or dodge. While it's assumed that in an average combat round, all combatants will be dodging, moving, or otherwise trying to evade attacks, these actions are not assumed to be the character's primary action. When you choose to parry or dodge, this means your character is actively trying to avoid being hit, sacrificing all other activities to do so.

When choosing to parry, all characters except warriors and scouts gain an improvement to their AC equal to half of their current career level, rounded up—except for 1st- and 2nd-level characters, who get an automatic benefit of -2. (As you'll see by doing the arithmetic, the benefit for characters of 3rd and 4th level is also -2, but after that it gets better.)

Warriors and scouts, being generally better at combat (both attacking and defending) than other characters, get an additional AC benefit of 1 when parrying: -3 at 1st through 4th levels, -4 at 5th level, and so on.

The hitch, of course, is that while parrying, you cannot perform any other action; you can't move, attack or do anything else. Also, parrying only works against attacks made from the defender's front—if the attack comes from behind the character, he won't be able to see it and take evasive action . . . and that leads us into the next subject.

Backstabbing

This is the technique of sneaking up behind someone and hitting them from behind. Backstabbing is a skill requiring some finesse—and requiring that the attacker be armed with a melee weapon (sword, dagger, etc.) instead of a weapon that does damage from a distance.

When a character makes a backstabbing attempt, he gets a +2 bonus to his attack roll (if he needed a 10 to hit normally, he needs only an 8 when backstabbing the same target). Also, if the backstab attempt hits, the amount of damage done by the weapon is multiplied by 2.

Rogues, being sneaky by nature, are an exception to both of the above rules. A rogue gets a +4 to his attack roll when backstabbing, and the damage multiplier is increased for a rogue of medium or high level: A rogue of level 1-4 gets the same $\times 2$ damage multiplier as any other character, but at levels 5-8 it goes up to $\times 3$; at levels 9-12, to $\times 4$; and at

13th level and higher, to $\times 5$ —making the backstab a potentially lethal tactic even if the rogue is using a weapon that doesn't normally do a lot of damage.

However, backstabbing isn't quite as easy as we've made it sound so far. Success on the attempt requires that you are able to get right behind your target without being noticed. A warning from someone else, or the sight of you slipping past his field of vision, will instantly tip a target off, and your advantage will be spoiled. When backstabbing, an attacker must also make a successful Move Silently Skill Check to avoid being detected.

Brawling

A lot of times, combat comes down to a matter of brawling, plain and simple. We're not talking sophistication here; we're talking two people slugging it out toe to toe. Maybe in the trendy salons of Coprates Chasm they fight it out with laser knives or insults, but out in deep space, men (and women) often settle things with a fast uppercut.

There are a lot of pretty sensible reasons for this. First and foremost, most 25th-Century weapons can deal out an extraordinary amount of damage. Pulling out a heat gun and charring somebody is a somewhat extreme reaction to an insult, so most minor disputes get settled with less lethal methods.

Another reason is that on an asteroid or in a ship, it's far too easy to blow a hole in the side of a dome or a hull and risk killing everyone inside (including yourself). However, very few people have ever managed to punch a hole through a rocket hull with their fists.

Punching damage isn't fatal. It's what we call subdual damage—damage that hurts but can't really kill. By inflicting enough subdual damage, you basically clobber your opponent into submission, forcing him to give up.

You must be within three feet of your opponent to make a brawling attack. For every successful hit, roll 1d4 to determine the points of damage you caused. If your character's Strength is very high or very low, add the appropriate number from the "Damage Bonus" column of Table 1 to the result of this roll (but note that any successful attack does at least 1 point of damage).

If the damage inflicted reduces a target's hit point total to 0 or less, the victim might be knocked out. Either you (for your character) or the referee (for a non-player character) rolls a percentage. If the result is greater than the victim's System Shock number (see Table 3), he is knocked out for 1d10 rounds.

If it is equal to or less than that number, the victim remains conscious—barely—with 1 hit point.

When a knockout victim regains consciousness and gets back to his feet, he has 1 hit point (and if he gives you any more trouble, you might try to knock him senseless all over again!). The rest of the subdual damage he suffered is recovered at the rate of 1d4 hit points per hour.

Bludgeoning

Sometimes, you need to knock someone out in a hurry. One way to do this is to reach for a handy bottle, pipe, or brick, or the butt of your laser pistol, and use the object as a club.

To make this attack, first state (to the referee) your intention to bludgeon. Because the weapon is not being used to intentionally cause fatal damage, you must take a -4 penalty to your attack roll.

When a hit is scored, the defender must make a System Shock roll at half his normal chance of success (rounded down). For example, a target with a Constitution of 13 has a System Shock number of 85, meaning that he normally needs a dice roll of 01-84 to avoid a knockout. But as the victim of a bludgeoning attack, his System Shock number is reduced to 42, and he needs a roll of 41 or lower.

Damage done with a weapon in a bludgeoning attack is real damage (not subdual damage, as we described earlier). After all, the butt of the pistol didn't get any softer because you weren't necessarily trying to hurt the guy much. And it isn't possible to "pull your punch" and not use your character's Damage Bonus for Strength—so if you want to knock out a guard but you also want him around for questioning later, the second part of that plan might be foiled if you end up hitting him too hard.

Melee Combat

While not as common as they once were, melee weapons—the kind that make direct contact with an opponent—still occupy an important place in 25th-Century combat. Knives, mono knives, and ceremonial polearms can be found all over the inner solar system. And for going one-on-one in close quarters, swords and cutlasses are still the weapons of choice for many marauders.

Range

When attacking with a melee weapon, you must be within hand-to-hand range for the weapon, as listed on Table 23. The range of a melee weapon can

be as short as 3 feet (for a knife, dagger, or club) and as great as 9 feet for a polearm (a blade mounted on the end of a long shaft). One important thing to remember about range is that when you're close enough to hit an opponent, chances are that you're also close enough to be hit. If you wade into combat with a dagger (range 3 feet) against someone swinging a sword (range 6 feet), you shouldn't be surprised if your referee assesses a penalty to you or gives a bonus to your opponent to reflect the reality that he can hit you before you can hit him.

Table 23: Melee Weapons

	Range (feet)	Damage	Rate of Fire
Knife	3	1d3	1
Dagger	3	1d4	1
Club, bottle, etc.	3	1d4	1
Mono Knife	3	1d6	1
Cutlass	6	1d6	1
Sword	6	1d8	1
Polearm	9	1d10	1
Mono Sword	6	1d10	1
Kryptx	6	var.	1

Damage

Every type of weapon has a damage figure, expressed as a die roll. Whenever you score a hit with that weapon, you roll the indicated die, and your opponent subtracts that number from his current total of hit points. Also, characters with exceptionally high or low Strength scores will increase or decrease the damage they do on each hit with a melee weapon; see the "Damage Bonus" column on Table 1. Any hit with a melee weapon will cause at least 1 point of damage, even if low Strength or some other penalty calls for a subtraction that reduces the damage roll to 0 or less.

To determine the damage done by a knife (1d3), roll 1d6 and divide the result by 2 (rounding up) for a figure of 1, 2, or 3. The damage for a kryptx, a weapon normally used only by Venusian priests, is given as "variable" because of the special nature of the weapon; see *The Technology Book* for details.

Rate of Fire

This statistic has greater meaning for ranged weapons (see the next page) than for melee weapons. In this case, the number simply means that you can make one attack per round with any melee weapon, regardless of its size or the damage it causes.



Ranged Combat

The most popular type of weapon used in the 25th Century, ranged weapons include lasers, heat guns, rocket pistols, and other projectile weapons—any device that does damage to a target without requiring the attacker to be within arm's reach. The combat statistics for ranged weapons are given in Table 24.

Range

In general, attacking with a ranged weapon is much like attacking with a melee weapon. The first step is to make sure that the target is in range for your weapon type. Determine how far you are from your intended target, in feet, and compare that to the number in the "Max. Range" column on Table 24. That number is the outermost limit of long range—if you're any farther away than this, your shot will automatically miss.

If the distance between you and your enemy is half of that number (or less), then you can make your attack at medium range. If you're separated by only one-quarter (or less) of that distance, then you attack at short range.

Range determination is important, because the farther you are from your target, the smaller your chance of hitting it:

Any attack at long range is made with a -5 penalty to the attack roll.

Any attack at medium range is made with a -2 penalty to the attack roll.

Any attack at short range is made at no penalty to the attack roll.

Two other vital considerations when attacking with a ranged weapon are line of sight and size of

Table 24: Ranged Weapons

	Max. Range	Dam- age	Rate of Fire	Shots
Needle Gun	300	1d3	3	20
Bolt Gun	400	1d4	2	10
Desert Runner	200	1d4	1	10
Crossbow		or 1d8		
Kryptx	400	1d6	1	10
Laser Pistol	800	1d8	3/2	7
Rocket Pistol	400	1d10	2	5
Microwave Gun	400	1d10	2	10
Laser Rifle	3000	1d12	1	14
Heat Gun	60	2d6	1	7
Rocket Rifle	2000	2d8	1	10
Sonic Stunner	40	special	1	14

the target—obviously, you can't hit something you can't see. That 3,000-foot maximum range figure for the laser rifle looks pretty impressive—but keep in mind that it's virtually impossible to see the body of a man from more than half a mile away. Your referee will let you know if you're not able to see a target well enough to fire on it (or, if he's generous, he might allow you to take the shot with an extremely large penalty to your chance of hitting).

Damage

Determining the damage from a ranged weapon attack is much the same as for a melee weapon attack, except that you don't get a damage bonus for Strength; a 98-pound weakling can do as much damage with a laser pistol as a musclebound hulk can. However, remember that your Dexterity does have an effect on your chance to hit the target in the first place; check the "Missile Bonus" column on Table 2 and apply that modifier to your attack roll before you determine whether or not you hit what you aimed at.

The damage figure for the Desert Runner crossbow is variable (either 1d4 or 1d8) depending on what type of ammunition the weapon is using. Damage for a sonic stunner is listed as "special" because the weapon does not cause the target to lose hit points. See *The Technology Book* for details on both of these weapons.

Rate of Fire

Some ranged weapons can be fired more than once per round, as shown on the "Rate of Fire" column on Table 24. The laser pistol is something of a special case; its figure of 3/2 means that it can be used three times every two rounds (but not twice in each of two consecutive rounds). You don't ever have to fire a weapon more than once per round, but when the capability is available it can sometimes come in pretty handy. You can take multiple shots against the same target, or against different targets that are located no more than 10 feet apart and in the same general direction. Each shot requires a separate attack roll.

Shots

In a hot and heavy firefight, this might turn out to be the most important weapon statistic of all. Any ranged weapon can only be used a certain number of times before it runs out of ammunition or out of power. At that point, you need to spend 1 round reloading or recharging the weapon (if you have a re-

load available) before you can use the weapon again. Always keep track of how many shots you've fired—because you can be sure that your referee is doing the same thing.

Thrown Weapons

Attacks with thrown weapons are performed similar to attacks with ranged weapons, except that the attacker must provide the propulsion—and that means that the range of a thrown weapon depends upon the Strength of the thrower. As a general rule, an object weighing 5 pounds or less can be thrown (with accuracy) as many feet as the character's Strength times 5, with a minimum of 30 feet and a maximum of 100 feet. For every 5 pounds of additional weight (or any fraction thereof), the maximum throwing range is halved. Table 25 describes the combat statistics for thrown weapons (and for heavy weapons, which are discussed in the next section).

The farthest that a character can throw a weapon represents the outermost limit of long range; half of that distance is the extent of medium range, and one-quarter of that distance is the limit of short range. Penalties to the attack roll apply (−5 for long range, −2 for medium) for thrown weapons just as they do for ranged weapons.

There are two kinds of thrown weapons (not counting grenades, which are discussed separately). Those specially designed for throwing, such as darts (or throwing knives, if your referee wants to use such items), are used with only the standard penalties for long or medium range. However, bottles, pistols, bricks, and other objects aren't designed to be thrown. Any attack made with this sort of throwing weapon suffers an additional −4 penalty. (Sometimes it's worth a shot anyway; having a −9 penalty to hit with a brick at long range is better than having no brick at all.)

Table 25: Thrown Weapons and Heavy Weapons

	Max. Range	Damage	Rate of Fire
Dart	special	1d4	1
Brick, bottle, etc.	special	1d4	1
Grenade	special	special	1
Grenade Launcher	200	special	1/2
Plasma Thrower	400	4d10	1/2
Rocket Launcher	1000	5d10	1/2

Grenades and Explosives

One very specific thrown weapon is the grenade. As with other attacks, the idea is to hit your target. However, a failed attack roll may also have some effect, since grenades and other types of explosive devices are weapons that affect an area: If they miss their target, they can do some amount of damage to any character or creature within a certain distance from the explosion. The trick is to determine what targets, if any, fall within range of that effect.

All explosive weapons have a blast radius—a spherical area centered on the point of explosion, extending a certain number of feet in every direction. The size of the blast radius depends on the type of weapon, as described on Table 26.

Table 26: Blast Radius (in feet)

Explosive grenade	10
Stun grenade	15
Dazzle grenade	15
Gas grenade	20
Rocket launcher shell	20
Plasma thrower canister	25

To determine what targets are within this blast radius, you'll need to know exactly where the grenade (or other explosive device) came down. If the attack hits the target, then the target is the place where the blast radius originates. If the attack does not hit, roll 1d4 to determine in which direction, relative to the target, the grenade missed. (Exception: For an attack at short range, no die roll for direction is necessary; the grenade always lands behind the target.)

- 1: in front
- 2: behind
- 3: to the target's left
- 4: to the target's right

Next, roll 2d20 (for a grenade) or 3d20 (for a heavy weapon projectile) to determine, in feet, how far from the target the grenade fell. Now you know the point from where the blast radius begins, and you can figure out what targets (if any) are within that area.

If a target is hit directly by a grenade (whether or not it was the intended target), then that character or creature suffers 4d10 points of damage. Any target within the blast radius but not hit directly by the weapon has a chance to avoid some of the damage by making a saving throw vs. explosion. If the saving throw succeeds, the target suffers only half of the amount of damage rolled. (Saving throws are discussed in more detail later in this chapter.)

As an optional rule, your referee may want to allow longer ranges for thrown weapons in low-gravity environments. To simulate this effect, use the "Weight Multiplier" column from Table 16 to determine maximum range. For instance, on Luna a character can throw a grenade six times farther than on Earth. In zero gravity, the multiplier is $\times 2$ (or perhaps higher, if the character makes a successful Maneuver in Zero G Skill Check). Note that the blast radius of a grenade is *not* multiplied, and this benefit only applies to weapons (and other objects) that are thrown by hand.

Three special types of grenades that don't cause hit-point damage are also mentioned on Table 26. These weapons affect all characters or creatures in their blast radius, unless those targets make saving throws against the specific effect of the grenade. (A target hit directly by a special grenade is also allowed a saving throw). A successful saving throw means that the target was able to completely avoid being affected by the grenade. The special types, and the saving throws that apply to them, are as follows:

Stun grenade: save vs. paralysis/stun/fall

Dazzle grenade: save vs. electrical shock

Gas grenade: save vs. gas/poison

In all cases, a victim of one of these grenades who fails his saving throw and is not wearing some kind of protection (dark goggles against a dazzle grenade, a breathing mask against a gas grenade) is knocked out for 1d6 rounds. An unconscious character is motionless, defenseless (no adjustments to normal Armor Class, automatically loses initiative), and in danger of being killed quickly unless he is protected by an ally.

Heavy Weapons

This category includes three weapons that use special "shells" to cause a great amount of damage to distant targets. The grenade launcher is simply a device that allows the user to "throw" a grenade (of any type) as far as 200 feet. The plasma thrower uses a canister of flammable jelly that detonates on contact and has the largest blast radius of any area-effect weapon. The rocket launcher throws a large explosive shell that does more damage than any other weapon. Note that all of these heavy weapons have a slow rate of fire; they can only be used once every two rounds, because of the time required to reload them. (See *The Technology Book* for other information.)

Saving Throws

The concept of saving throws was indirectly introduced back in the chapter on Races, when certain character types were described as being resistant to heat, vulnerable to suffocation, and so forth. The subject came up again in the preceding section of this chapter, concerning grenades and other area-effect weapons. Now's the time to get down to particulars.

A saving throw is, quite simply, a 1d20 roll that helps to determine if a character is affected by some threat to his well-being. The threat may come as the result of combat (the explosion of a grenade, for instance) or as the result of exposure to some unpleasant occurrence (a fall) or condition (a radiation leak). When a character attempts a saving throw, he's trying to save himself *against* the threat in question; that's where the expression "save vs. explosion" (for instance) comes from.

Table 27: Basic Saving Throws

Type	Roll Needed
Explosion/Plasma Fireball	14
Electrical Shock	13
Paralysis/Stun/Fall	15
Toxic Atmosphere/Gas/Poison	14
Suffocation	16
Radiation	13
Extremes of Heat or Cold	13

Table 27 lists the basic saving throws for each category—the numbers that you must equal or exceed on a 1d20 roll to prevent your character from

being harmed, or to reduce the amount of harm he suffers.

Those numbers (not including modifiers for race, which we'll get to in a moment) are the required saving throws for 1st-and 2nd-level characters. When a character attains 3rd level he gets a +1 bonus to all of his saving throws, and then an extra +1 for every third level he gains thereafter (total bonus of +2 at 6th, +3 at 9th, etc.). The bonus is added to the die roll, which reduces the number you need to roll for a successful saving throw.

Racial Modifiers

Because of the environment they come from or some aspect of their basic nature, characters of the various races have different degrees of resistance to the effects that call for saving throws. These differences are reflected on Table 28, which gives the bonuses and penalties to each type of saving throw for each player character race. (We could have expressed these as "die roll needed" numbers for 1st-and 2nd-level characters by simply incorporating the bonus or penalty into the basic saving throw number for each category, but it's a little easier to see the differences between the races by just looking down the columns of pluses and minuses.)

Again, as with the bonus for experience levels described above, the numbers on Table 28 are meant to be added to the 1d20 roll—not to the basic saving throw number. A positive number indicates some degree of resistance, and a negative number indicates vulnerability to a certain type of threat. For instance, a Venusian is resistant to toxic atmosphere, gas, or poison; his saving throw roll is increased by

Table 28: Racial Modifiers to Saving Throws

Race	Explosion/ Plasma	Electrical Shock	Paralysis/ Stun/Fall	Toxic/Gas/ Poison	Suffo- cation	Radiation	Heat	Cold
Terran	0	0	+1	0	0	0	0	0
Martian	0	0	-1	0	+1	+1	-1	+1
Lunarian	0	0	0	-1	+2	+2	-1	-1
Venusian	0	+1	+1	+3	-2	+1	+3	-2
Mercurian	0	0	+1	0	+1	+3	+4	-3
Tinker	-3	-2	0	-1	0	0	0	0
Worker	0	0	+3	0	0	0	0	0
Terrine	+4	+3	+3	+3	+1	+2	+2	+2
Delph	+2	+1	+3	+1	+4	+1	-4	+2
Lowlander	+2	+3	+2	+4	-4	+1	+6	-6
Desert Runner	+1	+1	+2	0	+2	+2	-3	+4
Stormrider	-2	+2	0	+4	-4	+1	0	+3
Spacer	0	+3	+5	+4	**	+4	+5	+5

**: Immune

3 (so that he actually only needs to roll an 11 or higher to succeed). On the other hand, he is vulnerable to extreme cold and must reduce his die roll by 2 (which means he needs a 15 or better to succeed against that kind of threat).

Saving Throw Priority

Notice that the list of threats that call for saving throws is given in a certain order: The top-to-bottom sequence of Table 27 is the same as the left-to-right orientation of Table 28 (and the descriptions that follow are also given in that same order). This sequence is an indication of the priority that each type of saving throw has in a situation when your character is faced by more than one of these dangers at the same time.

Let's imagine a gruesome situation: An explosion rips a hole in the side of your ship, air is rushing out through the rupture, and the reactor shielding was also damaged, causing a radiation leak. What saving throws do you make, and in what order?

You have three threats to deal with, and to get out of this mess you have to save against each of them. According to the sequence, you first have to make a save vs. explosion. That's your most immediate concern, because if you fail that save it won't make much difference whether you run out of air or get poisoned by radiation. Next in line is a save vs. suffocation, because you would succumb to lack of air before you would be affected by the leaky reactor. Finally, if you're still around, you attempt a save vs. radiation. Nothing to it . . . right?

Explosion/Plasma Fireball

This is the threat you have to worry about whenever you're caught in the blast radius of a grenade, a plasma thrower, or some other explosive device. (A number of other factors can cause explosions, too, but they aren't specifically covered in these rules.) If you're caught, you can't avoid getting hurt, but if you succeed on a save vs. explosion, you only take half as much damage (rounded down) as you would otherwise—you were able to dive for cover at the last instant, or you got lucky and most of the force of the blast was directed away from you.

Electrical Shock

When you're exposed to a large amount of electrical current (a charged fence, a loose wire on an atomic generator or a ship's control panel), you will suffer a certain amount of damage—usually 1d10, but perhaps more or less in certain cases at the referee's discretion. If you succeed on a save vs. electrical shock, you suffer half damage—you pulled away or jumped away before getting a real good jolt of juice.

Paralysis/Stun/Fall

Three different threats that all have the same basic effect—an abrupt, forceful physical trauma. Your nervous system can be paralyzed or stunned by some kind of strong vibration or energy field, such as that produced by a sonic stunner. If you succeed on a save vs. a paralysis or stun attack, you escape the effect altogether; if you fail, you're knocked out or rendered helpless for 1d10 rounds (or some other variable amount of time, depending on the device that did the damage).

Falling, as you've often heard, doesn't hurt a bit; it's that sudden stop at the end that does the damage. If you take a tumble on Earth, you suffer 1d6 points of damage for every 10 feet of the fall (but a fall of more than 200 feet doesn't add anything to the damage; after all, 20d6 is enough . . .). If you succeed on a save vs. fall, damage is halved—you broke your fall, or fortunately managed to hit one of the softer rocks in the vicinity.

On most places other than Earth around the inner solar system, falling damage is not as severe because gravity isn't as strong. Table 29 summarizes these differences.

Table 29: Falling Damage

Location	Damage per 10 feet	Maximum
Earth	1d6	20d6
Venus	1d6	18d6
Mars	1d4	10d4
Mercury	1d4	8d4
Luna	1d2	8d2
Large asteroid	1	10

Toxic Atmosphere/Gas/Poison

The effect of failing a saving throw against one of these threats depends on the exact nature of the gas or poison (something your referee will determine). A sleep gas will knock you out for a certain number of rounds; toxic gas or poison will cause damage during each round you're exposed to it (and might also knock you unconscious).

Diseases also fall into this category. Failing a saving throw means that you suffer whatever adverse effects the disease brings with it: loss of hit points, loss of Strength, inability to perform normal activities, or anything else the referee dictates. (You may

get to attempt new saving throws on a daily or twice-daily basis to see if you succeed in fighting off the effects of the illness.)

In all of these cases, succeeding on a saving throw means that you were able to avoid the bad stuff—the gas dissipated quickly, the poison didn't have enough potency, the disease was not able to get a foothold on your physiology.

Suffocation

Unlike the dangers described above, suffocation is a constant threat for as long as the conditions exist. You must attempt a saving throw vs. suffocation in each round during which you don't have an air supply. For every save that you fail, you suffer 2d10 points of damage; for every save that succeeds, damage is halved.

You might be able to hold your breath long enough to get to your spacesuit and climb into it: A character can hold his breath for a number of rounds equal to one-third of his Constitution score (rounded up); after that, he *has* to breathe, setting off the need to make saving throws vs. suffocation.

Radiation

Whenever a character is caught outside in a solar storm or exposed to a radiation leak, a radiation save must be made. But radiation is a relatively slow killer, depending on what sort of exposure is present. One saving throw is made for the overall dose, as soon as the character has managed to move away from the source of exposure. On a successful saving throw, damage is halved.

Damage from radiation is assessed all at once 1d6 hours after the character has moved away from the source of exposure—or, if he never does get away, the referee keeps track of damage as it accumulates and pronounces the character dead when his hit point total drops to 0 (no saving throw allowed as long as the character continues to be exposed to the radiation).

The amount of damage that is caused by a source of radiation is up to the referee's judgment, but should usually be at least 1d4 per round and in most cases no more than 1d8.

Extremes of Heat and Cold

This kind of saving throw is made whenever an unprotected character is exposed to extremes of temperature: the frigid wastes of the arctic, a blistering tropical sun, and so forth. This type of exposure damage is slow and steady, affecting a character on

an hour-by-hour basis. While the referee should use some leeway in determining the extent of damage (basing it on the conditions encountered), in general extreme temperature conditions will cause 1d4 to 1d6 damage for every hour of exposure, or half that much if the character makes a successful saving throw (attempt a new save every hour).

Note that the definition of "extremes of temperature" here is not extended to include the chill of deep space or the broiling heat of the sun side of Mercury. Exposure to conditions such as these will cause almost immediate death, and no saving throws are allowed.

Damage and Death

Damage is a fact of life. If you dish it out, sooner or later you're going to have to take it. The ultimate challenge for characters in the XXVc™ game is not avoiding damage—that's virtually impossible—but avoiding death.

For the sake of simplicity, damage in the game is expressed as a simple loss of hit points. Every time a character takes one or more points of damage, he loses that many hit points. If his hit point total reaches zero, the character is dead. (There are ways to restore lost hit points; some of them were covered in the chapter on Skills, and another method is coming up at the end of this chapter.)

The rule system for damage makes no attempt to be realistic, because realism would add so much complexity that it might take an hour or two to play out a single combat encounter. What happens if a character takes a wound in his arm, so that he can't use a weapon? In his leg, so that he can't move? In his head, so that . . . Well, we could go on, but the point is this: You won't find any rules for specific damage in this book. Still, you're free to develop whatever system works well for you.

Dying

When a character reaches 0 hit points, he is dead. Period. (With one slim exception; see the next section.) Although the science of the 25th Century is very advanced, there's no way to bring a dead character back to the land of the living. . . .

Life Suspension

. . . Well, at least not *immediately*. And only in the best of circumstances.

Someone with one foot across the threshold of death's door (at 0 hit points or fewer) can be saved

by the use of a life suspension device. However, there are some major requirements to be met.

The first one is that a life suspension device has to be available. These glassite cylinders are bulky (500 pounds, 8 feet long, 3 feet in diameter), requiring at least a large ground truck or a decent-sized rocket ship to cart them around. And they're expensive (at least 150,000cr), which means they're pretty scarce. What that adds up to is the obvious fact that you aren't going to find a life suspension device—especially an empty one—on just any ship or rock you happen to be visiting.

Next, the device has to be available *quickly*. To have any hope of being revived, a character must be placed in the device within five rounds after he drops to 0 hit points.

Finally—and this is the easiest part of all—there has to be a medic available to operate the machine.

If all of those conditions are met, the medic still has to succeed at a couple of checks using his Life Suspension Tech skill. (This process is described in the chapter on Skills.)

All in all, not much of a chance. But any chance is better than no chance at all . . . which is what the next section is all about.

Inescapable Death

The setting of the XXVc™ game is a stage upon which player characters perform heroic, death-defying actions. Much more often than not, they survive. (If they didn't, everyone would quickly get tired of playing.) An inventive referee will help player characters avoid the consequences of bad luck, using scenarios such as these:

—The bad guy pops up behind you, sticks a rocket pistol into your back, and pulls the trigger—but lo and behold, the gun misfires! Before he can get away, you whirl around and blast him with your own weapon.

—Your fighter takes a massive hit, disabling its controls. You go into a flat spin, careening toward the mountain that looms in your viewscreen . . . when all of a sudden, your rocket-powered ejection seat activates, blowing you free of the cockpit and letting you make a soft landing.

However, there are going to be times during your game when common sense should take precedence over rules mechanics or the referee's altering of reality, and most of those will be occasions when a character (or, more precisely, a player) tries to do something that's just plain dumb. If a character takes a plunge out of an airlock (the wrong way) without a spacesuit, or opens the radiation baffles

in the engine room "just to see what fusion looks like," there isn't much that a referee—even a generous one—can do.

Although the object of the XXVc™ game is to have a good time, the referee should do his best to maintain a semblance of reality in the game. When inescapable death is really and truly inescapable, the only thing the referee can do—to maintain his own credibility—is to let it happen.

Healing

When your character is feeling poorly, and a new infusion of hit points is just the thing he needs, there are a few facets of the game rules that he can take advantage of: medical treatment and natural healing.

Medical treatment is dealt with in the chapter on Skills—specifically, in the sections covering the First Aid skill (which any character can have) and skills that are available only to medics. In this section, we're concerned with the way that characters can heal themselves without any outside help. And that comes down to one short word: rest.

Natural healing is a fairly slow process, but it works without fail when the injured character follows some simple rules. A character who does not engage in vigorous activity (strenuous work, combat, jumping, quick or extended movement) can gain back 1 hit point per day of rest. During any day when these "take it easy" requirements are not met, the character does not improve in health.

If a character does nothing but sleep and rest for an entire day, he can restore up to 3 hit points during that day. While this is a good option for characters in transit between planets, with nothing better or more urgent to do, it may not be possible all the time.

Sometimes, your referee may allow your character to use the time between adventures as healing time; when you and the other players gather for the next playing session, a certain number of days or weeks (of "game time") will have passed and everyone will be back at full strength.

No matter how your character gets back his hit points, remember that under no conditions can a character regain more hit points than he had originally (at full health, before taking any damage).

Rocket Ships

A modern rocket ship is an advanced and highly sophisticated piece of machinery. Yet, in basic principles, it is almost exactly like the ancient rockets of the 20th century: a hollow tube containing fuel, an electronic guidance system, and an engine pushing fire out of the back.

Actually, there's a little more to it than that. The internal systems of a typical rocket include the following compartments:

Sensors tell the rocket where it's going and what it is encountering along the way. The communication system, which is combined with the sensors, enables a ship to send and receive messages.

Controls are used to steer and propel the ship.

Life Support includes air tanks, air and water recyclers, hydroponic vats and air-conditioning systems.

Fuel is the raw chemicals burned by the engine, as well as refrigeration units to keep the fuel and oxidizing agent at extremely cold temperatures and pumps to move the fuel into the engine when it's needed.

Engine is one word that covers a lot of smaller devices and subsystems. The Injector mixes the fuel and pumps it into the Reactor, which then superheats it to gas. (Shielding around the reactor keeps the radiation from reaching the crew.) Finally, the Fusion Converter (not found on some ships) bombards the superheated fuel with free electrons, turning it into pure fusion energy.

The rockets of the 25th Century take off and land vertically. Powerful gyrostabilizers keep the rocket balanced on its fins as it comes in for a landing, while massive jacks make sure it can't be toppled while it's sitting on the ground. The rocket is arranged in a series of decks, stacked one on top of the other, with the sides of the rocket serving as walls and the intervening decks as floors and ceilings. This means that to go from one part of the rocket to another requires elevators or ladders. It's useful to think of a rocket as a skyscraper apartment with wings.

When the ship is on the ground, the force of gravity holds things down to the decks (floors). When the rocket is moving, the constant push of the engines provides a counterforce that pushes objects to the "back" of the rocket, providing a sort of artificial gravity. When the engines are cut off, of course, this effect of acceleration disappears, and everything in the rocket becomes suspended in zero gravity.

In the early days of interplanetary travel, back in

the 21st Century, ships blasted nose first for half of a trip, then turned end over end and blasted in reverse to slow down for landing. The ships of the 25th Century are far more powerful than those older ships, and are able to make the braking maneuver at the last part of the trip, just before landing. Braking uses a great deal of power and fuel, but these are two things 25th-Century ships have a lot of.

Types of Ships

So far we've talked about the basic mechanics of rockets. But how does this translate into game rules? While we've given you a wide selection of "stock" ships, you'll soon want to design your own, as well as gaining a better understanding of the underlying theories of rocket design. The way to start is by learning about the types of ships available. In the following descriptions, you'll see references to some game-related concepts (reaction bonus, hit points, and so forth). What they mean and how they fit into the XXVc™ game rules will be explained later in the chapter on Space Combat.

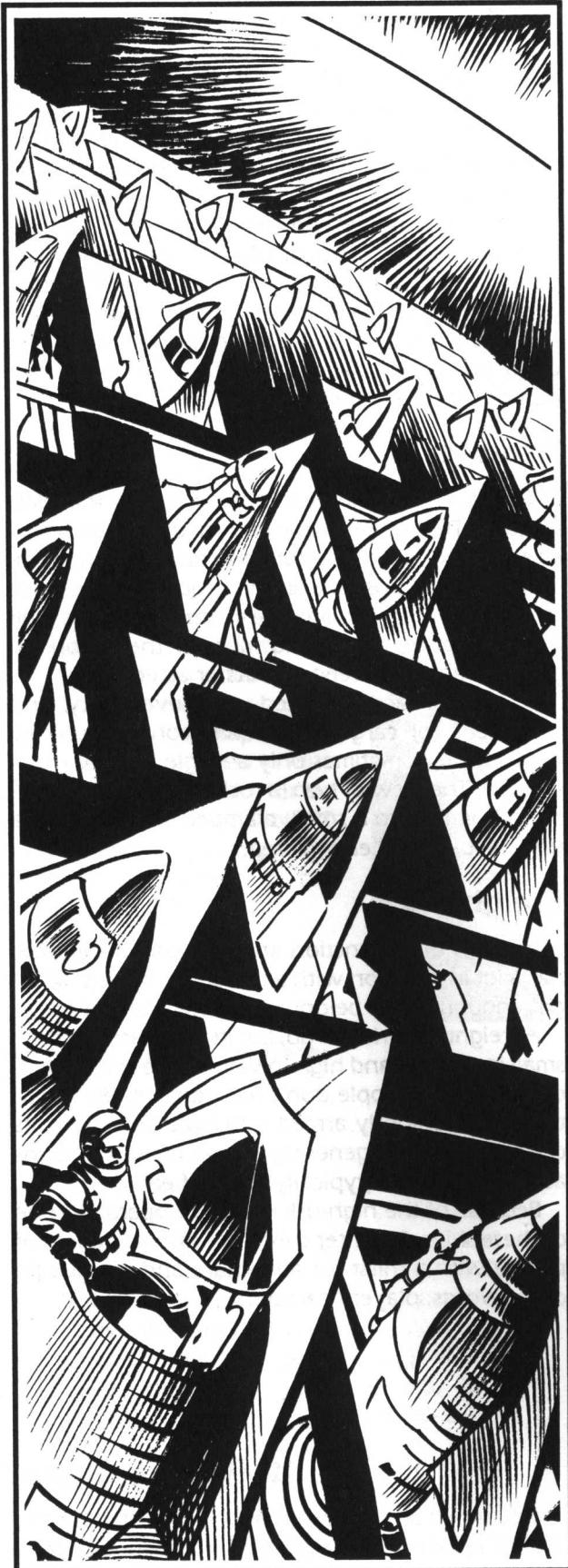
Fighters

Fighters occupy a very specific niche in the forces of the solar system. They are normally very small, one-to two-man vehicles, with limited range and weaponry. Fighters are powered by less sophisticated atomic motors that lack the fusion converters of larger vessels, making them incapable of interplanetary travel. However, they are cheap, easy to build, and can easily be carried from place to place as part of a larger ship's cargo load.

The biggest strength of the fighter is its ability to be designed for a specific environment. But as a result of this specialization, fighters are generally limited to being usable on or near the planet for which they were designed. However, this specialized nature also makes fighters the supreme combat machines for their intended battlefield—faster than battlers and transports and more maneuverable than cruisers.

Here are advantages and disadvantages of several major fighter types:

Martian Fighters: These types have large wings for better maneuvering in the thin Martian atmosphere. They are armored with an ablative plastic hull coat which resists sandstorm damage. (Other types of fighters that get caught in a Martian sandstorm suffer 2 hit points of hull damage per round of exposure.) Martian fighters cannot travel in space



(not enough power), and are only marginally useful on Earth, Venus, and Jupiter, where their large wings make them especially vulnerable to atmospheric buffeting (canceling any reaction bonus that the fighter would have in a thinner atmosphere).FL) **Venusian Fighters:** These fighters are adapted for the harsh acid rains and heavy atmospheric pressure of Venus. As a result, they are more like dirigibles than airplanes, with sturdy hulls and ballast tanks. They don't fly as much as they swim through the dense air. Venusian fighters are ugly, but are excellent at maneuvering in the thick soup. They would do well in the lower reaches of Jupiter, but would be hopelessly inept on Earth or Mars (+6 reaction bonus).

Earth Fighters: These types are a mix of streamlined hulls and narrow, variable wing geometry; in some ways, they resemble the sleek fighter planes of the late 20th Century. Earth's atmosphere allows maximum maneuverability without the huge wings required on Mars or the heavy armor needed on Venus. On Mars, these fighters must operate with their wings fully extended, and even then they lose a lot of their "dexterity" (+6 reaction bonus). On Venus or Jupiter, the powerful storms and acid rains would quickly rip them apart (5 points of hull damage per round of exposure).

Cruisers

Cruisers are the main rocket vessels of the XXVc™ game universe. Unlike fighters, which are designed for the conditions of specific planets, cruisers are capable of moving in all mediums.

Most cruisers range from 50 to 200 feet in length (although a heavy cruiser can be as much as 1,000 feet long). The hull is cylindrical, and vanes or wings are often mounted on the hull for stabilization in atmosphere. However, cruisers do not use these wings for flight—the body of a cruiser is too bulky to be supported by its wings alone, so they "brute force" their way around with their huge rocket motors. This means that cruisers are not as maneuverable as atmospheric fighters. Also, when a cruiser loses its engines, it has all the gliding ability of a rock. A very large rock.

Cruisers are, however, well within the theoretical design limits for a craft about the size of a 20th-Century DC-10. When piloting a cruiser, it's useful to ask yourself, "What could I do with a jetliner armed with lasers and missiles?"

Because of their size and powerful fusion converters, cruisers are the most commonly used ships for interplanetary travel. Most cruisers have tiny

crew quarters, a combination galley/community space, a control deck, some cargo space, an airlock and a weapon/suit locker. Most cruiser travel is done at high speeds, with little regard for comfort.

Cruisers fit into the tactical scheme of the 25th Century between fighters and battlers. Fighters are designed for combat in very specialized arenas, such as space or a specific planet. Battlers are designed to carry a group of fighters, lots of armament, and huge numbers of assault units to a battle zone. The role of the cruiser is much like the role of a 20th-Century fighter-bomber. It can be useful in combat in a wide variety of situations.

Small cruisers, known as scouts, are almost as maneuverable as fighters, and can often hold their own in a dogfight—especially with an experienced pilot at the controls. Medium-sized cruisers are well armed and can serve as transports for relatively small squads of troops. Large cruisers are tough enough to take anything that any other ship—except a battler—can dish out. This range of types and versatility makes the cruiser the primary ship of choice throughout the system.

Asterovers

The asterover is an all-purpose vehicle, generally somewhat similar in design to the old-fashioned Lunar Module of the Apollo project. It contains a powerful rocket motor, a bulky cockpit, some lab and living space, and stubby maneuvering fins. The asterover is a purely brute-force vehicle, able to travel from orbit to a planet surface and back again; like the fighter, it is not capable of making an interplanetary trip.

Battlers

Battlers are by far the largest ships in the XXVC™ game universe. Each one is essentially a spacefaring military base, carrying enough weaponry and enough troops to mount a successful full-scale assault on most medium-sized cities. Because of its size, a battler is the only type of ship that can carry other ships; many battlers have hangar bays that can hold fighters (enabling the small ships to be transported from planet to planet if desired).

Battlers are very large—the smallest types may be nearly 1,000 feet long and carry a crew of 200 or more. Medium-sized battlers are 2,000 to 3,000 feet long, with crews of 300 to 500. The largest battlers are nearly 2 miles in length and have more than 1,500 crewmen.

Battlers are deep-space vessels, unable to land on a planet. However, because they sometimes must

skim the atmosphere of a planet to scoop up gas and liquid to power their fusion drives, they are moderately streamlined, built around a cylindrical hull with a cone-shaped nose. Living spaces, weapons systems and hangar bays can be extended on booms and then retracted when in combat or skimming modes.

A typical war fleet consists of one or two battlers surrounded by a screen of 10–12 cruisers of varying sizes. Typically, one battler in the fleet will carry a complement of 20–50 fighters designed to operate in the atmosphere of the target planet, while the other will carry space fighters to be used for fleet defense and for attacks on orbital installations.

Transports

Transports are the beasts of burden of the 25th Century. They come in a wide variety of shapes and sizes, but all have one fundamental thing in common: Their purpose is to carry cargo from one place to another. They can operate in atmosphere as well as deep space, and spend most of their working time in transit between planets or asteroids.

Transports sacrifice speed, maneuverability, and armament for cargo space. Weaponry is usually very sparse, sometimes only a single laser or gyro-cannon. The crew of two (a rocketjock and an engineer) is limited to a small, cramped cockpit, with a tiny sleeping and eating area.

Freighters

In terms of its function and purpose, a freighter has a lot in common with a transport, but it's different enough that it belongs in a separate category.

A freighter carries cargo, but its loads are typically small in volume and high in value—the sort of merchandise that people don't feel comfortable about trusting to a lightly armed transport. To protect its cargo, a freighter generally has as many weapons as crew members (typically three of each).

Because of the high-risk nature of operating one of these ships, freighter crews are often made up of people with a thirst for adventure and intrigue (in other words, player characters).

Ship Construction

Designing a rocket ship is a lot like designing a character; there are attributes, hit points, weapons, and armor to be determined and selected. But unlike character attributes, ship attributes are not determined by using dice. Instead, they are directly related to the tonnage of ship.

Tonnage

The first thing you'll need to consider when building or buying a rocket cruiser is its tonnage. A common misconception is that because rockets are often called "ships," they must weigh as much as Earth-type watercraft (which can be upwards of 100,000 tons). In reality, a rocket ship is actually a rather sophisticated aircraft. With the exception of battlers, 25th-Century ships are capable of flying in atmosphere just like other aircraft (and even battlers need to visit the fringes of an atmosphere periodically), which requires that they be as light as possible.

Tonnage is expressed in multiples of 5 (a 32-ton ship, for example, is not possible). Table 30 gives standard tonnages for common ship types in the XXVc™ game.

Variations

In this section, we're trying to give you a general idea of the characteristics of 25th-Century rocket ships, but we can't possibly cover all the varieties of ships that can and do exist.

The statistics and tables in this section are meant as guidelines, not as limitations. For instance, when we say that a ship of 15 tons or less has a speed of 5, we're talking about a *standard* ship of that size.

When you design ships to populate your game universe, you can build in any sort of variety that seems reasonable.

The width of the rocket is determined by dividing the tonnage by 2 (rounding down). Our 50-ton, 100-foot-long rocket is 25 feet thick.

Cargo

All 25th-Century rockets have some cargo space; even on the smallest ships, there's room for provisions and personal belongings of the crew members. Cargo space is measured in tons and is determined by dividing the overall tonnage of the ship by 2. For example, a ship weighing 30 tons can carry 15 tons of cargo. Cargo space can be traded for weaponry at a cost of 10 tons of cargo space per weapon, or vice versa. (Installing weapons is covered later in this chapter.)

Speed and Maneuverability

Speed is also a factor of tonnage. The more your ship weighs, the less quickly it will be able to accelerate and move, even with its larger engines. For a standard ship design, speed is rated from 1 to 5. Most of the time, speed is used in a combat situation to see who can outrun whom. It also comes into play when a ship is moving above the surface of a planet. (See the section on Space Travel later.)

Maneuverability is the equivalent of the ship's Dexterity, and is also based on the ship tonnage. Instead of being a single number, maneuverability is represented by two figures: a ship's Reaction Bonus (used to help determine who wins initiative, just as in character-vs.-character combat) and its AC Defense Bonus, which modifies the ship's basic Armor Class (see below). Table 31 contains the speed and maneuverability figures for standard ships of certain tonnages.

Table 30: Standard Tonnages

Ship Type	Tonnage
Fighter	10-20
Asterover	20-30
Scout Cruiser	20-50
Light Freighter	30-50
Heavy Freighter	55-80
Medium Cruiser	55-200
Light Transport	80-200
Heavy Transport	205-350
Large Cruiser	205-500
Space Liner	500-800
Battler	1000-5000

Length and Width

The length of a rocket is determined by multiplying the tonnage by 2. Thus, a 50-ton rocket is 100 feet long.

Table 31: Speed and Maneuverability

Tonnage	Speed	Reaction Bonus	AC Defense Bonus
5- 15	5	-2	-4
20- 45	4	-1	-2
50-100	3	0	0
105-200	2	0	+1
205-500	1	+1	+2
505 and up	1	+2	+3 or more

Hit Points

Ships have hit points just as characters and creatures do, but instead of being an overall figure, these points are allocated to each of a ship's six major sections. These six sections, and the hit points that each section has, are as follows:

- 1) Hull: Hit points equal to ship's tonnage \times 4.
- 2) Sensors/Commo: Tonnage \times 1.
- 3) Controls: Tonnage \times 1.
- 4) Life Support: Tonnage \times 2.
- 5) Fuel System: Tonnage \times 3.
- 6) Engine: Tonnage \times 3.

For example, a 30-ton ship would have the following hit points in each of its sections:

Hull	$30 \times 4 =$	120
Sensors/Commo	$30 \times 1 =$	30
Controls	$30 \times 1 =$	30
Life Support	$30 \times 2 =$	60
Fuel	$30 \times 3 =$	90
Engine	$30 \times 3 =$	90

In ship-vs.-ship combat, every hit on a vessel causes damage to one of its sections. If the hit point total of a section is reduced to 0, it is unable to function. (For more information, see the chapter on Space Combat.)

Armor Class

As with characters, Armor Class defines the quality of a ship's basic protection: the strength of its hull, whether it has electronic jamming devices, and other special defensive features. There are four basic Armor Class ratings:

AC 8, or Civilian armor, is used on most nonmilitary ships, including transports, freighters, astrorovers, and some cruisers.

AC 6, or Military armor, can be placed on any type of ship and is standard for fighters.

AC 4, or Maximum Military armor, is usually found only on cruisers of 100 tons or more.

AC 0, or Battler Class armor, is found only on battlers.

Weapons

The last step in constructing a ship is to add weapons. Each ship gets a maximum number of weapon spaces equal to its tonnage divided by 10 (rounded down). Some weapons that can be installed on ships will take up more than one weapon space. (See Table 32, in the following section on Buying a Ship, for more information on weapon costs and weapon spaces.)

Design Your Own

Page 94 of this book contains a form that you can use to create ships of your own design, with spaces for all of the vessel's statistics plus an area for a few lines of description or other notes on what makes this ship special. Once you've filled out a form, you can use it during the play of an adventure the same way that you would use one of the Ship Data Cards in the game box.

Buying a Ship

The obvious place to find a rocket ship for sale is a spaceport. Most ports have an area set aside for used ships. As on any used vehicle lot, the types of ships will vary wildly in quality and type.

Another way to obtain a ship is to buy it fresh off the assembly line. The purchase can be made by ordering the vessel through a shipbuilder's agent. The agent arranges payment and financing, as well as the delivery of the ship to the port of choice.

The Price Tag

The standard base cost of a ship is its tonnage \times 10,000cr. For that price, you can get a used ship in good condition. If you want to save some money up front, you can shop around for a ship in poor condition and pay only 5,000cr \times tonnage. At the other end of the scale is a ship in new or excellent condition, which costs 20,000cr \times tonnage.

Note that all of the figures given above are *base* costs, not total prices. A lot of other factors (discussed below) also have a bearing on how much you'll pay to purchase a ship and keep it, or get it, into good operating condition. Here's a summary of what you get for each kind of purchase:

Poor Condition: The ship has been overworked and not maintained. After making the purchase (or perhaps before, if you're dealing with a reputable seller), roll 1d10 for each ship section except the hull. On a result of 1-3, that section is in good repair. On a result of 4-6, the section is 25% damaged, and its hit points are reduced by that amount. On a result of 7-9, the section is 50% damaged, and a 10 means that the section is inoperative and must be repaired before the ship can be used. Then make another roll for the hull: On a result of 1-5, it's okay; on 6-10, it is 25% damaged.

Good Condition: The ship has been well maintained and is worth every credit you spent; it has its full normal totals of hit points in all sections.

New or Excellent Condition: Either the ship is

straight from the factory, or its owner has taken especially good care of it. All hit point values are 10% higher than normal; for instance, a 25-ton ship in excellent condition has 110 hull hit points instead of 100. Unless you're buying factory direct, this kind of ship is extremely rare, and it's probably not a military vessel—because once any section of a new ship takes damage, it loses that hit-point bonus forever.

Armor Costs

Another variable in purchase price is a ship's Armor Class rating. For a vessel with a Civilian rating (AC 8), there is no adjustment to the base cost, but after that the numbers start adding up.

A ship with a Military rating (AC 6) has its price tag increased by 20% over the base cost.

For a ship with a Maximum Military rating (AC 4), the increase is 40%. (This kind of armor is usually only found on cruisers of 100 tons or more.)

A battler—which is the only kind of ship that can have Battler Class armor (AC 0)—is priced at a full 100% over the base cost.

governments buy warships!

Financing

Of course, very few people buy a ship out of pocket. Usually, a down payment of 20% to 30% is required, with the remainder divided into monthly payments over a five-year period. A finance charge of at least 10% (sometimes a lot more) is tacked on to the unpaid balance after the down payment is taken off the top. For example, Flint purchased the *Lady Jane Gray* used, in good condition, for 300,000cr. Thanks to a run of good luck at the casino on Aurora, he was able to make a down payment of 60,000cr, leaving 240,000 to be financed at a rate of 15%. Now he needs to come up with 276,000cr over a period of five years (60 months), which figures out to 4,600 cr per month.

We said you could buy a ship. We didn't say it would be *cheap*.

Operations

The first thing you'll need to know after you've bought a ship is how to keep it running—or, if you went for a bargain basement model, how to get it into working condition. This means you'll need to know about fuel, parts, repairs, spaceport fees, and supplies.

Fuel

The stuff that makes your ship go costs an average of 20 credits per hit point of fuel. This means that a freighter of the *Lady Jane*'s size (30 tons, 90 fuel hit points) will spend 1,800cr for a full tank. Any ship that is capable of interplanetary travel also needs to have the rods of atomic fuel that are used to heat the reactor power plant. To reload a reactor costs a minimum of 1,000cr. However, a load of reactor rods will last for five years.

Parts and Repairs

Repairs are usually made only when money is scarce and the ship is far from port. In many cases, it's actually more convenient to replace a damaged ship system than to repair it. All of the sections of a ship are modular, and any or all of them can be replaced in 1d6 + 4 hours, as opposed to an engineer spending a lot of time (making various Repair Skill Checks) to restore hit points in small amounts.

Table 32 gives the standard costs for replacing the main systems of a rocket. Many values are given as a range of numbers, because replacement costs are sometimes higher for larger or better-equipped ships. For weapons, Table 32 also includes the number of weapon spaces each type of armament requires. (These are the figures you will take into consideration when designing a ship and deciding whether or not to trade cargo space for weapons.)

Making a replacement requires a trained engineer and a successful Average Repair Skill Check (in the proper category; Electrical for sensors, Mechanical for the fuel system, and so forth).

Table 32: Ship Replacement Parts

Part	Cost (cr)
Sensor/Commo Unit	4000-6000
Controls Unit	3000-5000
Life Support Module	7000-9000
Fuel System	8000-10000
Nuclear Engine	20000-40000
Weapons (and # of spaces required):	
Beam Laser (1)	1000
Pumped Laser (2)	1500
Gyrocannon (1)	2000
Missile Mount (1)	2000
Light Acceleration Gun (1)	2500
Heavy Missile Mount (2)	3000
Heavy Acceleration Gun (2)	5000
K-Cannon (5)	10000

The price of hull repairs varies depending on the damage. In general, the cost is 100cr and one hour

of labor (which is included in the price) per hull hit point restored. For example, repairing a 50-point gash in the *Lady's* hull would take 5,000cr and 50 hours. However, if you're down in some low dive on Ceres, and they know they've got you over a barrel, don't be surprised if that price mysteriously shoots up to 200cr or 300cr per point!

Spaceport Fees

Most spaceports have docking charges. These costs range from 50cr per day in a small class C port such as Keeler (on Luna) to 200cr per day at a large, class A port such as Tycho or Mars-Pavonis.

In addition to docking fees, most ports charge for pilots (200cr per hour), towing to and from repair sites (100cr per hour), transportation to hotels and other facilities (by train, 2cr per quarter-mile; by jet-cab, 6cr per quarter-mile), and lodging (20–100cr per night, depending on the hotel). A meal in a spaceport restaurant costs about 10–40cr.

More general information on spaceports is given in the next section of this chapter.

Cargo and Supplies

As a rule, each person on a ship needs five pounds of food and water per day for survival. A part of your ship's cargo space must be taken up by these items. For example, the *Lady Jane* has a three-man crew; on a five-day hop to Mars, she would need to carry 75 lbs. of food and water—not a big deal for a freighter, which has lots of cargo space. But on a ship that carries a lot of people (such as a space liner or a heavy cruiser) and is outfitted for an extended trip, the weight of food and water for all the passengers can add up to a hefty amount.

Another important consideration for cargo space is personal equipment and possessions—individual weapons, reloads, clothing, tools, and so forth. When calculating how much cargo you can haul around, remember to first deal with food, water, and personal possessions, since those are absolute necessities.

You'll also need to carry a supply of reloads for your weapons (except for lasers, which run off generators that have an essentially unlimited amount of power). More information on the cost and weight of reloads for weapons is covered on Table 33, in the chapter on Space Combat.

Spaceports

A spaceport is a facility designed to handle take-offs and landings of rocket ships. This is no mean feat—a rocket's nuclear engine develops millions of pounds of thrust at temperatures that can make steel run like water. The launch bays of spaceports are constructed of special concrete that can withstand this titanic force.

A large spaceport usually has several dozen launch bays, connected by a network of subways or monorails leading to hotels, repair shops, and shopping facilities. Every port also has a control tower in a central location, which pilots communicate with for clearance and landing permission.

Most planets and major asteroids have one or more spaceports, each one rated A through C. Most Class A ports have facilities for building, repairing, replacing and modifying all types of ships. There are usually hotels and restaurants within easy reach of the rocket field. There may even be a rocket-building factory adjacent to the port.

A Class B spaceport is capable of replacing parts for most common types of ships. Parts are usually available (75% chance for any specific part needed), or can be ordered and delivered within 1d6 days. The hotel and entertainment facilities are less accommodating than at a Class A facility and may be located miles from the actual port.

Class C ports have no repair or refitting facilities. They are usually open-field areas, lacking the features and sophistication of larger ports. There may be a few rough hangars or domes thrown up around the field, far enough back (at least a mile) from the launch area to avoid being blasted by rocket exhaust. There often is no full-fledged control tower, only a shack containing a shortwave radio and radar gear.

Space Travel

Getting from one planet to another in the 25th Century isn't as time-consuming or as complicated as it was in the early days of space exploration. Instead of blasting off, reaching escape velocity, and then coasting the rest of the way, which is how man took his first steps out into the solar system, modern ships have the ability (and the fuel capacity) to stay under power all the way from their takeoff point to their destination.

The most important benefit of this advance in technology is that space travel is *fast*. Even a trip from the outermost edge of the Asteroid Belt all the

way to the other side is measured in days instead of weeks or months.

Another good thing about travel in a ship that's under constant power is that courses are very easy to plot—a straight line from here to there is all it takes.

The Solar System Map

Brief instructions on conducting the movement of ships and planets can be found on the sheet containing the Solar System Map. The following information goes into a little more detail.

Before you can calculate distances and travel times between planets, you have to know where the planets are. Punch out the die-cut markers provided in the game box for the four inner planets and six asteroids and place them on their proper orbital tracks.

The red dots on the orbits indicate the positions of these planetary bodies on Jan. 1, 2456 (the date when the saga of the *XXVc™* game begins). The marks on each orbital track indicate how far a planet or asteroid on that orbit moves every month (30 days).

As the referee keeps track of the passage of time in your game, he will also be keeping track of where all the planets and asteroids are at any given time: On Feb. 1, 2456, every marker is moved one step along its orbital track in the direction of the arrow, then moved again one month later, and so on. If the action in your game starts at some time earlier or later than Jan. 1, 2456, it's a fairly simple matter to determine where the planet markers should be placed to simulate that point in time.

The Ruler

The transparent ruler in the *XXVc™* game box contains four different measurement scales, three for ship travel (marked off in days) and one for communication (marked off in minutes). The communication scale is easy to handle, since radio waves always move at a constant velocity (the speed of light). Simply lay the ruler on the map with the "zero" end at the place that's sending a radio message, point it toward the place that's going to receive the message, and read the number of minutes it will take for the signal to get there.

The three travel scales are almost as easy to use. Each one is marked off according to how long it takes a ship to move at a certain rate of fuel usage. You can choose to burn 10, 20, or 40 hit points of fuel per day, and the more fuel you use, the faster your ship can move—but be careful not to use so

much fuel that you don't have enough to finish the trip.

Running Out of Fuel

Each time your ship makes a move, it uses fuel. Also, every time your ship takes damage in its Fuel section (covered in the next chapter on Space Combat), it will lose that many hit points worth of fuel. When your ship's fuel hit point total is down to 0—whether as the result of interplanetary movement, on-planet movement, combat, or all three—it is out of fuel. You can get more fuel at any Class A or Class B spaceport, at some Class C ports, or from a friendly vessel that passes by and has some to spare.

But what happens when the tanks go dry? If you're flying near the surface of a planet, the answer's pretty simple—you fall like a rock. Landing an out-of-fuel ship requires a Rocket Pilot Skill Check at a Difficult or Impossible level. Failing the check means that the ship will crash.

A ship that runs out of fuel in deep space will immediately deviate from its original course by 15 degrees to one side or the other (roll a die for random determination). This deviation comes from the jolt that the ship takes just as its engine dies. Then the ship will begin to drift in a straight line, moving at the 10-point-per-day rate. If its new line of movement brings it within 1 inch (on the map) of the sun or any of the inner planets, it will be captured by the gravity of that body, and 1d3 days later it will spiral in and crash into that body. If not, it will continue to drift until it leaves the confines of the map and becomes lost in space.

Moving On Planet

Most ships are capable of moving inside a planet's atmosphere as well as in space. For every point of speed a ship has, it can move at a top speed of 1,000 mph in atmosphere (for example, a speed of 5 allows a maximum airspeed of 5,000 mph). A ship burns 1 hit point of fuel per hour for every 1,000 mph of velocity.

To get an approximation of how long it takes a ship to move from one location to another on a planet, pull out the appropriate Planet Data Card and check to see what the diameter of the planet is. By using that figure as a basis for a scale of movement, you can arrive at a rough estimate (which is all that's really necessary) of the distance between two points on the planet surface. Then, if you know the speed at which the ship is moving, you can figure out how long it needs to make the trip.

Space Combat

"Flint, I have a suspicious-looking fighter at three o'clock."

"Thanks, Leanna. Good thing it's only one-thirty. That gives us an hour and a half to decide what to do."

"Flint!"

"Just a little rocketjock humor, dear. . . ."

Battles in outer space are a strange mixture of two distinct levels of firepower and electronic gimmickry. From large ships, radars stab out into the night, relaying information back to computers, who pick targets and designate fire. Other systems spread defensive missiles, chaff and magnetic fields to intercept the incoming attacks.

But fighters and cruisers will still be the domain of the single pilot, forcing his ship into a tight inside loop against a backdrop of blackness broken by the weapon bursts from other vessels, and then getting off a clean missile shot or a sizzling beam of laser fire. As military tacticians have discovered over the centuries, in a dogfight—fighter to fighter—you just can't beat a bad-tempered rocketjock with a full load of ammo.

Before we get into the mechanics of conducting ship-vs.-ship combat, it's time to talk about the tools of the trade—weapons and sensors. Table 33 contains all of the combat-related information about ship weapons, plus some other facts; refer to it as you read the following descriptions—and, of course, as often as necessary when combat gets under way.

Lasers

While personal weapons use capacitor ("pulse") lasers exclusively, ships are often armed not only with the single-shot variety of laser but also with its predecessor, known as the "beam laser" to distinguish it from the pulse version. The beam laser is not as concentrated and thus not as hot (doing half as

much damage as a capacitor laser), but it has a longer range and is somewhat better for hitting what you aim at because the beam can be swept through an area—hitting whatever it contacts—instead of relying on a single line of fire.

Gyrocannons

These weapons are the equivalent of 20th-Century machine guns—not because they can fire in rat-a-tat fashion, but because each load of ammunition contains a full 50 shots.

A gyrocannon fires a small explosive shell that is much less powerful and has a shorter range than a missile (see below). But the weapon's large load of ammo and its ease of operation make it an often seen form of armament.

Missiles

In a typical episode of space combat, especially one involving medium- and large-sized ships, lots of missiles fill the void between the combatants. In the 25th Century, just heaving a nuclear bomb in the direction of your enemy isn't going to be enough—most ships are hardened against solar flares, and compared to what Sol can dish out, a few kilotons is nothing. Also, most ships are able to target a "simple" nuclear missile in seconds and wipe it out with lasers at long range. Instead, ship-to-ship missiles nowadays are designed to do nastier, more subtle things.

In fact, a missile doesn't even have to collide with a target in order to do damage (which is why ships can take several "hits" from missiles without going to pieces physically). Some missiles are specially designed to miss—but while making a close pass, they throw out a brutally intense magnetic field that wreaks havoc with the target's electronic systems. Other missiles explode in the enemy ship's path, seeding the area with millions of tiny metal pellets. When the target slams into this micro-minefield, the pellets can shred a section of the hull.

Table 33: Ship Weapons

Type	Range (hexes)	Weapon Spaces	Shots	Damage	Hit Bonus	Reload Cost (cr)	Reload Weight (lbs)
Beam Laser	6	1	unl.	10	+1	0	0
Pumped Laser	4	2	unl.	20	0	0	0
Gyrocannon	4	1	50	10	+1	100	400
Missile Mount	6	1	4	40	0	300	400
Heavy Missile Mount	6	2	4	60	-1	900	1200
K-Cannon	4	5	6	100	-3	1500	4000
Light Acceleration Gun	2	1	15	20	-1	200	1500
Heavy Acceleration Gun	2	2	10	30	-2	400	3000

Missiles come in three basic sizes. A regular missile does twice as much damage as a strike from a capacitor laser, and has a longer range. A heavy missile can also be fired from long range, and although it isn't as accurate as a regular missile, it packs 1 1/2 times the punch.

The granddaddy of missiles is the K-cannon—K for kinetic, as in impact. One K-cannon mount takes up an enormous amount of space on a weapons deck—only really big ships can carry such weapons in the first place—but many a captain has been convinced that K-cannons are worth every inch of that space. A single strike from one of these explosive behemoths can destroy the hull of a 25-ton cruiser. The projectile of a K-cannon is not as accurate as a heavy missile, and it's no good at all from long range . . . but you can afford a couple of misses when one hit can do so much.

Acceleration Guns

This weapon is a ship-sized version of a mass driver . . . which is a very tame way of describing a simple, "stupid" weapon that's capable of doing a lot of damage.

As with the mass driver (and its tiny cousin, the needle gun/bolt gun), the barrel of the weapon contains a series of electromagnets. When electrical current is delivered to the magnets, they literally pick up and hurl forward a large chunk of raw iron. By the time it leaves the muzzle of the gun, it's traveling at better than a mile a second—and in deep space, there's nothing to slow it down.

The heavy acceleration gun is slightly less accurate than the light gun and doesn't contain as many projectiles in a full load of ammo, but the damage caused by one of its boulder-sized shots is nearly as great as that of a missile strike—at a fraction of the cost.

Table 33 Explanations

Range is given as a number of hexes (as counted on the Deep Space Display in the game box) which indicates the longest distance over which the weapon can be used with a chance of hitting. Any weapon attacking another ship from 1 or 2 hexes away does so at short range (with no penalty to the chance of hitting). At 3 or 4 hexes (medium range), the penalty to hit is -2, and at 5 or 6 hexes (long range), the penalty is -5, the same penalties as for individual combat.

Weapon Spaces is an indication of how much room the weapon takes up in a ship (more informa-

tion on this is in the preceding chapter).

Shots indicates how many times the weapon can be fired before it needs to be reloaded (lasers are unlimited in this category).

Damage is the number of points of damage the weapon causes on a successful hit. Unlike personal weapons, ship weapons cause a constant amount of damage every time they hit.

Hit Bonus is added to the weapon's chance of hitting (which is primarily based on the Armor Class of the target and the THAC0 number of the character who is operating the weapon). Some weapons are easier or harder to handle than others.

Reload information becomes important when a weapon's ammunition is depleted and must be replaced. *Cost* is the standard price for purchasing spare ammo at a spaceport where it is available; *Weight* helps to determine how much ammunition a ship can carry in its cargo space; *Time* is the number of rounds required to install a reload—not counting any time it might take to move the reload from the cargo deck to the weapons deck (if that hasn't already been taken care of).

Combat Procedure

The system for conducting combat between ships in the XXVc™ game actually kicks into gear before the ships have a chance to start shooting at one another. How the characters work their ship's sensor systems helps the referee to determine the distance between ships (at a scale of 1 hex = 50 miles) when possible combatants appear on the Deep Space Display. When a combat encounter—two or more non-allied ships within potential combat range—occurs, things happen in this order:

1) The referee takes the appropriate types and numbers of ship markers from the selection on the die-cut sheet and puts them on the map at a distance and angle (nose to nose, nose to tail, etc.) that matches the situation. (Ship markers are coded by color and letter: A = asterover, B = battler, C = cruiser, F = fighter, H = heavy cruiser, L = space liner, T = transport or freighter. Note that the two sides of each ship marker are different, allowing for a large number of possible combinations.)

2) Every round of contact begins with each ship on the map rolling 1d10 for initiative, modifying its roll by the Reaction Bonus of the ship. In the order of their rolls from lowest to highest, each ship takes one or more actions, sometimes using one or more points of speed to do so. When the ship with the highest modified initiative roll has completed its first

action, the process begins over with the first ship until everyone's speed points are used up or every manned weapon has been fired once. (More on this later.)

3) Every ship calculates its current speed rating by subtracting any points of speed it used to perform actions in step 2. If any of the actions taken by ships in the current round caused damage to another ship, all of that damage is assessed now. The next round begins with each ship's speed rating, hit points, and other capabilities reduced (if necessary). Activity returns to step 2 and continues round after round until the conflict is resolved, either by one side being disabled or destroyed or one or both sides fleeing the field (moving off the map).

Actions

In a combat or possible combat situation, any of the actions that a ship (and its crew members) can take will fall into one of two categories: Maneuvers, which require the expenditure of speed points, or Attacks, which do not.

Maneuvers are performed by the pilot—who is usually, but not necessarily, a rocketjock. These include movement, turning, movement plus turning, and special movement (a feat that requires a Skill Check to determine success).

Movement: A ship can move in the direction it is already headed a number of hexes equal to its current speed rating (or any number lower than that). Every hex of movement requires the expenditure of 1 point of speed. If a pilot chooses movement as an action, he can go straight ahead only 1 hex, or as far as his ship's current speed rating will permit.

Turning: By spending 1 point of speed, a pilot can pivot the nose of his ship through one hex side (60 degrees) and get it heading in a different direction. Thus, by using 3 points of speed, a ship can be turned so that it is heading in the direction opposite its previous course. (A ship with a speed of less than 3 cannot complete this kind of maneuver in one round.)

Movement plus turning: Both of the above maneuvers can be combined in one action if desired, as long as the number of speed points expended is not greater than the ship's current speed rating.

Special movement: This is where Skill Checks (and the referee) enter the picture. If a rocketjock wants to pull an inside loop and come around on the tail of an enemy with his weapons trained on the target, this is entirely possible—as long as the pilot succeeds at a Skill Check (degree of difficulty at the ref-



eree's discretion) and the ship has enough speed points (again, referee's judgment) to perform the maneuver. If the Skill Check is failed or the ship doesn't have enough speed points to complete the action, the referee will determine the effects and consequences.

Attacks are made independent of speed; as an action (or part of an action) during a round, a ship can fire one or more of its weapons while it is in motion, or when it's stationary, as long as those weapons are usable.

A weapon is *not* usable (at least not during the remainder of the current round) if:

1. It is not manned. (A character can only fire one weapon per round, and must be manning that weapon at the start of the round.)
2. It has been fired during the current round.
3. It is out of ammunition.
4. It has been destroyed by damage from combat.

If a weapon is usable, it can be fired at any time, as part of any action taken in a round—before, after, or even during any maneuver.

Attacking with a ship weapon is basically done the same way as attacking in individual combat. After determining the number he needs to score a hit (using his THAC0 number and any applicable Hit Bonus for the weapon, and adjusting for the Armor Class and AC Defense Bonus of the target ship), a character manning a weapon makes an attack roll with 1d20.

Note: If a ship weapon is used directly against a character or creature, it does points of damage equal to 10 times the amount given on Table 33.

Damage

When you score a hit in ship-vs.-ship combat, you don't simply damage the target ship—you damage one of its individual sections. The part of the ship that takes damage is determined by rolling 1d12 and consulting Table 34.

Table 34: Ship Hit Locations

1d12 Roll	Ship Section Hit
1	Sensors/Commo
2	Controls
3	Life Support
4-5	Fuel
6-7	Engine
8	Weapon
9-12	Hull

If one or more characters are located in a section that takes damage, then the character might also

get hurt. He must attempt a saving throw vs. explosion. If it fails, he suffers 1d10 points of damage; if it succeeds, he escapes injury. If a character is reduced to 3 hit points (or half of his full normal total, whichever is lower), he is severely injured and can't participate in running the ship until his wounds have been treated.

Any successful attack, except a hit on a weapon, will reduce the hit points of the ship section that took the damage. The effects of damage on the various ship systems are as follows:

Sensors/Commo at 0 hit points: No sensor use or ship-to-ship communication possible. Ship is "blind"; -5 to all attack rolls, +3 to AC until the system is repaired.

Controls at 0 hit points: Ship cannot maneuver; travels in a straight line a maximum of 2 hexes per action (or up to the limit of its speed, whichever is less). If in atmosphere, there is a 50% chance each round that the ship will nosedive and crash.

Life Support at 0 hit points: No heat, air recycling, or radiation protection in ship. Anyone aboard must don spacesuits or save vs. suffocation.

Fuel at 0 hit points: Engine starves and cuts out; ship cannot maneuver. It drifts randomly a maximum of 2 hexes per action (roll 1d6 for direction at the start of each action). If in atmosphere, the ship will crash in 1d4 rounds.

Engine at 1/2 normal hit points: Ship loses 1 point of speed (to a minimum of 1).

Engine at 1/4 normal hit points: Ship loses 3 points of speed (to a minimum of 1).

Engine at 0 hit points: Same effect as for fuel at 0 hit points.

Weapon hit: One of the ship's weapons, determined randomly, is destroyed. If that weapon was being manned, the gunner must save vs. explosion to avoid taking 1d10 points of damage.

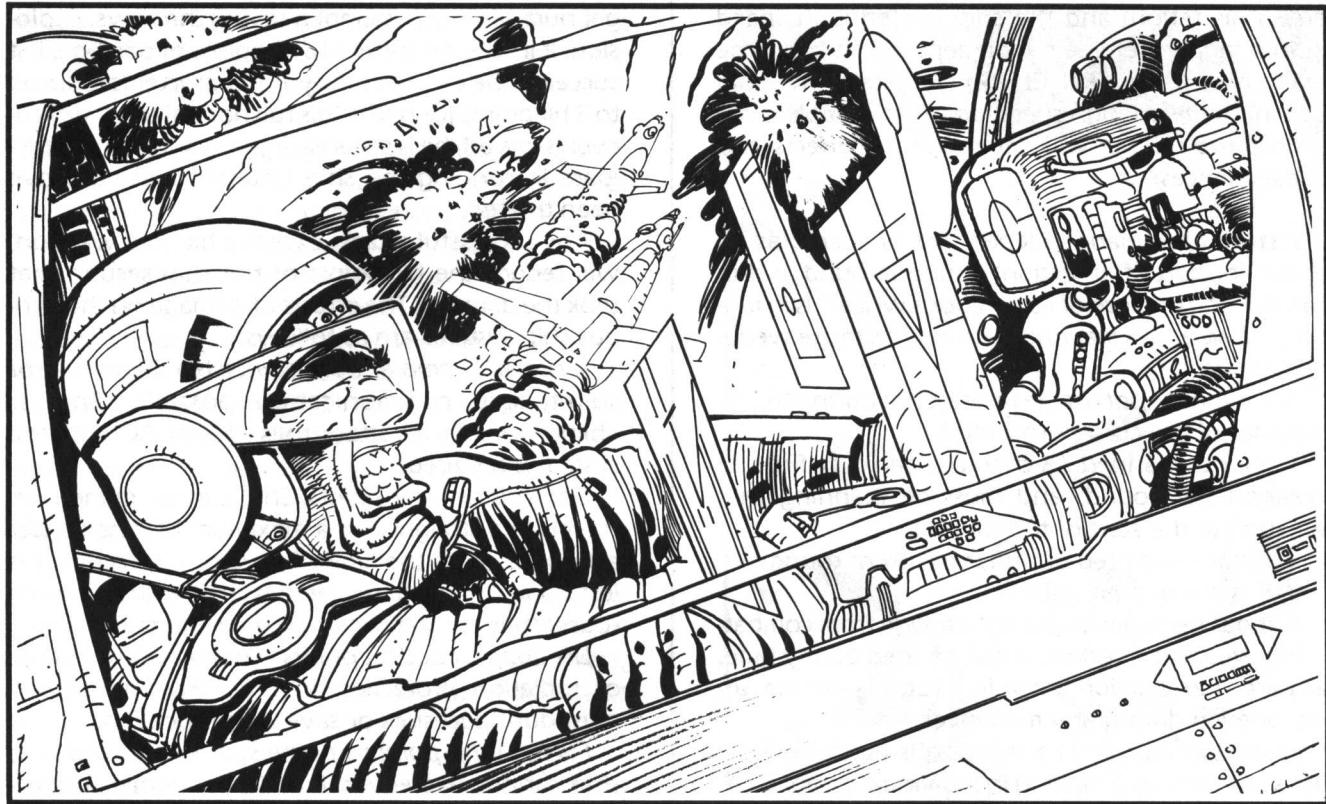
Hull at 1/2 normal hit points: Ship loses half its speed (rounded down, to a minimum of 1).

Hull at 0 hit points: Ship falls apart. Any characters aboard without protection (spacesuit, battle armor, pressure tent, etc.) die immediately.

Damage Markers

The numbered die-cut markers in the XXVc™ game box can be used with the Ship Data Cards to keep track of damage to a ship's systems. The green markers are single digits; yellow markers represent multiples of 10; and red markers represent multiples of 100.

When a section of a ship suffers damage, take one or more markers that add up to the correct total



and place them on the part of the card corresponding to that section. Continue to place new markers round after round ("making change" when convenient or necessary) to keep a running account of the condition of the ship.

For instance, if a ship suffers 80 points of damage to its hull in one round, take a yellow 5 (50 points) and a yellow 3 (30 points) and place them in the "Hull" box on the ship's card. If the hull suffers 20 more points of damage in the following round, you can simply add a yellow 2 or you can take away the 5 and the 3 and replace them with a red 1.

The single-digit (green) markers aren't used for the ship sections (since every ship weapon does damage in multiples of 10), but can be used to keep track of how many of a ship's weapons have been destroyed; simply place an appropriate green marker somewhere in the upper right area of the card, near where the ship's weapons are listed. For ships that have a mix of different kinds of weapons, you will have to keep track (on a separate sheet of paper, or by some other system you devise) of exactly which weapons are destroyed and which are still functional.

Of course, you can also use the numbered markers for any other purpose you see fit. When characters are on a shopping spree, the markers can

represent money; when in battle, they can represent individual hit points lost.

Called Shots

Sometimes you (or your opponent) will engage in combat with the intent of disabling instead of destroying the enemy vessel. At other times, you may want to do just the opposite: go for a kill by concentrating on blowing out the other guy's weapons, so that you can then take him apart at your leisure.

In both of these types of situations, it's possible to achieve your objective by making called shots against a specific part of the target ship. But, of course, that's not as easy as simply saying, "I'm aiming at the control deck."

A called shot against any of a ship's internal systems is made with a penalty to your attack roll: The tougher that section is to hit, the greater the penalty. If your modified die roll is high enough, your weapon does damage to the section you were aiming at. If your attack roll fails, you missed the target altogether (even if the roll would have been high enough to hit the ship without the called-shot penalty). Table 35 summarizes the attack roll penalties for attempting called shots.

Table 35: Called Shots

Penalty	Ship Section Targeted
-6	Sensors/Commo
-6	Controls
-4	Life Support
-3	Fuel
-3	Engine
-6	Specific weapon
-1	Hull

The Combat Team

This section provides some guidelines and suggestions for how every member of a player character group can contribute during ship-vs.-ship combat, so that the group has the best chance of succeeding and everyone has a good chance of rightfully earning some experience points.

Rocketjock: If there's at least one in the group, he should be at the controls. He also may be able to fire a weapon from the control deck, if one is available (in a one-man fighter, of course, this is mandatory).

Warrior and scout: Usually the guys with the best combat ability, they should be stationed at the weapons that do the most damage or have the best chance of hitting.

Engineer: At least one should be available to scurry between decks and make repairs. Even if your ship is never hit, he deserves a share of the credit for victory because he was there in case he was needed. (After all, it's not his fault that he wasn't required to fix anything.)

Rogue: A jack-of-all-trades. He can man a weapon, and he probably has a high enough Dexterity to make a passable attempt at handling the ship if the rocketjock is injured or is needed elsewhere.

Medic: Much like the engineer, this guy is essential to have on the crew even if he's never needed. He can handle a weapon (just as anyone can), but his true value is in being on call in case someone is severely injured.

Assistance: A character who isn't occupied at a specific task (piloting, repairing, manning a weapon, etc.) can contribute by assisting another crew member.

If a character is assisting a gunner, the gunner receives a +1 bonus to his attack roll.

If a character is assisting someone who is using a skill (an engineer making repairs, a medic treating an injured crew member), the user of the skill makes all Skill Checks with a +10 bonus to his overall skill rating.

Note that this bonus for assistance only applies during ship-vs.-ship combat.

Moving Between Decks

A lot of times, every character will have a place to go when the cry of "Battle stations!" rings out. But some characters will need to move back and forth between sections of a ship during a battle. When the need arises, a character can travel from one section to an adjacent one and still perform some other activity during the same round. However, it takes a full round to move two sections.

For example, in a ship with the weapons deck adjacent to the life support section and two decks away from the controls, an engineer could move away from the weapon he's manning, rush into life support, and attempt a repair all in the same round. But if the control deck is the place that needs fixing, he must take one round to get there and can't attempt a repair until the following round.

Crashes and Collisions

When a ship crashes on the surface of a planet, it automatically takes 10 points of hull damage for every 1,000 feet fallen. All characters inside will take maximum damage from the fall (as per Table 29). There is no saving throw against a crash.

A ship that collides with another large object causes damage (in hull hit points) equal to its own tonnage, and suffers damage equal to the tonnage of the object it collided with.

Ramming—causing a collision intentionally—is a possible tactic for either vessel whenever two ships occupy the same hex on the Deep Space Display. The target ship can avoid the collision if its pilot succeeds at an Average Pilot Rocket Skill Check, with a bonus or penalty to his skill rating of 10 for every point of difference between the speed of the ships.

For example: The pilot of a 150-ton medium cruiser (speed 2) has had enough of being pestered by a 15-ton fighter (speed 5), and the pilot of the fighter has carelessly allowed his ship to get too close to the cruiser. The big ship tries to ram.

The fighter pilot has a Pilot Rocket skill rating of 50 and a Dexterity of 15, giving him an overall skill rating of 65. He adds 30 more (3×10) for the difference in speed between the ships, for a total of 95. If the fighter pilot makes a percentage roll of 01–94, he effortlessly dodges the cruiser; on a roll of 95–00, the cruiser hits the fighter, doing 150 points of hull damage—more than enough to reduce the smaller ship to wreckage—and suffers 15 points of hull damage itself. A small price to pay. . . .

Digital Personalities

"DPs can't be everywhere at once . . . It just seems that way."

—BadInger

Digital Personalities (DPs for short) are electronic entities—certainly alive, just as humans and other creatures are alive, but living an existence so different from that of biological creatures that there is practically no comparison between the two.

A general description of DPs and what they can do is given in *The World Book*. The information that follows is provided to enable the referee and players to understand, use, and interact with Digital Personalities during XXVc™ game adventures. Note that it is *not* possible for a player character to become a DP. If a player wants his character to undergo a transformation into electronic form (and if the referee wants to allow it to happen), the player should be aware beforehand that as soon as the process is complete his character becomes a non-player character and, as such, will be controlled by the referee from then on.

DPs were originally designed to handle complex, computer-oriented tasks requiring more intelligence than it was possible to build into even the most advanced computer program. (Artificial intelligence, no matter how good, is still artificial, and can never be as sophisticated as the real thing.) In the time since the first ones were created in the early 22nd Century, DPs have evolved to the point where they have a staggering degree (from the human standpoint) of self-awareness.

In the 25th Century, DPs are used—or, more accurately, *allow* themselves to be used—to run factories, control highways, and operate city systems. One of the few things that most DPs can't do is control a rocket ship, since the computer on even the largest of ships is still far too small to contain a Digital Personality except for a very small one (1st or 2nd level). Most of the time, DPs live and operate within one of the World Computers, devices of enormous size and complexity that are located on the major worlds of the solar system (see the section on World Computers later in this chapter).

Game Statistics

From a game-rules standpoint, there is no difference between the two types of DPs, Constructs and Translated Personalities. The only distinction is in how they were created (see *The World Book*, and the NPC Profile Cards for Doctor Huer and Simund Holzerhein).

Ability Scores: As non-physical entities, DPs have no scores for Strength, Dexterity, or Constitution. However, when a DP produces a three-dimensional image of himself (prior to interacting with characters and other people), he does have mental and psychological attributes (Int, Wis, Cha, Tech) that carry over from the personality the DP was derived from.

Hit Points and Levels: A Digital Personality rolls 1d10 for hit points at every experience level, even beyond 9th (which is where normal characters stop using dice for new hit points). DPs don't gain experience points or advance in levels the same way that player characters do; since they are under the control of the referee, it is his responsibility to determine when a DP becomes more powerful and deserves to be advanced a level. Also unlike characters, DPs are not required to begin at 1st level; most of them are at least 5th or 6th level as soon as they are created, and many advance fairly rapidly (compared to the rate at which normal characters gain new levels).

Armor Class: The AC of a Digital Personality is a function of his experience level, beginning at 10 (for a hypothetical 1st-level DP) and improving by 1 for every additional level until he reaches AC 0. Thus, Doctor Huer, an 8th-level DP, has an AC of 2; Simund Holzerhein, at 10th level, has an AC of 0 (and that's as good as it will ever get, no matter how many more levels Holzerhein attains).

Combat: DPs can engage other DPs in combat through the use of special programs (described below). However, DPs cannot directly attack normal characters or creatures, and neither can they be attacked by characters. Digital Personalities use the same THAC0 numbers as warriors and scouts (see Table 20). If a DP's hit point total is reduced to 0, he becomes disintegrated and ceases to exist (unless a copy has been prepared; see the Copy Self program, below).

To engage in combat, two DPs must be located in the same computer "cell" (see the section on World Computers below). Each round of conflict begins with an initiative roll (1d10 for each DP, low roll takes the first action). The referee administers all episodes of combat between DPs (since only non-player characters are involved), but he may allow players to make initiative rolls and attack rolls on behalf of a friendly DP who is tangling with a BGDP (Bad Guy DP).

Programs

In basic terms, a Digital Personality is a computer program, albeit an extremely sophisticated one. However, a DP does not have the innate ability to affect the other parts of a computer system (including other DPs) by himself. Most of the time, he has to rely on other smaller programs that he can call up and manipulate.

A low-level DP can use or initiate one program per round. At 5th level he can use two programs per round, at 10th level three, and so on. As explained in the following descriptions, some programs operate for longer than 1 round after they are activated. Once the activity of such a program is set in motion, that program does not count against the DPs limit of programs usable per round.

Non-Combat Programs

Control Remote

This program allows the DP to control any device that is normally operated, monitored, or controlled by some part of the World Computer network. The DP's chance of success is 10% per level, up to a maximum of 90%. If he fails to control a certain device or mechanism, the DP cannot try this program on the same device again for at least 1 hour.

Copy Self

This program allows a Digital Personality to make a copy of himself, but at half the experience level (rounded down) of the original. The copy is stored in computer memory, but remains dormant; it is activated automatically if the original is destroyed. Preparing a copy takes 10 minutes per level of the original. Only one copy of a DP can exist in computer memory at a time; if a new one is prepared (for instance, when the DP advances in level), the outdated one is overwritten. The chance of successfully using this program is 5% per level of the original, up to a maximum of 50%. If the attempt fails, the DP cannot try again for at least 1 day.

Program Hardening

This program improves the AC of the Digital Personality by 2 for 1d6 rounds. It can be used up to three times per day. The program restructures the design of the DP program temporarily into a denser, harder-to-attack format. However, the new format is incompatible with a DP's normal operational mode, and cannot be maintained for long.

Stealth

This program routine allows the DP to enter computer "cells" without being detected, or to move

past another DP without being noticed. It has a duration of 1d4 rounds, and can be used twice per day. The chance of a DP successfully using this program is 10% per level, up to a maximum of 90%.

This program can also be used to counter another DP's Stealth program. If the percentage roll to determine success for the counterprogram is higher than the roll that activated the first Stealth program, then the first program is negated and the DP is detected.

Reformat

Essentially a computerized version of the medic skill Treat Light Wounds, this program reconstructs missing sections of a damaged Digital Personality, allowing it to recover 1d6 hit points. The DP must be of 3rd level or higher to use the program, and it can be used up to three times per day.

Recompile

This is a more sophisticated version of Reformat, allowing a DP of 6th level or higher to restore 1d10 hit points. It can be used up to three times per day. Once a DP gains the ability to use Recompile instead of Reformat, he will abandon the less powerful program.

Combat Programs

Virus Attack

This attack creates a replicating computer virus that eats away at the enemy DP's basic programming. If the DP using this program makes his attack roll, the program causes 1d4 points of damage for each level of the attacker (for instance, 8d4 for an 8th-level attacker), and follows this up with 1d4 points of residual damage in each of the following three rounds. This attack can be used as often as desired, except that a new virus cannot be created while one is still in effect.

Mind Bolt

This attack is a powerful bolt of electronic noise, designed to disrupt and destroy another DP. It can be used up to three times during any combat encounter—but a failed attack roll counts as a use! On a successful attack roll, this program does 1d6 points of damage per level of the attacker.

World Computers

In the 25th Century, mankind has progressed beyond using puny computers with tiny programs that do one or two jobs. Instead, each world has its own huge computer, and single programs are re-

placed by incredibly powerful artificial intelligences which can handle all sorts of complex tasks. These World Computers, which were originally created by the System States Alliance to control its distant colonies, are of enormous size, not only because they handle billions of tasks, but also because they must provide space for all of the Digital Personalities that occupy the world on an operational level.

Once more, for emphasis: World Computers are **HUGE**—each one the size of a small city. Grown from chunks of self-replicating crystal, each occupies a massive shaft that extends deep beneath the planet's surface. Each World Computer might be thought of as a vast crystalline universe, in which programs flit back and forth like ghostly inhabitants.

The five planetary computers are these:

RAM Main. This is where Simund Holzerhein, the head of RAM, resides. A subsection of this system, located on Mars, contains all the secret information and plans of RAM's executive class.

Venus Prime. This computer is beneath the continent of Ishtar, but is shared by all Venusians. It is used mostly for advice and information, and is dominated by a main Digital Personality known as Aphrodite, who controls most of its functions.

Earth Worldnet. This was the first World Computer constructed by the SSA. It was severely damaged during the Ten Year War (2275-2285) and has remained relatively unrepairs and unused ever since—except by RAM and NEO, both of which have tapped into still-functioning sections and created their own subsystems.

Luna Main. A large copy of Earth Worldnet, designed by the System States Alliance as a backup prior to the Ten Year War, this part of the network was taken over by the Lunarians when the SSA collapsed. NEO, RAM, and the Lunar Federation all have special subsystems within the main computer.

Mercury Prime. Grown from a stolen shard of the RAM Main computer, Mercury Prime is far smaller and not as powerful as its longer-established brethren.

All of the World Computers are interlinked by a series of special computers, called relay points. The relay points are small movable satellites which shift around the solar system, constantly adjusting their positions to keep in close contact with all of the main World Computers.

Every DP has a residence address in a designated part of a certain World Computer (Doc Huer, for example, lives in the NEO subsystem of the Earth Worldnet computer). But DPs are by no means limited to "staying home"; they can travel from place

to place within a certain World Computer at the speed of light. To get from one World Computer to a different one, a DP must disassemble, download, and then reassemble at the destination when his trip is complete (see the section below).

Inside a World Computer

Every World Computer system is made up of groups of individual memory "cells." Each cell holds specialized information. A Digital Personality can move through the system one cell at a time, discovering what is in each cell, much like an adventurer moves through an unknown series of catacombs. An individual World Computer has billions of cells; usually, only the cells of a specific area are important during the course of an adventure.

Here's an example of a small part of RAM Main, consisting of seven cells. Each round, a DP can enter one cell. Let's say that a RAM DP named Ulianov starts in cell 1, looking for data on Buck Rogers. Meanwhile, two low-level DPs under Ulianov's control search cells 2 and 4. Doctor Huer is in 7, where he is looking for data on Simund Holzerhein. (The Holzerhein files are actually in cell 5, the Buck files in cell 3.) On the next round, Ulianov goes into cell 7, where he finds nothing he wants. Fortunately for Huer, the good doctor picked that same instant to vacate 7 and move into 5, thereby avoiding possible combat and happily finding what he was after.

The referee can easily draw a map of a section of World Computer cells by sketching out a collection of circles, each of which touches at least one other circle. (The numbered markers in the *XXVc™* game box can also be used for this purpose.) Movement between cells is possible wherever two circles are touching.

Downloading

DPS can move between adjacent cells of a World Computer very rapidly. (In reality, the trip takes less than a millisecond, but we still use rounds to keep track of time for game purposes.) However, they cannot instantly transfer between planets due to the vast distances. Instead, they must disassemble and download into the communication network, reassemble themselves when they get to their destination, and then go about their business.

Disassembling and reassembling each require 1 minute (1 round) per level of the DP. The time required for downloading is identical with the time it takes to send a normal radio message from one planet to another.

Scientists

Given enough time and enough money, anything is possible.

—The scientist's credo

Thanks to centuries of warfare and interplanetary conflict, the processes of independent scientific research and invention have regressed. Most scientists in the 25th Century are throwbacks to the earlier prototype of the solitary inventor. Working long hours, poring over ancient documents, modern scientists are as much reconstructors of old technology as they are creators of new.

Forget about clean, high-tech research labs; the scientist is a maverick, operating alone. Government grants? Governments only want weapons; they don't care about pure science! Anyway, governments are always trying to suppress or classify information to maintain their petty strategic advantages. Corporate sponsors? What do those simple-minded pencil pushers know about science? Besides, RAM has its own pet research teams . . . and its own not-so-subtle ways of discouraging independent operators. Bah!

In the style of old-style inventors such as Edison and Ford, there are many rivalries between scientists, battling over patents, manufacturing rights, and scientific recognition. While some scientists work to bring the world new inventions and discoveries to improve mankind's lot, many others set out to create a big moneymaking invention so that they can gain wealth and power. Still others use their inventions to directly carve out their own personal kingdoms.

Scientists—the good, the bad, and the in-between—constitute a major group of non-player characters in the XXVc™ game universe. They have at least an indirect impact on the lives of all player characters, since every gennie and every significant invention in the solar system was created by members of their profession. They have skills and abilities that no player character can ever possess.

The remainder of this chapter describes the scientist in game terms, enabling the referee to design scientist NPCs and use them in adventures.

Ability Score Requirements: Int 16, Wis 12

Eligible Races: All humans, Tinker, Lowlander, Delph

Dice for Hit Points: 1d4 per level through 9th, +1 point per level at 10th and higher

A scientist has the same THAC0 numbers and advances in levels at the same rate as a medic. As with

Digital Personalities (see the preceding chapter), it is not necessary for a scientist NPC to begin at 1st level and advance through the ranks; the referee is free to create a medium- or high-level scientist, and can advance that character in level at any time he deems appropriate.

Special Abilities

The scientist is the only character who can possess the special skills of Gadgeteering (a career skill) and Bioengineering (a general skill, for scientists who choose to follow this discipline).

The scientist is the only character who has the ability to invent new technological devices. Invention is not a skill per se, but a special ability that has its own set of rules and procedures.

Scientist Skills

Every scientist has five career skills in common: Gadgeteering (explained below), General Knowledge, Library Search, Memorize, and Notice.

His other three must be chosen from the following list: Astronomy, Biology, Botany, Chemistry, Geology, History, Mathematics, Metallurgy, and Physics. These three skills represent the scientist's special areas of study and are used to make inventions or discoveries.

For general skills, the scientist has all of the choices available to player characters, plus one skill that only he can learn, which is . . .

Bioengineering

This skill, related to Intelligence, is used to create new plants, animals, or humanoid gennies. The prerequisite for acquiring points in this skill for using it on humans or other animals is Biology 20; for using it on plants, the prerequisite is Botany 15. (Some of the information on how this skill is used is contained in *The World Book*, in the section toward the end that is meant to be read only by the referee. The following details are a supplement to that section.)

Bioengineering may only be performed upon an organism before birth; a scientist could, for example, bioengineer a human to be born with greater strength, but could not make the alteration after he was born. Specific applications of the Bioengineering skill, and the difficulty levels associated with achieving these feats, are as follows:

Alter Human (Difficult): This process allows the bioengineer to alter an unborn human's ability scores. Scores may be altered within a range of +2 to -2. For every point of positive change, there must be an equal amount of negative change; for

example, a +2 increase in Strength would require a -2 decrease in one other attribute, or a -1 in each of two other attributes. It takes 1d8+6 months to grow the altered embryo to adult-level maturity—and at that point, the scientist attempts the Skill Check to determine if the altered creation will survive. Special prerequisite: Biology 50.

Create Gennie (Difficult): This process is described in *The World Book*.

Create Animal/Plant (Difficult): The scientist (or the individual commissioning the scientist's work) determines the type of animal or plant to be created. The referee then assigns a difficulty level based on the following guidelines:

Modify an existing life form (Average): This includes faster, stronger or smarter designs of existing life forms.

Combine traits from two or more life forms (Difficult): This covers combinations such as photosynthesizing animals, walking plants, fur-bearing fish, and so forth.

Create a totally new life form (Impossible): This allows new designs with no current analog in the XXVc™ game universe.

Gadgeteering

A special career skill available only to scientists, this is an advanced form of the Jury Rig skill. Instead of merely enabling him to make a temporary repair, however, the Gadgeteering skill allows the scientist to create an entirely new use for or modification of an existing device or principle. For example, lasers are common in the 25th Century. However, a scientist might be able to use his Gadgeteering skill to improve the power of an existing laser, combine a laser with another device, or modify the laser to generate a beam invisible to the human eye.

Gadgeteering can:

—Combine functions of two or more existing devices. (Each combination of two functions requires a separate Skill Check.)

—Make one or more modifications to an existing device. (Each modification requires a separate Skill Check.)

—Increase the power or range of a device.

—Decrease the size of a device or weapon without reducing its effectiveness.

An attempt at Gadgeteering normally calls for an Average Skill Check. However, this check can be modified by circumstances:

If the gadget being worked on has more than one function, the Skill Check becomes Difficult for each attempt to modify a function or incorporate a new one.

If the scientist does not have all of the proper tools or equipment to work with, the Skill Check becomes Difficult or Impossible (depending on the referee's judgment of the circumstances). And, obviously, whenever a scientist is being forced to make a Gadgeteering attempt out in the wilderness with no equipment, the task really *is* impossible—no chance of success whatsoever.

If the gadget is a simple modification of an existing device (a radio that gets better reception, or a laser pistol with slightly longer maximum range), the check may become Easy instead of Average.

If the gadget is a major modification of an existing device (a personal radio into a device capable of ship-to-ship communication), the check becomes Difficult or Impossible.

Gadget Construction Times: Gadgets are spur-of-the-moment creations, unlike inventions (see below), which require major research. A gadget can be created within a certain period of time, based on how tough the task is (and if the Skill Check succeeds):

Easy	1d4 hours
Average	1d10 hours
Difficult	1d3 days
Impossible	1d4 + 4 days

Costs: In general, constructing a gadget is pretty inexpensive; usually the cost of the basic device to be modified, plus 10% for spare parts. (This does not include whatever fee the scientist charges for his services.)

Inventions

First and foremost, scientists are creators. First and foremost, what most of them create are *inventions*—a term that, in the XXVc™ game, covers a wide range of accomplishments.

Unlike gadgets, inventions involve the creation of new or extremely modified technology. For example, to modify a laser for greater range or power is gadgeteering, but to create a totally new kind of coherent energy beam is invention.

Also, and equally important, inventions need not be devices; an invention can be the act of discovering a new astronomical body, or deducing a mathematical theory.

The system for determining what a scientist can invent, and what the expense of that effort is, involves the consideration of three elements:

1) **Research Points:** Examine the list of descriptions and Research Point costs given below. From the first part of the list ("Basic Invention/Discovery"), identify the particular skill that relates

to the invention the scientist is trying to develop. (If a scientist has no points in the indicated skill, he will automatically fail at creating the invention.) Then, going all the way through the list, note all of the Research Point costs that apply to the invention in question, and then add those numbers together. Subtract this number from the scientist's overall rating in the skill that relates to the invention. The result indicates the chance (on a percentage roll, as for a normal Skill Check) that the scientist is able to succeed at the invention. But before you make the percentage roll, take into account the guidelines in the next two categories.

2) Cost: Any invention has a price tag equal to the Research Point Cost multiplied by 10,000 credits. If the scientist does not have this much money at his disposal (and the vast majority of them won't), then the invention must be financed by an outside source—and the money must be paid before the client discovers whether the scientist has succeeded. In general, half of the cost covers supplies and equipment the other half covers the scientist's time and effort—both of which are the same regardless of whether the invention attempt succeeds or fails.

3) Time: No invention comes into existence overnight, or anywhere close to that. The client (or the scientist himself, if he is financing his own activity) must wait for a number of days equal to the invention's Research Points. At that point, the research is finished—assuming all of the cost has been paid—and everyone concerned can find out whether the invention attempt succeeded. If the scientist hasn't received all of the money he needs by the time the research period could have ended, then his research is stalled and can only proceed at the rate of 1 day for every 10,000cr that he receives against the unpaid balance.

Research Point costs are as follows. In the first section of the list, the relevant skill is given in parentheses.

Basic Invention/Discovery	Point Value
Super healing ray (Physics)	20
Super healing drug (Chemistry)	20
Super growth ray (Physics)	15
Super growth drug (Chemistry)	15
Mind control ray (Physics)	30
Mind control drug (Chemistry)	30
New explosive (Chemistry)	10
New energy ray (Physics)	20
Improved energy ray (Physics)	10
New communication device (Physics)	10
New energy field (Physics)	30
New power source (Physics)	20

New type of propulsion (Chemistry or Physics, depending on specifics)	30
New metal (Metallurgy)	20
New plastic (Chemistry)	10
New chemical (Chemistry)	20
New mathematical formula (Mathematics)	20
Discover new natural chemical compound (Geology or Chemistry)	40
Discover new astronomical body (Astronomy)	10
Discover lost city/wreck/object (History)	25

Size (for devices)

Invention is pocket-sized	20
Invention is portable	10
Invention requires some form of vehicle to move it	5
Invention cannot be moved	0

Range/Effect (for devices)

Several feet or less	0
Hundreds of feet	5
Hundreds of yards	10
Hundreds of miles	20
Thousands of miles	30
Millions of miles	50

Power/Damage (for devices)

1-20 hit points	5
21-100 hit points	10
101 or more hit points	50

Problems

Invention requires special equipment or materials	20
Scientist lacks proper lab, research site, or tools	25
Scientist being forced to do work	50

When all is said and—especially—done, the percentage roll (against skill points plus attribute bonus, minus Research Point cost) determines whether the invention attempt succeeds. Note that, unlike other kinds of Skill Checks, automatic success is not possible—a roll of 01-05 has no special meaning. However, a result of 96-00 does still indicate automatic failure; even a scientist with a phenomenally high skill rating is not assured of success when he's trying to do something that has never been done before. Even in the 25th Century, nobody's perfect.

And that seems like a good place to wrap everything up. Have fun!

Name of Ship:

Type: _____

Armor Class: _____

Attributes

Tonnage: _____ feet
Length: _____ feet
Width: _____ feet
Cargo: _____ tons

Weapons

Hit Points:

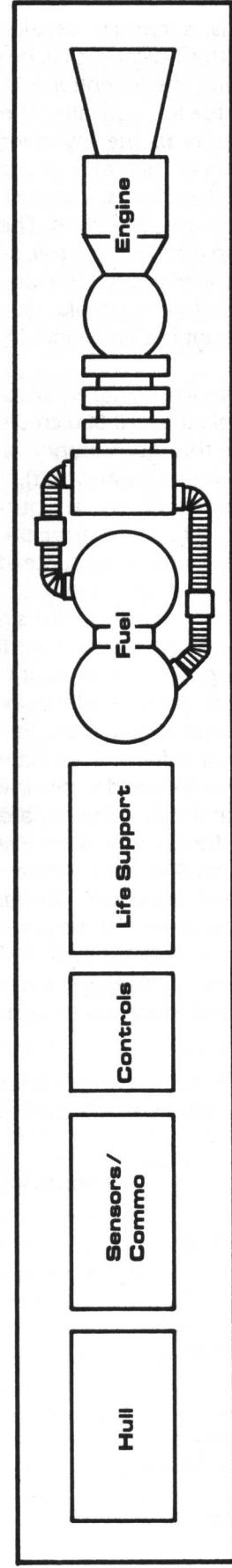
Hull (Tonnage \times 4)
Sensors/Commo (Tonnage \times 1)
Controls (Tonnage \times 1)
Life Support (Tonnage \times 2)
Fuel (Tonnage \times 3)
Engine (Tonnage \times 3)

Crew: _____

Speed: _____

Reaction Bonus: _____

AC Defense Bonus: _____





Gennie Profile Sheet

Name: _____

Place of origin: _____

Human-based (Y/N): _____

Physical Size: _____

Str	Dex	Con
-----	-----	-----

External Covering: _____

Int	Wis	Cha
-----	-----	-----

Eyes: _____

Tech	AC	THAC0
------	----	-------

Ears: _____

--	--	--

Mouth: _____

--	--	--

Nose: _____

--	--	--

Genotype: _____

Hit Dice (no. & type): _____

Full _____ Current _____

Cultural: _____

Hit points _____

Advantages

Disadvantages

Weapons

(or Attacks) Damage Weight

Other Equipment

Weight

Saving Throws

	Basic	Modifier	Roll Needed
Explosion/Plasma	14	_____	_____
Electrical Shock	13	_____	_____
Paralysis/Stun/Fall	15	_____	_____
Toxic Atmosphere/Gas/Poison	14	_____	_____
Suffocation	16	_____	_____
Radiation	13	_____	_____
Extremes of Heat	13	_____	_____
Extremes of Cold	13	_____	_____

For "monster" types:

Climate/Terrain: _____

Frequency: _____

Organization: _____

Activity Cycle: _____

Diet: _____

Intelligence: _____

No. Appearing: _____

Movement: _____



Character Record Sheet

Name: _____ Race: _____ Career: _____

Height: _____ Weight: _____ Birthplace: _____ Age: _____ Sex: _____

Str	Hit	Damage	Weight	Lift	Feat	Level	Current XP	THAC0 Number
Dex	Reaction	Missile	Defense		Tech			
Con	HP Bonus	Shock	Int	Wis	Cha		Full	Current

Hit points _____

Armor worn _____

Normal	Melee	Ranged
Combat	Combat	Combat

AC _____

Weapons Damage Weight

Other Equipment Weight

Career Skills Rating General Skills Rating

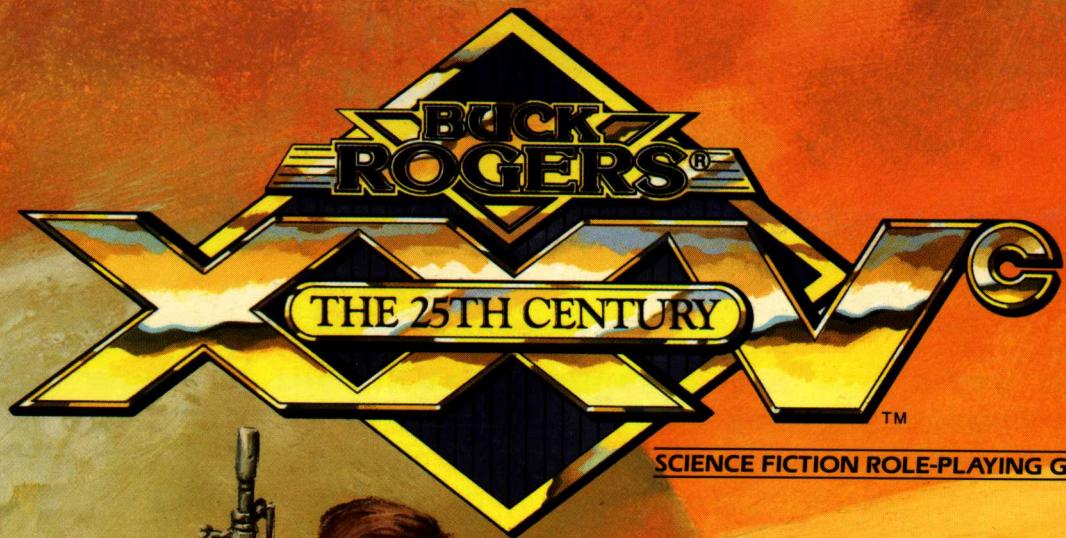
Notes (personality, special abilities, etc.)



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SCIENCE FICTION ROLE-PLAYING GAME



The World Book

The World Book

The world of the XXVc™ game spans a huge area of space, covering hundreds of millions of miles from edge to

edge. It is a vast arena of political intrigue, warring factions, secret ambitions and dangerous alliances.

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Cover painting by Jerry Bingham

*Interior Illustrations by Continuity Studios,
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The Solar System

Mercury: Home to an underground civilization of miners, its surface is broken by huge solar collectors, massive mobile cities, and gaping strip mines, while far overhead, the mighty orbital palaces of the energy-rich Sun Kings spin in silent majesty.

Venus: A partially terraformed hell-world, where only the highest peaks can support human life. As the Uplanders build their great ceramic towers atop those peaks, the nomads of the vast, balloonlike Aerostates cruise the acidic skies. And far below, in the steaming swamps of the lowlands, reptilian humanoids struggle to make the world in their image.

Earth: A twisted wreckage despoiled by interplanetary looters, Earth and its ruins are a testament to a declining civilization. Its people are divided and trapped in urban sprawls and mutant-infested reservations, while a few scattered arcology states hold fast to the last remnants of humanity.

Luna: An iron-willed confederation of isolationists, the highly advanced Lunarians are the bankers of the solar system—"peaceful" merchants more than willing to knock any invading ship out of the skies with their mighty mass drivers.

Mars: A terraformed paradise, reborn through the most sophisticated world-building technology of all time. Yet, a world with its dark side—the ruthless Martian corporate state of RAM, attempting to spread its evil tentacles throughout the solar system. Terror and force are its weapons, and the absolute domination of mankind is its ultimate goal.

The Asteroid Belt: A scattered anarchy of tumbling planetoids and rough rock miners, where every sentient has the right to vote, and the majority rules among half a thousand miniature worlds.

Jupiter and Its Moons: The site of some of mankind's most radical genetic experiments, with mutated flying men living in the shrouded depths of Jupiter's atmosphere. And far above the mysterious gas giant, a collection of satellites as varied as they are numerous. To name just a few: Io, powerhouse to the Outer Worlds; Europa, home to a gene-spliced race of warlike humanoids; and Ganymede, where aquatic men build great cities beneath a perpetually iced-over sea.

The Saturn System: The rings around this unique planet are home to a bizarre race of cybergenetic man-machines, who live their entire lives within the ultimate in self-contained spacesuits. And in the higher orbits of Saturn's moons: the totalitarian state of Mimas; Calypso, the rental-prison world; and Titan, the gem in the Saturnian crown, where the massed fleets of the Inner Worlds battle for the right to terraform as they see fit.

The State of the World

Spanning the vast distances of interplanetary space, the people of the 25th Century are masters of advanced fusion technology and spaceship design. Although limited to sublight speeds, their powerful space fighters, cruisers and battlers are amazing vehicles that use nuclear engines and high-tech weapons to battle for the frontiers of space.

For more than three hundred years, giant rocket ships have been plying interplanetary routes, making a trip to Mars an everyday event. Shuttlecraft carry passengers from planetside into suborbital space, where gigantic orbital colonies and asteroid stations abound.

Computers have advanced far beyond all expectations. Personalities can be downloaded into machines, allowing people to live in hologrammatic immortality. Even sentient computer personas are fairly common, mixing into the society of the 25th Century as equals.

In the far future of the 25th Century, genetic engineers and corporate warlords manipulate the codes of life, creating and shaping man in a new image: *Homo solaris*—the humans of the solar system.

What engineering was to the 20th Century, genetics is to the 25th. Cloning, regeneration, bionics—even bioengineered humans and other life forms are reality. But while much of this new science is a boon to humanity, a few powerful men scheme to create armies of mutant warriors and mindless slaves.

Bioengineered organisms have made it possible for humans to colonize the solar system. Many humans in the 25th Century have had some minor genetic engineering in their background. The ruling families of the solar system often use gene manipulation to engineer their children for increased intelligence, attractiveness and to eliminate genetic illness. Gene engineering is not accepted everywhere. Earth humans, having lived through various genetic accidents due to war and experimentation,

have a particular hatred of bioengineering and oppose it violently.

The most incredible feats of gene engineering are gennies—humans who have been so radically altered as to almost be aliens. There are gennies for almost every type of environment, from the lizardlike Lowlanders of Venus to the bat-winged Stormriders of Jupiter. And of course, RAM has its own legions of bioengineered combat troopers to spread terror and oppression throughout human space.

The 25th Century is an armed society. Every citizen is licensed to carry some type of personal defense weapon. It's a time when the fastest gun rules the spaceways.

The weapons of the 25th Century are products of a spacefaring age. Capacitor lasers use banks of storage capacitors for an electrical charge of thousands of volts—enough to create a brief, intense bolt of laser energy. The rocket pistol fires a self-propelled bullet—a miniature surface-to-surface missile. The mono knife, only one molecule thick along its edge, is capable of cutting through anything. Smart clothes incorporate internal circuitry and microcomputers for climate control, communications and defense.

Massively powerful weapons threaten the peace (or help to keep it, depending on your point of view and frame of mind): One shot from a ship's kinetic cannon can blow apart an enemy vessel, and one boulder flung by a large mass driver can level a small city. But in the ruined sprawls of Earth, where it's one man against another, often the best weapon is still a knife and the skill to use it.

The year is 2456. Across the black expanse of interplanetary space beckons a new frontier. All it takes to answer the call is a fast ship, a weapon slung low on your hip, and the nerve to face the unknown. The worlds of humanity—in all their variety, splendor, and squalor—are waiting for you, here, in the 25th Century.

A Chronology: From Then to Now

1999–2050

In late 1999, the long dormant Cold War between the United States and the Soviet Communist bloc flared up in one last gasp of aggression. Prompted by a small group of aging hard-liners, the Soviets built and launched a powerful space-

offense system, known as Masterlink, that directly threatened United States security. Hoping to avoid a serious confrontation, the U.S. did not send its military might against the Soviet Union directly—but the orbiting war-station could not be allowed to remain in the sky.

The U.S. Air Force put a daring plan into operation: A single experimental space plane was launched to knock out the Soviet satellite. Its pilot, Lt. Col. Anthony "Buck" Rogers, successfully ran the gauntlet of all the Soviets' first-line defenses and destroyed Masterlink, but (it was assumed) at the cost of his own life.

Their backs against the wall, the Soviet hard-liners struck back by launching nuclear missiles from some of the sites that were commanded by officers sympathetic to their cause. Of course, the United States was ready for such an eventuality, and since U.S. intelligence knew that the hard-liners were a small minority within the Soviet power structure, the retaliation was mostly defensive in nature. In the Last Gasp War, as the conflict became popularly known, only a few nuclear warheads actually made it to their targets, and no major centers of government or commerce were hit. But enough bombs got through to convince everyone of the utter folly of using nuclear weapons to settle their differences. For the first time in history, the leaders of Earth adopted a true planetary perspective—a fitting, and necessary, prelude to what was to come.

The countries of the world settled down to a long-awaited era of mutual cooperation. There was no denying the basic nature of humankind, however, and in the arena of world affairs there arose three major power groups: the Russo-American Mercantile Combine, the Euro-Bloc faction, and the Indo-Asian Consortium.

By 2050, these superpowers had established the foundation of a world government of sorts (supplanting the outdated United Nations organization), and had given themselves the mission of finding new places for mankind to occupy and exploit. Thanks to the development of nuclear fusion propulsion systems for spacecraft, manned missions were landing on Mars at the rate of dozens per year; orbital missions to Venus were almost as frequent; and rockets going to and from Luna were literally an everyday occurrence. Man now possessed the technology to travel to other worlds in the solar system, and was rapidly developing the means to make those places habitable—not a decade too soon, as it turned out, because Earth was in bad shape and getting worse all the time.

Radioactivity wasn't the problem: The warheads

that exploded during the Last Gasp War were not particularly "dirty," so that within decades, radiation levels in the blasted areas had dropped to practically nothing. But by the middle of the 21st Century, Earth was a polluted and depleted world. The planet was no longer capable of supporting its human population, which by this time exceeded 12 billion.

It was time to move.

2051-2100

During the last half of the 21st Century, the System States Alliance was formed from representatives of the "fringe" countries of the world as well as the three big power blocs. The organization's principal purpose was to ensure the continued survival (in other words, prevent the collapse) of planet Earth. As the first step toward this goal, the Alliance developed and implemented a plan for organized, efficient colonization of the solar system. Charters were awarded to each of the three power groups. The Russo-American Mercantile Combine, having the most clout, grabbed the rights to Mars, which it saw as the most lucrative piece of nearby property. The Euro-Bloc group took Luna, and the Indo-Asians got Venus. The System States Alliance kept a heavy hand on all of the colonials, extracting heavy taxes in raw materials to keep its polluted Earth running.

2101-2300

With more money and technological resources than the other colonizing groups and the best set of physical conditions to start with, RAM (as the Russo-American Mercantile group was now known) rapidly made Mars habitable. In the 22nd Century, genetics took a great leap forward when scientists discovered how to decipher the code of the DNA molecule and recombine parts of it from different species to create specially tailored life forms. The techniques of terraforming rode on the coattails of this advancement—organisms specifically designed to help make Mars more Earthlike were brought to the Red Planet and introduced into its biosphere. Brute force played a part, too, as gigantic "icestroids" were hauled in from the Asteroid Belt and rained down onto the south polar region of the planet, releasing heat and water vapor. By the mid 2200s, Mars was livable in certain select areas, such as the Coprates Chasm.

The Europeans took an entirely different approach on Luna, where no amount of terraforming could ever change the basic nature of a world that is

biologically dead. Civilization on Earth's satellite grew up piecemeal as a collection of domed craters, many of them interconnected by underground passageways. As men had known ever since the first lunar probes of the 20th Century took their readings, the moon is an uncaring and unforgiving environment. Lunarians, as a group, took on the personality of the place where they lived—asking for no help and giving none.

In contrast, the environment of Venus is down-right hostile. The planet is an astrophysical paradox—similar to Earth in many significant ways but entirely different in many, many others. (What a difference a few million miles from the sun can make. . . .) Not until the mid 2200s was the first domed colony established on the surface; up to that point, the Venusian colonists had lived in floating dirigible-cities balanced on the pressure flows of the planet's atmosphere.

In 2275 RAM, groaning under the yoke of Earth's oppressive government, rebelled. After entering into a nonaggression pact with Venus (which both sides honored for the duration of the conflict), a Martian war fleet systematically decimated the centers of System States Alliance power around the planet, as well as much of the rest of Earth's highly developed areas. Over the next ten years, deprived of the constant flow of resources from outside that it needed, Earth collapsed into barbarism. Billions died (ironically, relieving the severe overpopulation problem), and the planet became a shattered wasteland except for a few pockets of isolated city-states. These independent arcologies became self-sufficient, recycling entities, and have survived through the intervening years relatively intact. A few thousand desperate refugees fled the dying Earth and escaped deep into space.

By the end of the Ten Year War, Mars controlled Earth. Throughout the war, Luna remained neutral. In 2285 the Martians, fearing competition from the Venusians and no longer feeling bound by the non-aggression pact they had originally proposed, sabotaged the Venus orbital elevator effort, setting the colonization effort on that planet back drastically.

2301-2455

While tightening its grip on Earth and trying to keep spreading its influence through the rest of the inner solar system, RAM continued to terraform Mars. In 2310, refugees from Earth and dissidents from Mars (who objected to RAM's totalitarian regime) escaped and began a crash program to colonize Mercury. Working from asteroids placed into

orbit around the planet and from surface-based movable platforms known as track cities, they set up a going concern in solar power and mining. Eventually, the most powerful colonists established the Sun King monarchy that rules Mercury today.

By 2330 Venus had established cities in three places on the Ishtar Plateau. Lacking the technological resources of RAM, the newly established Ishtar Confederation turned to cheaper, long-term bioterraforming, making them the masters of these advanced techniques.

By the late 2330s and the 2340s refugees from Earth, Mercury, and Mars had fled en masse to the asteroids and to Jupiter. Using a combination of Venusian biotechnology and Martian knowhow, these hardy colonists built hundreds of mini-worlds throughout the trans-Jovian and Saturnian systems. It was here, among this environment known as the Outer Worlds, that the first true "space pirates" evolved. The Black Brotherhood, as they were called, began by raiding the nearby satellites and asteroids for ships, supplies, and energy; soon, their power and influence were felt all over the solar system.

2456: The Present

RAM has terraformed nearly half of the surface area of Mars, leaving only a few vast deserts between the planet's shallow seas and deep valleys. There's enough room for expansion to last for the foreseeable future; so, seeking new challenges, the Martians have turned anew to Earth, which they view as a vast garbage dump to be picked over. After establishing footholds in the ruins of the old cities, their scavengers now swarm over the landscape, while their Terrine clone-warriors eliminate any troublesome "natives" that get in the way. Since about ninety-five percent of Earth's population has regressed culturally and technologically to the level of the 20th Century, or worse, there isn't much opposition to Martian policy.

RAM has justified its encroachment on Earth by establishing the Solar Alliance Protectorate, an organization ostensibly created to shelter and nurture the ravaged planet. However, while RAM's official policy is, "These simple people must be protected from you ravagers of the solar system (read Venus, Mercury and Luna)," its true attitude is, "We beat them fair and square during the Ten Year War, so we can do anything we want to them."

But Earth has begun to recover. Although much of it is in ruins or covered by lifeless deserts, the areas around the independent arcologies are being

carefully reforested and seeded with life forms grown from the arcologies' huge genetics banks. The arcologies object to RAM's plundering, but have had no way to stop it. Only recently have some of them banded together to create the New Earth Organization (NEO), which harries RAM whenever it can.

NEO has recently recovered the still-living body of an ancient Earth fighter pilot named Buck Rogers. Long revered as the last martyr of old Earth's foolish international struggles, Rogers was made into a media hero by the System States Alliance when that organization was trying to build popular support for a unified effort toward interplanetary expansion. The pilot's reputation grew and spread over the centuries following his confrontation with Masterlink, to the point where Buck Rogers now has an almost mythical status among the people of the solar system. And—in typical flamboyant and unorthodox Buck Rogers style—the myth is alive!

With his tactical skills and daring, Buck Rogers is the asset the foundering NEO badly needed. But RAM is gathering its forces to crush the independent arcologies for once and for all, and even a hero from the past can only stop so many ships.

War in the 25th Century is primarily fought by armies of genetically engineered warriors—faceless legions who are bred for combat. Each of the major worlds of the solar system has developed its own battle fleets, space defenses, and cadres of troops. As it currently stands, RAM has the largest army, Venus the most sophisticated, and Luna the best equipped. Mercury has only a small military force of gennies, but an alliance with Venus keeps Mars at bay.

The exception is Earth, which doesn't have the equipment or the knowledge to create hordes of nonhuman or semihuman soldiers. And even if it did, true humans have a strong aversion to bioengineering that would make such activity highly frowned upon, to say the least. The people of Earth, and the members of NEO in particular, remain steadfast in their belief that ultimate victory in the battle for control of the solar system will be achieved by *real* humans—Terrans—who are and will always remain the superior species.

Naturally, the other civilizations of the solar system—even those that are not allied with Mars and RAM—scorn at the Terran point of view. As tensions mount and tempers flare, the solar system moves toward another war—one that, if it occurs, will involve all the colonized worlds of the solar system . . . and all of the vast space in between.

Welcome to the 25th Century.

Mercury

1st Planet of Sol System

Orbital radius: 36,000,000 mi. (.39 AU)

Diameter: 3,024 mi.

Period of revolution: 88 days

Period of rotation: 59 days

Gravity: 33% Earth normal

Escape velocity: 9,500 mph

Surface temperature extremes: -280°F to +800°F

Atmosphere: None

Status: Settled; highly developed culture and orbital settlements

Population: 20,000,000

Government: Economic constitutional monarchy

Ports: Two Class A, at Hielo Orbital Station and Caloris

Other prominent locations (spacedocks): Tolstoi, Beethoven, Vivaldi, Raphael, Copley, Michelangelo, Mozart

Major imports: Foodstuffs, drugs, and water

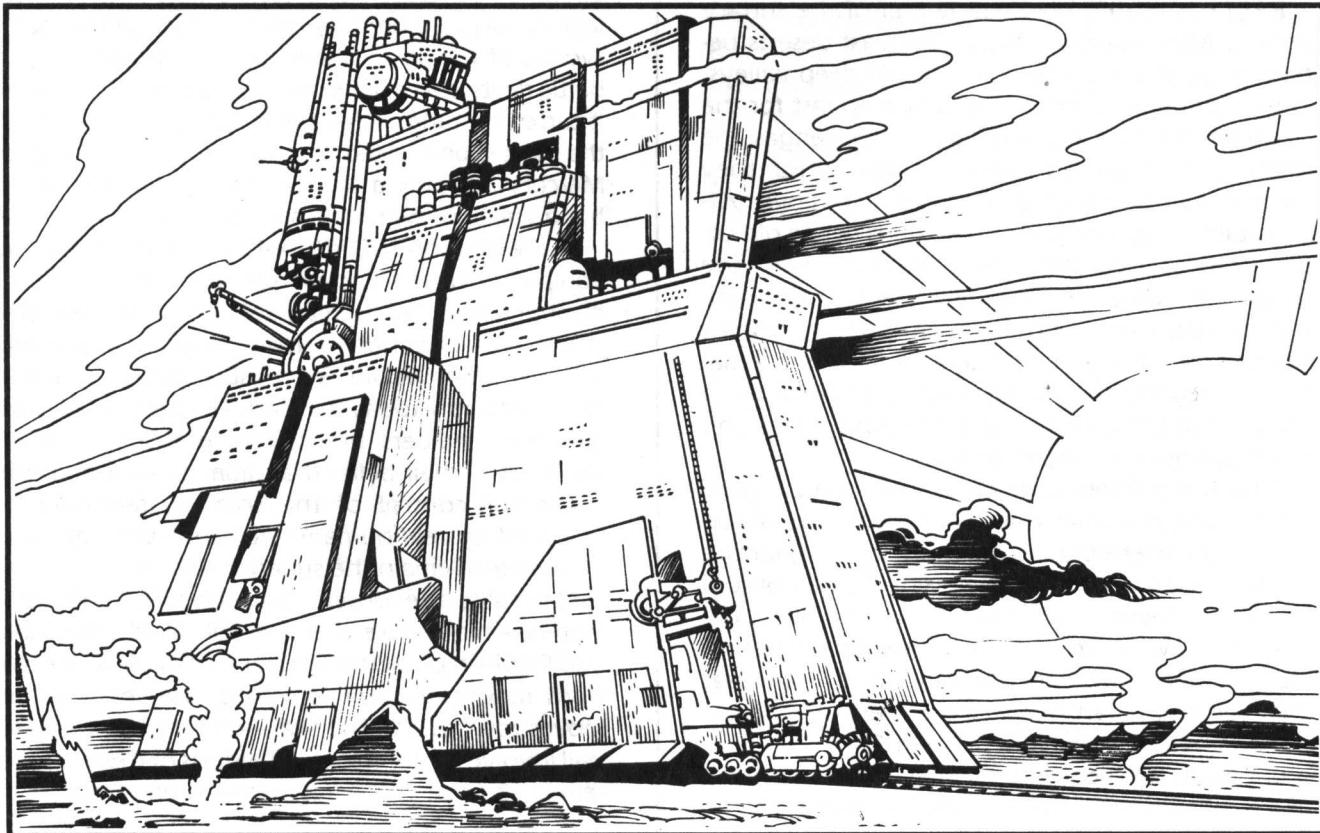
Major exports: Metals, raw ores, gold, silver, fissionables, and solar power

Like Luna, Mercury is a barren, airless crater-world. However, early in the history of colonization, the Mercurians realized that an atmosphere project would only trap the blazing rays of the nearby sun, cooking the planet worse than Venus. At least in the current situation, half of the planet is periodically cooled by the absolute chill of space as Mercury rotates on its axis; an atmosphere would only serve to distribute the sun's heat evenly, making the entire surface perilously hot all the time.

Although the Mercurian surface is pitted and cratered, with temperatures that are lethal at both extremes, the planet is still habitable if you're willing to live underground.

The majority of the planet's population lives sheltered from the intense solar radiation in huge warrens that crisscross beneath the surface. These warrens are primarily long corridors five to ten miles wide and hundreds of miles long, often laid out in a crisscross pattern like a gigantic grid. Buildings line the sides of these passageways, sometimes in multileveled tiers.

At intervals, usually at an intersection of two extremely large warrens, are enormous spacedocks with huge, sliding overhead doors, where ships as



A track city crawls its way across the scorching Mercurian landscape

large as heavy cruisers can be docked. Mercury's very low gravity allows such large ships to safely dock for refueling and refitting, making the planet an important way station for travelers negotiating a sunward crossing of the solar system. Hundreds of ships every year pass between Mercury and the sun en route to a destination on the other side of the solar system, and a good percentage of those vessels plan their journeys so that they can make a stop-over on Mercury—always careful to land at a space-dock that is on the side of the planet currently facing away from the sun.

Economy and Culture

The warren dwellers known as Miners are the largest segment of the Mercurian population. They wear spacesuitlike coveralls and heavy boots. Miners are rough and proud; they think they're tougher than Belters (the inhabitants of the Asteroid Belt, who also do a lot of mining). "Never saw a Belter who could stand Old Sol's oven," Miners are fond of saying. Even though they profess not to be affected by the oppressive heat of the planet (which can be felt, even deep underground), warren dwellers tend to be irritable and violent when the place they live in is facing the sun.

Another major power group in Mercurian society is the Musicians, who live both underground and off-planet. They operate businesses, run food-processing laboratories, and perform other non-physical tasks. The Musicians do not necessarily play music, although some of them do enjoy doing so; their name comes from the fact that many of Mercury's surface locations are named after old Earth composers (Beethoven, Vivaldi, and so forth), as well as artists, writers, and other intellectuals.

The surface of Mercury is uninhabited, except for the area along a sketchy, symmetrical network of huge, roadlike solar-collector arrays that were constructed during the early days of Mercurian settlement in the early 24th Century. Along these roadways move the track cities: huge, heavily insulated, tread-based mobile arcologies that cruise the Mercurian landscape, maintaining the surface-

mounted solar mirrors and scouting new mineral deposits for the warrens. Track cities, also constructed in the earliest days of colonization, were designed to be mobile so they could always stay on the cool side of Mercury as the planet rotates; if they had to stay in one place, the inhabitants would soon be killed—if not by the heat, then by exposure to a brutally intense dose of cosmic radiation. The track city dwellers are known as Desert Dancers, a gypsylike people who are fond of crafts, storytelling, and sharp knives.

Those areas of Mercury not covered with the solar-collector "roads" are being stripped of mineral wealth by roving ore-excavation machines (also run by Desert Dancers) that operate out of Caloris, the planet's only ground-based spaceport, and the spacedock sites. (Actually, Caloris is built entirely underground, as are all the other planetside locations. Only the rocket launch bays are open to the vacuum of space, and they only embark and disembark ships when they are facing away from the sun.)

However, as abundant as the planet's physical resources are (more than half of Mercury is composed of iron ore), the real bonanza for colonists is solar energy. Specially constructed satellites called Mariposas spread out their "wings"—immense solar collectors—to capture energy directly from the sun. The

power is transformed into microwave radiation, which is then beamed to other places throughout the solar system, allowing outposts in the Asteroid Belt and beyond to live on solar energy even though they're much too far from the sun to get the radiation straight from the source.

The Mariposas are mostly created from captured asteroids, plated with metal and covered with collectors. There are nearly five hundred individual Mariposas in orbit around Mercury, ranging in size from tiny moonlets, individually and independently owned, to planetoids dozens of miles in diameter, most of which are owned by the members of Mercury's reigning class, who call themselves the Sun Kings. At the top of the ruling class are the members of the Gavilan family, descendants of the people who sunk the most money into the original colonization project.

Planet data

Each of the following sections of *The World Book* describes a different planetary civilization, beginning with a list of data and general information. (You'll notice that we often use the word "planet" to refer to a satellite of a planet, as well as the actual planets themselves.) Some parts of each list are self-explanatory; as for the others . . .

Orbital radius is the distance from the object to the body (either the sun or a planet) that it revolves around. This distance is given in miles and, for the major planets,

(continued)

The Sun Kings own virtually all of the mineral- and energy-gathering machinery, and thereby are also the owners of the resources those machines collect. The Gavilans live opulently as ultimate monarchs of their planet, ruling from their palace inside the Hielo orbital colony. One of the main reasons the monarchy stays in power, instead of being overthrown, is that the government is not dictatorial. Decisions are made based on a democratic union of the Sun Kings and the other power factions in Mercurian society—the Miners, the Mariposa residents, the Desert Dancers, and the Musicians.

Like the members of the super-rich upper class of any historical old Earth civilization, the Sun Kings vary wildly in personal styles and (lack of) taste. Settled by a mixture of Middle Eastern, Martian, European, Central American and other refugees from the System States War, the Mariposas are a crazyquilt of cultural ostentation, from the Arabic palace replicas of the Minfar Mariposa to the baroque reproductions of the Gavilan family.

The medieval worldview has influenced the Gavilans more than most other Sun Kings. The ranks within Hielo's economic-based society are from titles of ancient nobility (Yeoman, Knight, Cavalier, Baron, Earl, Count, and King). While the Miners and the Mariposans favor functional clothes, and the Dancers and Musicians wear loose, colorful robes over their protective outfits, the fashions of Hielo are positively antique baroque—a mixture of finery such as high collars, embroidered bell sleeves, and pseudomilitary uniforms—all in vivid shades of yellow and gold. The Sun Kings favor the mono knife as a personal weapon; however, their knives incorporate various other tools, weapons and geegaws into their rather ornate design. The architecture of Hielo is full of embellishments, decorated with gold and silver filigree, and packed with copies of famous old Earth historical trappings, ancient artworks and antique furniture.

Politics and Government

Officially (as far as the rest of the solar system is concerned), there is a democratic government on

Mercury, but in fact, the people with the money are in charge. And that means the Gavilans and their Sun King brethren.

The Sun Kings control the reins of 55% of the power collected in the solar system, making them the richest force in all human space. However, they are hampered by the fact that Mercury must import nearly 80% of its food supplies. This means that RAM has always been an important part of the Mercurian equation.

Since shortly after the Mercury colonial effort got under way, the Sun Kings have generally gotten along well with RAM. (Even though many of the first colonists were "defectors" from Mars, RAM took a benevolent attitude toward them—it was better to have the malcontents go away than stay on Mars and try to undermine the establishment.) Troops from Mars have been called in to help quash the few minor rebellions that have occurred on the planet, and much of the Mercurians' space technology has been purchased from the Martians. But recently, the first signs of a falling-out between the two planets have begun to crop up, as evidenced by a Mercurian military buildup on and around the tiny planet. As the Dancers, Miners, and Musicians gain more confidence in their ability to influence the course of events, a new spirit of "Mercury for Mercurians" is growing, and that means that

also in Astronomical Units (AU), a system of measurement in which Earth's orbital radius is 1 AU. This enables you to tell at a glance (for instance) that Jupiter's distance from the sun is more than five times that of Earth's.

Period of revolution is how long it takes the planet to move around the body it is orbiting. (Time measurements—days, years, etc.—are in standard Earth quantities.)

Period of rotation is how long it takes the planet to spin around once on its axis.

Gravity is always compared to (continued)

RAM—and the minority among the Sun Kings who are puppets of Mars—may be on the way out.

In a casual but still threatening fashion, the Mercurians have pointed out—just in case anyone hadn't already realized it—that the Mariposas can easily be converted to a planet-busting weapon capable of sterilizing Mars. They have also strongly intimated that their fleets intend to control all the space within the immediate range of the sun. This is a dangerous proposition, as it would pass absolute domain over the critical sunward-passage route to the Mercurians.

A showdown is coming, no doubt, but meanwhile, the Mercurians are interested in doing anything that will indirectly weaken RAM while buying them time to build a larger fleet. This includes giving under-the-table aid to NEO in the form of money, ships and information.

Venus

2nd Planet of Sol System

Orbital radius: 67,270,000 mi. (.72 AU)

Diameter: 7,520 mi.

Period of revolution: 225 days

Period of rotation: 243 days

Gravity: 90% Earth normal

Escape velocity: 23,000 mph

Surface temperature: 300°F (lowlands), 100°F (mountaintops)

Atmosphere: Acidic, high pressure; protective suits required for humans below 5,000 feet

Status: Partially terraformed; settled by four principal population groups

Population: 90,000,000

Government: Theocracy; family-oriented clans

Ports: One Class A, at New Elysium; two Class B, at Tellus Regio and Hestia

Other prominent locations: Freya, Rupes, Rhea, Sappho, and Alpha Regio

Major imports: Technology, spacecraft, weapons, metals, alloys, and gems

Major exports: Drugs, bioengineered animals, exotic foods, and chemicals

Still a turbulent hothouse even after many decades of terraforming, the wastes of Venus have proven to be a stiff challenge for mankind's planet-shaping technology. Survival on the original Venusian surface, with temperatures of around 800 degrees Fahrenheit and atmospheric pressure at the surface 90 times higher than Earth's, was like standing in a sea of thick, swirling acid and carbon dioxide, hot enough to melt lead. The lowlands were an endless, rubble-strewn waste, bathed in a ruddy red gloom, while the highlands towered like great lifeless monoliths over a dead world.

Although the terraforming process has been going on for nearly three hundred years, Venus is still only marginally habitable. Its atmosphere has been depressurized and scrubbed to a point where the highest reaches of the surface are capable of supporting Earthlike life. Towering out of dense acidic mists, the continental mesas of Ishtar and Aphrodite are now covered in stands of dense Venusian coni-

fers, bioengineered to resist the high winds and acid storms. In the thick clouds above, biodesigned algae absorb the poisonous atmosphere and give off life-giving oxygen.

Several thousand feet below the continental mesas are the jungles of the lowlands. The vegetation of the lowlands is a truly alien combination of mineral and vegetable—massive yellow crystalline trees attract and ground the bolts of lightning that continually batter the jungles, while their heavy, blue, drooping coverings of lichen and moss absorb the acid rain and give off (once again) oxygen. The ground itself is covered with boulders, glowing pools of acid, and thick swamps of bioengineered, semi-metallic plants in wild, fluorescent colors.

Earth normal; thus, a 100-pound object on Earth would weigh only 33 pounds (one-third as much) in Mercury's gravity.

Escape velocity is the speed that a ship or some other projectile must reach to break free of the planet's gravity and get into space.

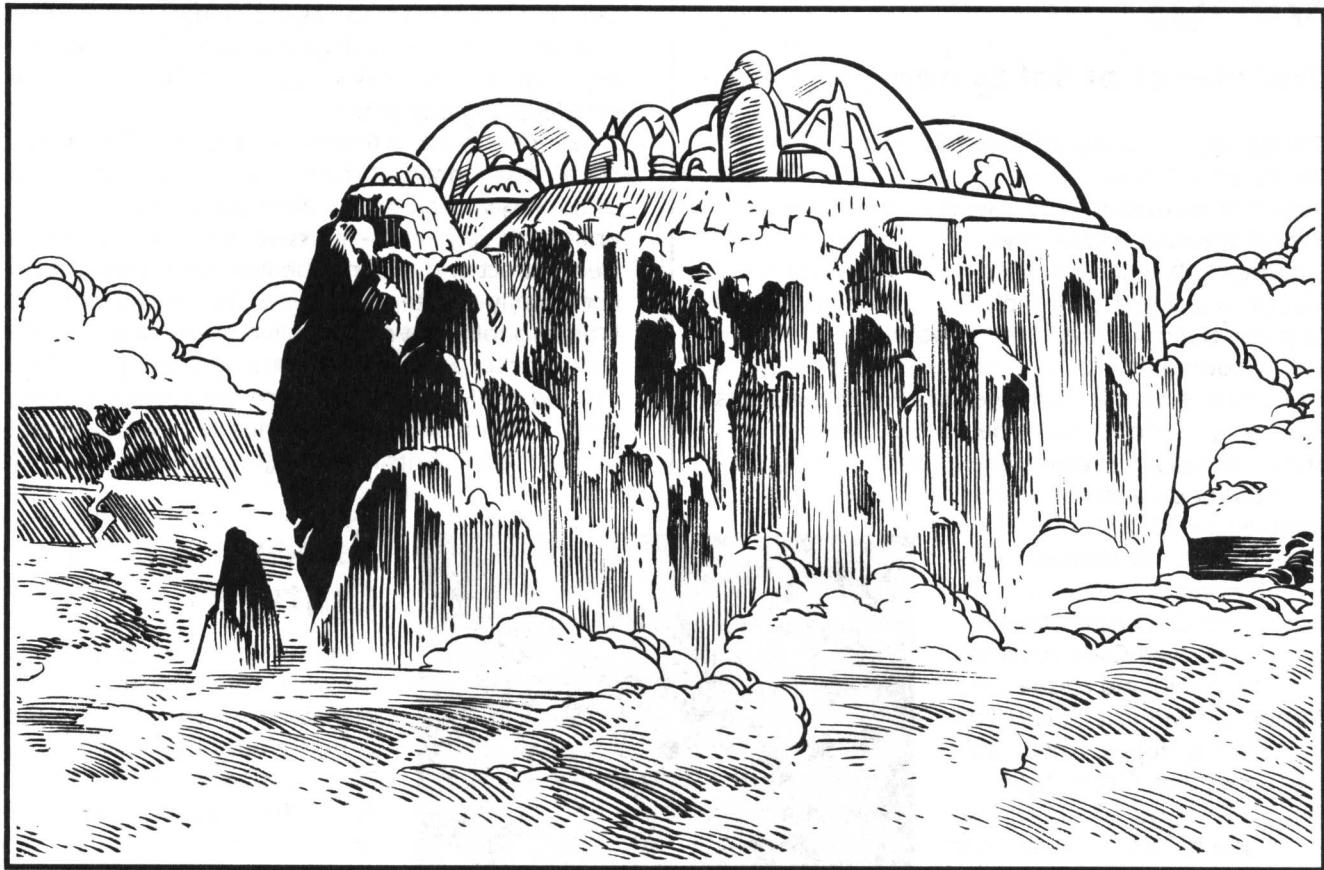
Finally . . . not every item in the full list of information is given for every planetary body. If a characteristic doesn't apply or isn't significant (such as gravity on very small moons, which is nonexistent), then the entry isn't used.

many of the characteristics of earlier Venusian building. Structures are made of stabilized, spun glass and ceramics, with curves and domes predominating. This style of architecture, marked by minarets, rounded towers, and onion-shaped domes, leaves no sharp edges or corners where acid rainfall can settle and collect. Coloration is rare on Venusian buildings, since the frequent (but now diluted) acid rains leach away all pigments, leaving everything a stark, silvery white. The billowing clouds at the foot of each mesa obscure the many mining digs and robo-factories below, giving each construction a "city in the clouds" effect.

These are the domains of the Uplanders, the aristocrats of Venus. A strong "original settler" mentality still pervades the Uplander culture, both on Ishtar and Aphrodite. Venusian clothing also reflects this rough, pioneer heritage. Voluminous

Economy and Culture

Venus—or, more accurately, the near-orbit area around the planet—was settled in the late 22nd Century by a combine of Southeast Asian and Indian colonists. The original orbital colonies huddled along its terminator (the dividing line between the dayside and the nightside) are still functional and occupied. The oldest surface-based civilizations are on the upper mountaintops of the Ishtar and Aphrodite plateaus. These settlements are still mostly domed, retaining



On a plateau above the poisonous lowlands rests a Venusian city

robes treated with acid-resistant chemicals are worn over baggy, radiation-suitlike garments (a holdover from the days of boiling nitric rains and 250-degree temperatures atop the plateaus). These old styles are still the best for the steamy, harsh atmosphere, and are often cooled with internal air-conditioning systems. The favored colors are light greens, grays, whites and silvers, giving the population a muted, almost esthetic look. Jewelry is cherished on Venus, because there are few gems native to the planet, but such adornment is rarely worn because the acid rain would quickly ruin it.

Venus is the site of a failed space elevator, which originally rose from a mountain peak located on the equator. Destroyed by RAM sabotage in 2285, its multi-mile length now sprawls over part of the towering mesa before falling to ruins in the mists below. The Aphrodite Orbital Platform is only one of many failures in the history of man's adventure on Venus, a world where civilization has been hampered constantly by savage elements and political betrayal.

New Elysium towers over Venus in more ways than one. The planet's largest city and only Class A spaceport is located atop Maxwell Montes, the

highest point on the planet, which reaches more than six miles above the surface on the polar continent of Ishtar. Mildly gene-modified to enable them to cope with the still-high atmospheric pressure, the Ishtarians are beginning to leave their domes and spread out through the habitable uplands around the mountain peak (they cannot journey into the lowlands). With its strong religious heritage, democratic ideals, and far-thinking leaders, the Ishtar Confederation (headquarters in New Elysium, outposts at Freya and Rupes) has become one of the most powerful beneficial forces in the solar system and is a counterbalance to the Martians.

The confederation is primarily theocratic in nature, dominated by the leaders of The Faith, a mixture of old Earth's Islamic, Bahai and Taoist beliefs. The people of the confederation are mostly vegetarians, although they hold no particular prohibition against violence or killing. Of the various groups of Venus, the Ishtar Confederation has the greatest access to spacecraft and the machineries of war.

The Aphrodite Families dominate the other continent, named Aphrodite, which is located on a stretch of terrain around the equator that runs

nearly halfway across the planet. The high ground is divided into twelve major family holdings and a number of other smaller farms. The leaders of this power group are primarily descended from the original corporate families of the old Earth Indo-Asian Consortium who organized and financed the first colonization efforts on Venus. The Aphrodite Families are dynastic in nature, and control the plateau through a complex web of intermarriages.

Among the planet-bound cultures of Venus, two other much smaller groups are notable. The Aerostaters are a culture of balloon dwellers, who drift along in the mild-pressure, breathable areas of the Venusian atmosphere. There are some 200 Aerostates, organized in a loose democracy. Their cities are huge clusters of interlinked spheres, balanced like bathscapes on the high-pressure regions below, and carried from place to place by the powerful winds of the upper atmosphere.

Much like the members of the upland civilizations, the Aerostaters are tight-knit, clannish and family-oriented. They are self-sufficient, trading in information and gas-mining rights. The gigantic, globular Aerostates are buoyant enough for hovercraft and small ships to land on and take off from, so the Aerostaters also serve as middlemen for the transfer of cargo and information between the planet surface and the orbital stations.

The other population group is the Lowlanders, heavily modified humans designed to withstand the intense atmospheric pressure and acidic terrain of the lowest spots on the surface. They look distinctly reptilian, with their scaly, acid-resistant hides, nictitating membranes over the eyes, and lack of ears. The Lowlanders live at the very bottom of the murky hellholes of Venus. Their huge, squat cities, constructed of durable ceramics, are as much mining sites as they are homes. The Lowlanders, now that they've been put in place in an environment for which they were specifically tailored, are actively resisting attempts to further modify Venus's surface—if the planet is made too Earthlike, they could all die (or, at best, they would become obsolete as a species and a culture).

In the eyes of the rest of the solar system, the Lowlanders are the most powerful of all the Venusians, because they control the critical drug trades in gravitol and lifextend, both extracted from the strange metallic grasses of the Lowland swamps. The Lowlanders still need to be on good terms with other Venusians (particularly the Aerostaters, who control the means of surface-to-sky transit) to get the raw materials for the drugs off-planet—but they know that they are the most important link in this

particular economic chain, and they intend for things to stay that way.

The Lowlanders are vitally interested in doing whatever they must to make sure the lowlands remain their exclusive territory. They are constantly looking for ways to both modify and improve their own abilities and to sabotage the ecological activities of the Uplanders as well.

Politics and Government

The only political group on Venus with enough money and enough clout to mount a real space fleet, the Ishtar Confederation controls the immediate region of Venus-space quite effectively, relying on a few titanically huge battlers, fast and heavily armed cruisers, and a type of fighter specially designed to outfly any other type of vessel inside Venus's atmosphere. In a head-to-head confrontation with the Ishtarians, RAM would probably lose the larger portion of its attacking fleet, not to mention an even greater proportion of its ground troop strength, which would be swallowed up in the acid seas and boiling mists of the Venusian lowlands.

Being the two biggest "gorillas" in the solar system, it's not surprising that RAM and the Ishtarians wage a very active cold war against each other. The Confederation has become active in the battle for control of Earth, subverting the activities of the Solar Alliance Protectorate and smuggling in weapons and supplies for NEO operatives. RAM supplies biotech chemicals and equipment and high-tech weapons to the Lowlanders, which maintains the balance of power in the ongoing struggle for control of Venus's surface and also keeps the Martians on the Lowlanders' good side where shipments of drugs are concerned.

Both RAM and the Ishtarians court the favor of the Aerostaters, the Aphroditians and the Mercurians. And they're both especially nice to the Lunarians, since a determined effort by Luna could easily break either RAM's quarantine of Earth or the Confederation's smuggling operation.

The fair-minded religious beliefs of the Ishtar Confederation make it heavily predisposed toward supporting NEO's liberation efforts, not only for political but also philosophical reasons. Thus, it is not likely that the Ishtarians will back out of their role in the power struggle. By continuing to use NEO as its agent, the Confederation is able to wage war "by proxy" against its RAM opposition while avoiding a direct confrontation that might rip apart the entire fabric of the solar system's civilization.

Earth

3rd Planet of Sol System

Orbital radius: 93,000,000 mi. (1.00 AU)

Diameter: 7,900 mi.

Period of revolution: 365 days

Period of rotation: 24 hours

Gravity: 100% Earth normal

Escape velocity: 25,000 mph

Surface temperature extremes: -130°F to +140°F

Atmosphere: Breathable; polluted, but recovering

Status: Home world of *Homo sapiens*; devastated and presently quarantined

Population: 3,000,000,000 (est.)

Government: Various forms; all currently under RAM control

Ports: Seven Class A, at Newyorg, Dallas, Canaveral, Paris, Moscorg, Buenos Aires, and Melbourne; nine Class B, at Los Angelorg, New London Org, Tomsk, Nairobi, Nanjing, Honshu, Manila, Denver, and Guyana; many Class C

Other prominent locations: Dozens of arcologies and orgs, too numerous to list

Major imports: Technology, refined metals, fissionables, and drugs

Major exports: Water, art objects, historical treasures, and (under duress) raw materials

If there's a dark side to the 25th Century, it's got to be on Earth. A series of wars combined with several other catastrophes has all but destroyed the once flourishing civilizations of mankind's home planet. Treated as an economic, political, and social backwater, Earth has long been the helpless prey of extraplanetary plunderers and invaders.

Earth in 2456 is fractured into a wide variety of power groups, corporate states, arcologies (self-sufficient cities), polluted barren areas, and urban/suburban reservations. The planet in general has been placed under the thumb of a branch of the "world government" known as the Solar Alliance (usually called simply the Alliance, or the SA). In actuality the Alliance is dominated by off-planet concerns, primarily RAM, who are intent on playing the planet's various small power groups against each other while the SA and RAM devastate the planet's human, mineral, and technological resources further. The eventual plan of the Alliance (specifically, RAM) is to complete the subjugation of Earth by turning it into a powerless "park planet" after the looting is complete.

The Alliance has divided Earth into divisions

called Regencies, each controlled by a single Alliance-appointed official. Every Regent is an absolute ruler of his or her domain, maintaining control by creative drug therapy, astute media manipulation (they control the airwaves), economic blackmail, and armed troops.

The people of Earth are so fragmented that no single "typical" group exists. The vast majority are pure humans (Terrans), either unable to afford or unwilling to undergo any costly genetic alterations. A few are mutants—legacies of a past pockmarked with nuclear conflict, biological warfare, and RAM's insidious genetic experimentations. Clothing runs the gamut from rags to smart uniforms; food is anything from raw vegetables and berries to pre-packaged microwaveable delicacies, depending on where and who you are. The only consistent feature among all Terrans is that, after nearly two hundred years of upheaval and oppression (since the start of the Ten Year War in 2275), everybody hates RAM. Unfortunately, the majority of the population is in no position to do anything about that.

Under the "protection" of the Regencies, most of the areas occupied by the ancient cities of Earth have become huge, decaying sprawls, filled with ruins, street gangs, dazed and drugged civilians and heavily armed RAM troops.

Only in the scattered independent arcologies is life reasonably good—there can be found adequate food, shelter, a lower crime rate and decent medical care. But most of the arcologies are also under the Alliance's oppressive thumb; in fact, they are much more strictly supervised than the sprawls are, simply because they have an impressive collection of resources that could be used against the Alliance and RAM if the arcologies were allowed to be the masters of their own destiny.

Not even RAM has enough resources to thoroughly control every arcology on Earth—of the hundreds of such communities on the planet, at present roughly one-fifth are not infested with RAM soldiers or bureaucrats, although their residents have to live with the constant threat that the enemy might consolidate its position somewhere else and free up enough troops to make an assault on a new target.

The arcologies were not attacked militarily during the Martian revolution and its aftermath; doing that would have worked against RAM's ultimate goal of control of their resources. Instead, they were subverted by a number of strategies ranging from indirect aggression ("Can we put an embassy here, or should we test one of our new bombs?") to bribery ("How much do you want for allowing us to garri-



A close-up view of the devastation in a once-great Earth city

son troops here? Ten million? No problem . . ."). Once the Alliance got a foothold, it was a fairly simple matter to spread its influence. At this point, its occupation and control is thorough enough that only two groups of determined opposition exist on the planet.

The Orgs

One resistance effort has its heart in the pseudo-cities known as orgs (short for "organized areas"). More civilized than a sprawl and much less affluent than an arcology, an org is a large, autonomous region that usually is named after the once-thriving city located on or near its current territory; for example, the three largest and most powerful orgs in North America are Chicagorg, Newyorg, and Los Angelorg.

The system of oppression adopted by the Alliance entails keeping a close eye on the well-to-do arcologies and at the same time making sure that the low-class denizens of the sprawls don't get a chance to organize or improve their lot in life. Between these social and economic extremes are the middle-class

orgs, fairly densely populated and modestly equipped but not having enough power on their own—or so the Alliance thinks—to do anything about changing Earth's eventual fate.

And the Alliance may be right. Collectively, the orgs have a lot going for them. The trouble is, they don't act collectively and (because of transportation and communication difficulties) probably couldn't if they wanted to. But there are enough rebels in each individual org for that community to be a potent force on a local basis—which, in turn, is part of the reason why the Alliance doesn't send a lot of troops and technology into these areas; if your enemy refuses to invade your turf, and you can't invade his, then you can't very well fight him. The Alliance remains confident that resistance among the population of the orgs will eventually disintegrate without support from the masses of the lower-class sprawls or the aid of upper-class technology from the arcologies. The orgs, although acting individually, each with its own private agenda, remain unanimously firm in their resolve that no one can be conquered who does not allow himself to be conquered.

Time, as it always does, will tell.

NEO

The second resistance group is the New Earth Organization, or NEO, an underground group—becoming less and less underground all the time—whose eventual goal is to end RAM's occupation of Earth. The various orgs all have the same intent, but where their effort is fractured by their physical remoteness from each other, NEO is not hampered by that difficulty. Operating primarily from a cluttered collection of old orbital stations and former corporate HQs orbiting above Earth, this one-time anti-pirate patrol has become a potent military force of ships, men and machines.

With agents and battle groups hiding all over the solar system, NEO has become a federation of rebels, smugglers and RAM renegades; part United Nations diplomatic corps, part Continental Army, and part terrorist organization. To carry the historical comparison one step further: If the orgs can be likened to the French Resistance of World War II, then NEO is (or, at least, has the potential to be) the Allied military might. If the war is to be won, then the army will play the major role—but without the civilian freedom fighters doing their part, the struggle would be much longer and more costly.

NEO is financed primarily by secretly transmitted contributions from highly placed residents and business concerns in the various arcologies. Control of NEO is based in the NEO Council, a governing body that includes representatives from each of the major arcologies as well as NEO's military leaders. The top-level hierarchy of the council contains nine members, but a meeting of the Grand Council can have around fifty people.

Most of NEO's resources are space-based, with stolen or secretly built ships scattered throughout the domain of the Solar Alliance. Its ground capabilities are so weak compared to RAM's that they might as well not exist—no ground tanks, assault teams or combat support units. Its ships are fast, lightly armed, able to strike almost at will, but not numerous or powerful enough to instigate a full fleet action.

Back to the comparison with the Continental Army: In many ways, NEO currently occupies the exact position of the United States forces of George Washington's time—undermanned, unable to field more than a few armies at any time, and all of those badly armed and made up of volunteers. However, the forces of NEO are masters at ambushes and unorthodox combat. Small attack groups are led, in most cases, by seasoned and competent soldiers, many of whom (like George Washington) served

with enemy forces before they joined NEO.

Like Washington's troops, the NEO forces are made up of citizens who were under RAM governance and eventually revolted. Their reasons are varied—economics, revenge, ideals, glory. NEO forces are able to hide within the various crannies of Earth culture; in the arcologies where the supervision of the Regency is benevolent or fairly lax, lower-ranking officers are even able to wear uniforms openly. Sometimes, when Alliance governors take notice of this kind of behavior, they allow it to continue: proof of the fact that NEO poses no threat to the current regime, and the malcontents can dress in any fashion that pleases them. (The truth of the matter is that the Regency doesn't want to risk starting any open conflict—because it doesn't know how many members of the arcology might join in with the rebels if they were forced to choose one side or the other.) NEO ranks are (from lowest up) Warrior, Strike Leader, Group Leader, Captain, Major, Colonel and General.

As it stands, the forces of NEO are ill prepared to fight a pitched battle—they look for points where they can pick the ground and the fight. They are not even up to the level of manning major bases or fielding a group of small fleets, compared to the resources that RAM has at its disposal.

A typical NEO combat group might have a hundred members working out of an org (not necessarily with the knowledge of the leaders of the org's own resistance cadre), armed with personal arms and a few heavy weapons. A strong NEO group might have a couple of ground tanks (captured from RAM forces), or a few cruisers and fighters hidden inside a city or out in the wastelands. A NEO fleet consists of perhaps a dozen ships of cruiser and fighter class, centered around (if they're lucky) a single large battler. This fleet would spend most of its time hiding out in Earth orbit or in the Asteroid Belt, coming in-system only when a major operation was planned.

NEO is desperate for ships. Parts are scrounged from wrecks, stolen from RAM bases, and traded for on the black market. NEO has one big advantage—like their Yankee forebears, the NEO shipmasters know how to get the most out of their ship designs. They trade this advanced knowledge to the asteroid pirates in exchange for looted ships and military technology—an uneasy alliance, but one that works for the time being.

NEO also needs leaders. The organization is made up primarily of small Battle Groups, organized under a Strike Leader, with a few of them bunched together under the purview of a Group Leader. This

militia format calls for a great deal of personal initiative in its commanders. Above the level of Group Leader in the military hierarchy, most of the NEO officers are information-gatherers and management types—people whose skills are necessary, but not sufficient to turn the tide. What NEO really needs is a grand strategist, the equivalent of an Eisenhower or a MacArthur. Someone like Buck Rogers.

NEO has evolved to become more than a military arm representing the interests of the arcologies and the orgs. In the role of a stable organization serving to knit together the many fringe members of the group, NEO has in some respects become a mini-government in exile, performing a function akin to that of the Continental Congress in 1776. However, unity has taken a back seat to democratic diversity; factions, disagreements, and power plays abound. But, since the arrival on the scene of Buck Rogers, a few things have changed.

In all likelihood, it will soon become apparent to the members of the NEO Council that they made a serious mistake in making Rogers an honorary member of the group. Buck was probably the last person in the universe to make into a figurehead—because he isn't about to remain merely a figurehead for long. Because of his strong-willed advice, a more unilateral NEO agenda has emerged, with the following goals:

- 1) Expulsion of all RAM forces and governmental controls from Earth and near Earth orbit.
- 2) Recognition of NEO as the de facto Earth government.
- 3) Unification of the Regencies under a NEO governing and supervisory body.

NEO plans to accomplish these goals through a number of methods. In addition to using the muscle of its ever-growing combat forces, NEO hopes to get sympathizers or appointees onto the Solar Alliance Council. In addition, several NEO sympathizers have been recruited within the Alliance and are being groomed as future Regents. By subverting the SA, it may be possible to force a political solution to the RAM expulsion. Aware of the other forces working against RAM (the Mercurians and the Ishtarians in particular), NEO has also nurtured strategic alliances with these groups whenever possible.

LaGrange Colonies

Earth Orbit Colonies

Orbital radius: 240,000 mi.

Diameter: Various

Period of revolution: 27½ days

Gravity: Various (spin-induced)

Status: Decrepit, poorly maintained orbital colonies; considerable wreckage

Population: 30,000 (est.)

Government: Independent outposts

LaGrange points, named after the 18th Century French astronomer/mathematician Joseph Louis Comte de LaGrange, are locations in space in a two-body system where the gravitational forces of the two bodies cancel each other out. If the location also happens to be in the orbital path of the smaller body, then an object (such as a space station) positioned there and put into orbit around the larger body will stay in a stable orbit indefinitely.

The LaGrange Colonies are located at the L-4 and L-5 points in the Earth/Luna system; 60 degrees ahead of and 60 degrees behind Luna in its orbit around the Earth. (Other prominent examples of LaGrange points that contain objects—Trojans, as they are sometimes called—are in the systems of Jupiter and Saturn; see the sections on those planets later in this book.)

The L-4 and L-5 Earth/Moon LaGrange points were the locations of the first truly deep-space civilizations, dating back to the 21st Century, and by now these orbital colonies are definitely showing their age. Many of these structures have passed through several owners in their lifetimes, and they have not always been well maintained. Sometimes, owners who could afford to move their stations elsewhere (often into the Asteroid Belt) did so.

What is left at the L-4 and L-5 points is a collection of dozens of battered hulks. Many of them are abandoned and useless (at least in terms of their original purposes). Others that are still functional are the homes of illegal operations, Solar Alliance watch stations, and dirt-poor people with literally no other place to go—a deep-space version of the urban sprawls of Earth. The L-4 and L-5 points are also a critical NEO staging area, since the huge collection of junk makes it easy to hide a group of small ships.

Luna

Primary Satellite of Earth

Orbital radius: 240,000 mi.

Diameter: 2,160 mi.

Period of revolution: 27½ days

Period of rotation: 27½ days

Gravity: 16% Earth normal

Escape velocity: 5,350 mph

Surface temperature extremes: -280°F to +260°F

Atmosphere: Very thin, only significant inside deep craters and fissures

Status: Underground and domed settlements; gradually being terraformed

Population: 172,000,000

Government: Federation of independent underground arcologies

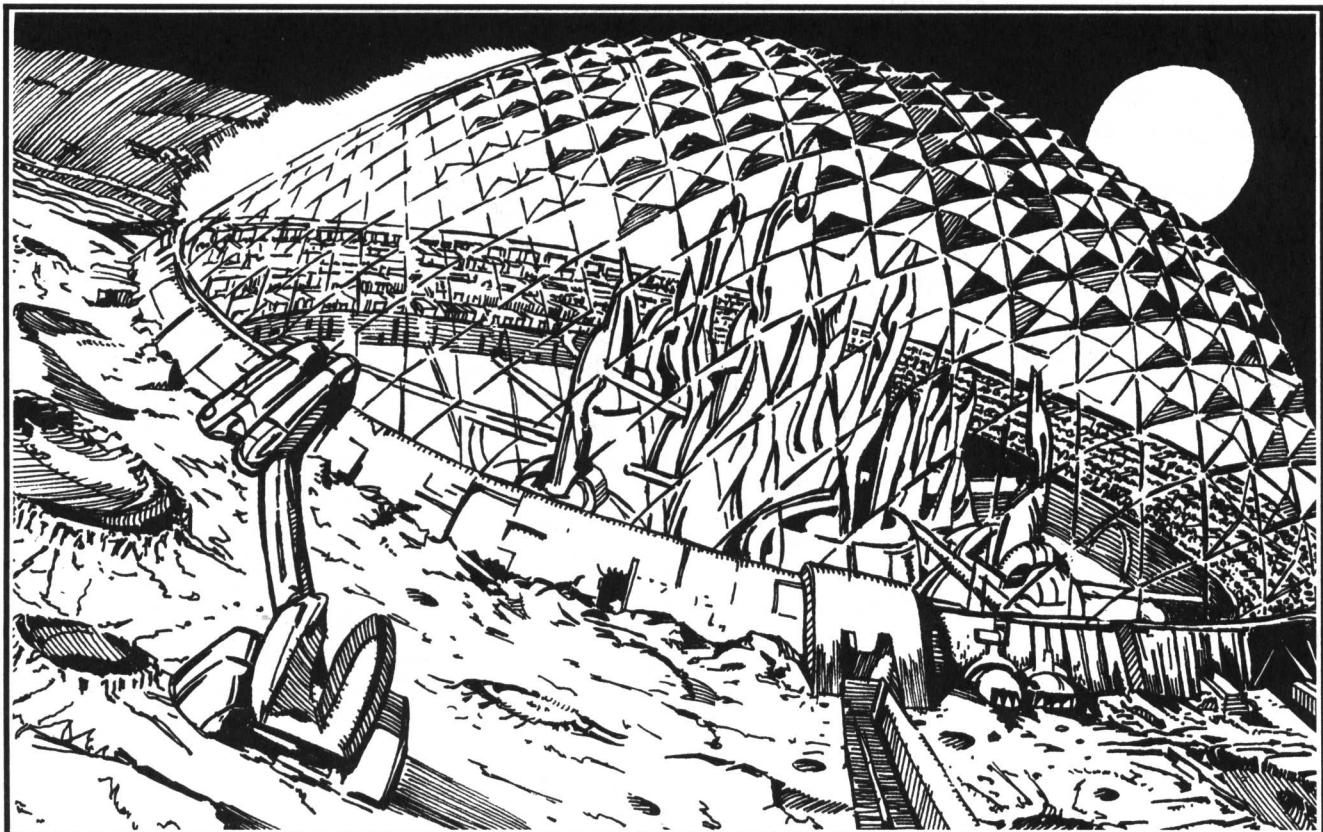
Ports: Five Class A, at Tycho, Aristoteles, Copernicus, Crisis, and Korolev; three Class B, at Gagarin, Plato, and Kepler; four Class C, at Archimedes, Clavius, Tranquillitas, and Keeler

Major imports: Water, food, and raw materials

Major exports: Technology, investment capital, weapons, and spaceships

Earth's moon, nowadays known as Luna, was heavily settled before terraforming techniques were highly developed, and as a result the Lunarians have taken a long-term, gradual approach to generating an air envelope for the planet. A thin atmosphere has been created by a complex, large-scale process involving the extraction of oxygen and nitrogen from the rocks and dust of the Lunar terrain. At its thickest, at the bottom of the deepest craters, the air is as thin as Earth's atmosphere five miles above sea level. In such places, it is possible for humans to survive on the surface for as long as one hour without a breathing apparatus (although, of course, they still need protection from the temperature and a way to heat or cool the air before it can be inhaled). The atmosphere-generation project is an ongoing effort; it has to be, in order to stay ahead of the rate at which the gas bleeds away from the low-gravity environment into space.

Lunar settlements are fully enclosed, either under domes or beneath the surface. They follow the general structure and composition of Earth arcologies; each settlement is self-sufficient, recycling its air and water and able to grow or manufacture enough food to sustain the population.



A massive dome separates this Lunar city from the barren surface

Economy and Culture

Lunarians (don't call them Moonies or Lunies, which are insulting terms to them) tend to be clannish, highly advanced, and armed to the teeth. Mess with one Lunarian, and you'll mess with all of them. They claim everything within the pull of Lunar gravity (out to about 100,000 miles) to be their territory, and they have the power to shoot out of the sky any errant or invading ships. Like Israel of the mid-20th Century, the entire Lunar population is trained and ready to go to war at a moment's notice.

Lunarians tend to wear close-fitting, spacesuitlike jumpsuits, often with "smart" functions like heating and cooling built right in. Coloration is usually brown, gray or silver—hues that blend into the Lunar terrain. Luna is an armed society; everyone wears at least one weapon, with bullet pistols (using relatively inexpensive "stupid" projectiles) and knives as the items of choice.

The largest Lunar cities are built deep within the walls of craters, covered over with geodesic dome sections with easily replaced modular sections. These cities include parklands, farms and open water areas. Many domed craters have "showcase" sections of spidery, nearly transparent silicate buildings spiraling up in the light gravity. But most Lunarians feel safest buried in the wall of the crater, and that's where even the most powerful and wealthy have their strongholds. Ground travel between cities is via magnetic-driven subways, or by asterover "buses" that travel above the surface. Huge mass drivers line the floors of several craters, capable of hurling massive loads into orbit (or in the direction of any enemy planet or invading spacecraft).

The Lunarians are profiteering neutrals in the skirmishes between RAM and Earth. Besides selling ships and weapons technology to anyone, they also operate the most powerful banking cartel in the solar system.

As long as the other parties remain peaceful, the Lunarians will deal with anyone—NEO, RAM, the Ishtar Confederation, the Belter Anarchy—at any time. Lunar banks are the most secure in the solar system, Lunar currency the most stable, and Lunar technology the most reliable. The Lunarians, tight-fisted skinflints and hardheaded merchants all, want your money. As long as it doesn't get in the way of your dealings with them, they don't care one iota what you think of them.



The tunnels of Luna are busy places

Politics and Government

The Lunar Federation, which oversees and governs all the military and political activity on Luna, truly deserves its nickname, "the Switzerland of the solar system," although students of 20th-Century history might suggest that "the Israel of the Alliance" would be more accurate. For like the Israelis, the Lunarians have a policy of "Never again" backed by a staggering amount of armed might.

Once, and only once, has any other government tried to tamper with the Lunarians' destiny—and this is what the "Never again" policy refers to: The old System States Alliance, based on Earth, tried to slam an iceroid into the Sea of Tranquility. The Terran leaders insisted that this was a simple terraforming exercise, similar to what was being done on Mars. The Lunarians responded that if they wanted to impact iceroids on the surface of Luna, they were quite capable of doing this themselves. Actually, the SSA's effort was a show of force, and when the System States Alliance persisted, the Lunarians showed *them* some force.

First they blasted the iceroid to smithereens shortly after it entered Lunar space. Then they turned their attention to Earth. In a businesslike but brutal retaliatory strike, nearly two hundred Terran ships were destroyed and seventeen Terran capitals were blasted by the impact of gigantic rocks hurled by Lunar mass drivers.

The only other time that the Lunarians have used their mass drivers against another planet was in 2275—once more against Earth—at the very start of RAM's revolt against the System States Alliance. (That incident is briefly described in the section on mass drivers in *The Technology Book*.) Since then, the use of such force hasn't been necessary—but everyone knows what the Lunarians can do if they think it *is* necessary.

The Lunarians don't want your problems, and they don't want your politics. They deal with disturbances by deporting all parties involved. They willingly prosecute and imprison RAM execs right alongside the lowliest space scum. They don't let anyone land warships on their world, and they have one very stringent rule about combat within Lunar space: *Don't even think about it.*

The System States Alliance (Solar Alliance)

Another political force present on Luna is technically a government in exile. Now called the Solar Alliance, this organization is descended from the

System States Alliance (SSA) that was based on Earth.

The SSA was a world government created in the last half of the 21st Century, led by representatives of the three major power groups at the time: the Russo-American Mercantile Combine, the Euro-Bloc, and the Indo-Asian Consortium. The original plan of the SSA was to have each cartel colonize and exploit a planetary body, then send back raw materials to Earth. The SSA would then divide this loot up among the starving billions on Earth.

Although its original motives may have been honorable, over the passage of several decades the SSA became a corrupt sham, maintaining control over its colonies by oppressive force and self-serving management. Finally, in the late 23rd Century, the Russo-American Mercantile Combine's Martian colonists raised a battlefleet, revolted, and went to Earth to overthrow their SSA masters.

The System States Alliance disintegrated as a result of RAM's victory. Now the planetary colonists were on their own, and RAM, being the most powerful of those groups, became the reigning force in the solar system. But to keep up the pretense of democratic government of the solar system, RAM instigated the formation of a new administrative body called the Solar Alliance. (The similarity between the old name and the new name was purposeful; this way, RAM could maintain that the new Alliance was merely an outgrowth of the old SSA instead of an entirely new agency.)

After the revolution left Earth under RAM occupation, Luna was the only neutral ground in the inner solar system where an interplanetary alliance could be headquartered. The Lunarians agreed to have the Alliance based on their turf, and Luna is where all formal Alliance meetings are conducted. (Naturally, the Lunar representatives are neutral on all issues—and the Alliance judiciously avoids making any decisions that would directly inconvenience or hamper the Lunarians.)

No representative of the Alliance admits—but neither do they deny—that the organization is merely a RAM puppet. Hardly anything of great import is ever accomplished, with the result that RAM is pretty much left free to do what it wants. The most active branch of the Alliance is the Solar Alliance Protectorate, a ten-member panel created at RAM's insistence to oversee the "protection" and "development" of Earth. The people who do the "protecting" and "developing," as might be expected, are RAM civilian employees (the Regents), backed up by RAM soldiers and gennies, using RAM hardware. Any doubt who's really in charge?

Mars

4th Planet of Sol System

Orbital radius: 141,710,000 mi. (1.52 AU)

Diameter: 4,200 mi.

Period of revolution: 687 days

Period of rotation: 24½ hours

Gravity: 38% Earth normal

Escape velocity: 11,160 mph

Surface temperature extremes (at equator): -80°F to +20°F

Atmosphere: Thin, concentrated in lowlands

Status: Extensively terraformed; most powerful planet in system

Population: 253,000,000

Government: Despotic corporate socialism

Ports: One Class A, in orbit above Pavonis; two Class B, at Coprates and Marineris; three Class C, at Pavonis, Utopia, and Hellas

Other prominent locations: Olympia, Chryse, Galiae, Arsia, Memnonia, Phytus, Solis, Argyre, Casini, and Hesperia

Major imports: Luxury goods, gems, rare metals, and wines

Major exports: Technology, weapons, and ships

Mars is the dominant planet in the solar system of the 25th Century, controlled by a government known as RAM (originally called the Russo-American Mercantile Combine, though the full name is no longer accurate and never used). RAM is the major political force on Mars, and is made up of equal parts socialism and corporate greed, combining the worst of the two dominant political and economic tendencies of the late 20th Century.

The Mars of the 25th Century has been extensively terraformed, using a variety of techniques including bioengineered life forms, volcanic heat traps, microwave mirror arrays in space, and dropping large iceroids onto the surface. (For further information on terraforming, see *The Technology Book*.) The current topography is based around two shallow seas, the Sea of Hellas in the southern hemisphere and the Boreal Sea, which rings the northern polar region. The Boreal Sea is a mere 400 feet deep, and is fully seeded with bioengineered marine life; the smaller Sea of Hellas, 450 feet deep, is still in the process of being stocked. A chain of small, deep lakes, known as the Marineris Chain, runs most of the length of the Valles Marineris basin that cuts through the planet surface just south of the equator. The deepest of these lake beds is roughly two miles beneath the surface of the water.

Much of the Martian highlands have been left unterraformed; these areas are covered with rocks, craters and red dust. With the planet having a higher water content than ever before, even these areas have a fair amount of plant life, although most of this is low and scrubby. The areas around Pavonis Mons (Mount Pavonis) have been planted with bioengineered conifers, and water has been brought in to form several small, deep lakes in that area.

Economy and Culture

The major civilized areas are centered around the southern and eastern edge of the Marineris Basin, in an area called Coprates Chasm, and on and around the Mars-Pavonis Space Elevator complex on the towering Tharsis plateau.

Coprates is a huge city of some sixty million people, housed in huge arcologies built into the titanic chasm walls. Smaller, pyramidal structures housing the executive class are scattered over the chasm floor, or on islands scattered throughout the Marineris Chain. The name "Coprates" takes in the entire area, describing a single-city nation stretching several hundred miles along the rift, although what is commonly called Coprates Chasm is a narrow area of the western valley only about three hundred miles long.

Much of the rest of civilization is based just north of the equator in the vicinity of Pavonis Mons. The mountain is an extinct volcano that rises high out of the Martian atmosphere, and also the planetside terminus of perhaps the greatest single technical achievement in mankind's history—the Mars-Pavonis Space Elevator. (For more information on this structure, see *The Technology Book*.) The Mars-Pavonis elevator is the planet's other major population center, containing dozens of levels habitable by humans.

Farther north, toward the Boreal Sea, a number of settlements are scattered along the shallow shore. Like similar settlements along the Hellas coast, these are devoted to farming, both land crops as well as shallow-water crustaceans and bottom fish, which comprise a large part of the Martian diet.

Martian cities are primarily based on the arcology concept, with a pyramidal plan predominating; in fact, the capital of Coprates is made up of dozens of interlocking pyramidal structures. The Martian style is clean and geometric, cut from sandstone and trimmed in glass and metal. Often, corporate logos

are etched into the faces of headquarters' pyramids. Hanging gardens are popular, as are large collections of Terran artifacts and treasures.

The Martian people are the best-fed, best-looking (because of gene-shaping), best-educated people in the solar system. They are fond of trinkets, gadgets, social events, and other nonessential trappings of civilization. Their garments are most often a combination of military uniforms and business suits (a Martian executive's "power suit" is often just that—a business suit with integrated wiring, built-in weaponry, and electronic defenses), usually in one of the more popular shades of red, gray, brown or black. The color blue is reserved for the "subhuman" gennie Workers, the lowest caste in the Martian hierarchy.

While the citizens of Mars are better off than any other group in the Solar Alliance, no one in that group can ever forget that they are controlled by a ruthless organization that encourages personal gain at others' expense, and enforces its preferences and policies through the use of force. That organization is RAM.

From the highest citadels to the deepest warrens, RAM maintains a constant surveillance on the citizens who are in its grip. Troops may detain anyone on mere suspicion. Internal Affairs operatives (known as Enforcers) can blackmail, kill or torture as they see fit. Even the most powerful members of the hierarchy are not entirely free of this totalitarian system, and since RAM absolutely controls most of the Martian surface and owns both of the planet's natural satellites, there are very few places where rebellion or dissent can take root.

Those few areas not controlled by RAM are considered as a group the Martian Free States, and are a haven for smugglers, pirates and NEO freedom fighters. These Free States are sparsely scattered across the high, windy plateaus that account for about half of the Martian surface area. While habitable in the loosest sense, the vast ranges around such outposts as Utopia, Hesperia, and Cassini are mostly home only to the gene-altered Desert Runners and other strange creatures of the high desert.

Politics and Government

After an abortive attempt to gain military supremacy in the late 1990's, the Earth nation known as the Soviet Union collapsed back into a period of revolt and internal confusion. The United States, itself weakened by years of divisive government, was in no position to take advantage of this condition, so

that by the early years of the 21st Century, a state of exhausted cooperation existed between those nations.

Eventually, this cooperation resulted in the formation of the Russo-American Mercantile Combine. Almost simultaneously, two other major power groups coalesced on the planet: the Euro-Bloc and the Indo-Asian Consortium. Prompted by a new planet-oriented worldview, leaders of these groups were the driving force behind the formation of a world-government agency, the System States Alliance.

Realizing that man's future on Earth was directly tied to his success in colonizing the rest of the solar system, the SSA took as its major goal the organizing of a colonization effort. Eventually, three charters were awarded: The Russo-American group took the rights to Mars, the Euro-Bloc claimed Luna, and the Indo-Asian group settled for Venus.

Although it was seen (and correctly) as the territory with the most potential for supporting human life, Mars was far from easy to tame. Conditions were harsh, and keeping the colonists dedicated to their task required harsh governance. The Russo-American Combine used brute force to forge the early Martian colonists into a tough fighting machine, capable of beating an equally tough planet.

One result of this process—only recognized by the people of Earth after it was too late—was that the government and the citizens of Mars became too tough and too powerful for the System States Alliance to control. RAM revolted against the SSA in 2275, and over the course of a conflict known as the Ten Year War succeeded in destroying or occupying every stronghold of the System States Alliance on Earth.

This victory by force and brutality was not without its price, even for the victors. After the war, a totalitarian state existed on Mars, in which a technocratic/corporate aristocracy ruled over lesser "workers" with an iron fist. Among the general populace, there was little argument—RAM had indeed thrown off the yoke of the corrupt SSA and made Mars into a relative paradise, and did provide food, shelter and jobs for everyone on the planet.

In many ways, the present-day RAM resembles one of the huge Japanese corporate empires of the 20th Century. Workers are taken care of from cradle to grave. All needs are taken care of by the Company, and the Company tells you what to do, say, wear and think. RAM chooses your job, provides your home, and even provides most of your social entertainment.

The only difference is that the old-style Japanese



A small section of Coprates Chasm, seen from the viewpoint of an incoming ship

corporation didn't have genetically altered troops to "take care of" dissidents and naysayers.

RAM is currently run by Simund Holzerhein, who took control of the RAM Board about one hundred and fifty years ago. A ruthless and implacable foe, Holzerhein is even more dangerous because of one additional advantage—his personality has been uploaded into the RAM Main Computer, giving him incredible speed, virtually limitless knowledge, and literal immortality. His real body lies in a glass cryogenic suspension tube stored in a bunker underneath his palatial "chalet" on the wooded slopes of the Forest of Pavonis. Various members of his family control key RAM operations, but overall, control of the subdivisions has been passed around between at least one hundred various family groups.

RAM is divided into divisions such as High Tech, Atomics, Fabrication, Consumer Products, Transportation, BioSci and Marketing. The most powerful division is RAM Security, which controls both the military and "secret police" aspects of the corporation. These are the aspects of RAM most often encountered by NEO and other planetary groups—the bad guys, as it were.

Security is further subdivided into five major groups: Internal Affairs, Corporate Security, Space Assault Corps, Ground Enforcement Corps, and Planetary Assault Corps. A small division within the Planetary Assault Corps is the intensely feared and respected Bio-Mechanized Assault Forces, made up of the semihuman killing machines known as Terrines.

Internal Affairs: The shadowy secret police of the Martian state, Internal Affairs grew out of the now-ancient KGB of the Soviet Union and the CIA of the United States. Although the secret police are capable of doing good deeds (for the sake of all the people they represent) and are not universally a Bad Thing, the fact remains that the vast majority of their activities are directed against segments of their own population and involve terrorism, intimidation, and murder. The organization's Enforcers and Interrogators are among the most highly trained and cybernetically enhanced veterans of the RAM hierarchy, with control over all citizens except those at the highest levels of the corporation. Internal Affairs is very powerful on Earth, which RAM correctly views as a hotbed of rebellion and dissent. Using such methods as powerful mind-control drugs, subliminal broadcast messages, and a ruthless assassination squad, Internal Affairs is—in the eyes of those victimized by it—RAM at its absolute worst.

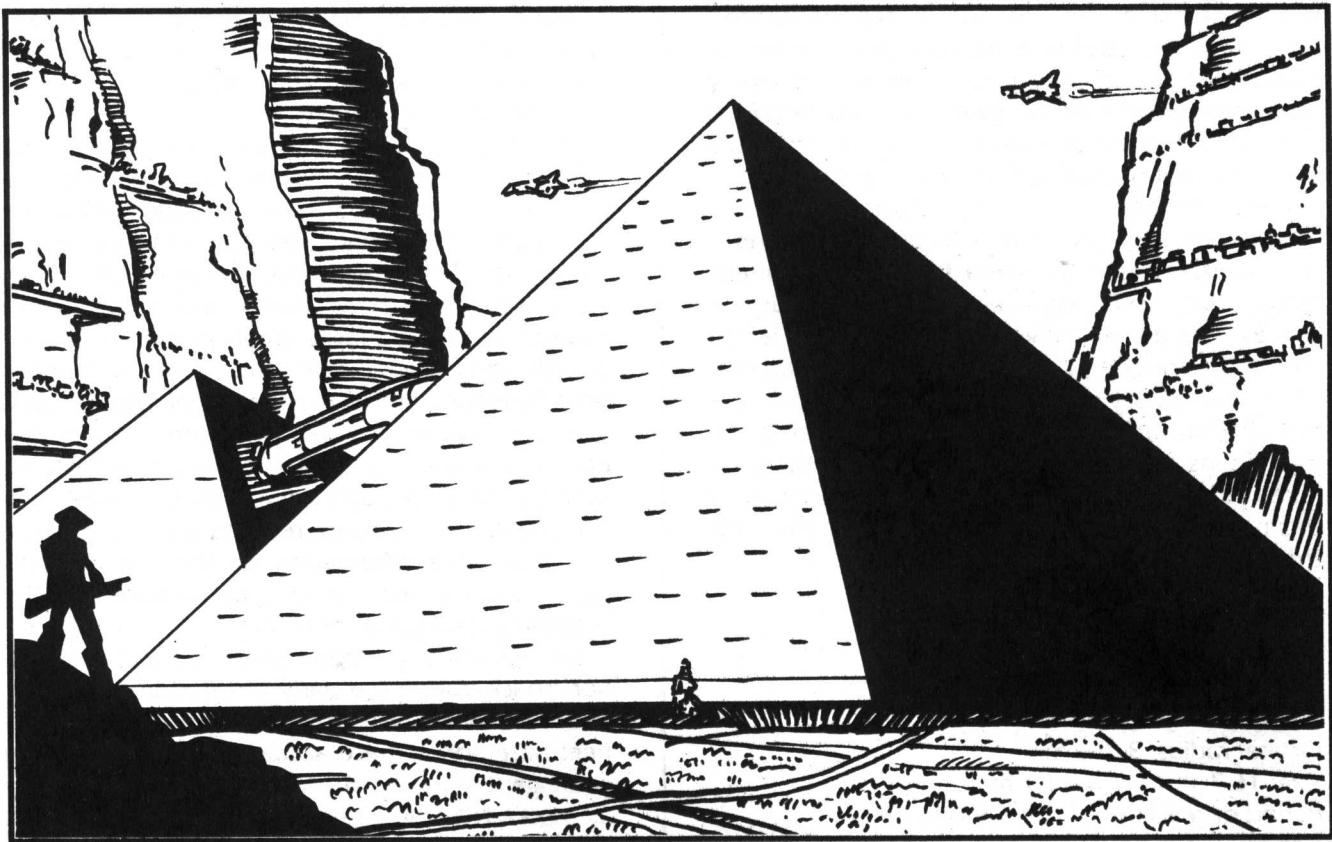
Corporate Security: Mostly made up of office guards and low-level security personnel, this division encompasses the corporate grunts of RAM. Lightly armored and superficially trained, operatives of Corporate Security protect only those targets deemed relatively less important or threatening to the corporation. Important bases and other high-security areas are protected by Internal Affairs operatives or members of the Ground Enforcement Corps.

Space Assault Corps: Space Assault is the second strongest arm of RAM Security, right behind Internal Affairs (and not counting the Terrines, which on a one-for-one basis are far tougher than any other soldier alive). Rocket pilots for the corps are drafted from the merchant fleets of RAM, or taken from the elite graduates of the RAM Academy on Deimos. Space Assault is currently made up of five fleets, named for the near-orbit areas where they are based: Earth, Mars, Vesta, Jovian (near Jupiter), and Deep Space (monitoring the Asteroid Belt). Each fleet has at least five battlers, ten to fifteen heavy cruisers, fifty to one hundred light cruisers, and hordes of fighters. Unlike NEO, RAM has no problem with procuring ships; if it needs more, it can either manufacture them or (even easier, if the circumstances are right) commandeer them.

Ground Enforcement Corps: This division is made up of normal humans, usually recruited from the local populace, who serve as garrison troops. Most of them have been slightly gene-altered, as have most Martians, to make them better able to handle the un-Earthlike conditions on the planet, but they have not been modified specifically to make them better in a combat situation. Quickly trained and poorly equipped (compared to Planetary Assault troops), they are considered an expendable front line. For serious problems, RAM calls in the Jump Marines (see below).

Planetary Assault Corps: These troops, many of them cybernetically enhanced for improved strength and quickness, are the nucleus of RAM's ground forces. Also known as the Jump Marines, these soldiers wear battle armor, carry heavy assault weapons, and are trained to be dangerous and ruthless foes. The Jump Marines are composed of promising recruits from the Ground Enforcement Corps (see above) and graduates of the RAM Academy who show promise as officer material.

Bio-Mechanized Assault Forces: Also known as the Terrines, these elite gennie Warriors are cybernetically altered and armored and equipped



The simple yet majestic pyramid is the cornerstone of Martian architecture

with the best individual combat technology RAM has to offer. Any two of them are equal to a squad of normal men in fighting strength, endurance, and killing power. There are only a few Terrine squads in RAM—a high mortality rate during the gene-altering and cybernetic process, plus fatalities during training, keeps the number of individual soldiers down around one thousand at all times. Terrines are called in only when a situation looks critical and a RAM victory is essential.

RAM's Military Policy

RAM is a massive political entity designed for continued expansion. For centuries, the tough Martian environment put up enough resistance to keep the RAM expansionists at bay. Now, with the planet sufficiently tamed and molded to its needs, RAM wants more. One obvious place to expand is back on Earth, which has been part of RAM's dominion since the end of the Ten Year War in 2285.

Earth is only a stepping stone in RAM's plan to eventually dominate the solar system. Once the planet is thoroughly exploited and its populace subjugated, it will provide a base from which RAM can

tackle the Lunarians and the Venusians, as well as offering some leg room for RAM's ambitious managerial class. (Everyone wants to be in charge of something, even if it's a run-down outpost on a backwater planet.)

However, RAM knows that it must move carefully on Earth—as it has been doing since taking over—in light of political opposition from Venus and Luna. One thing RAM doesn't want is for that political opposition to erupt into out-and-out military conflict—at least not until RAM is fully prepared for that turn of events. In a strategy similar to that used by the Nazis on 20th-Century Earth, RAM continues to move slowly, milking Earth's resources and consolidating its position, until the time is right for a military strike.

RAM's only noteworthy potential opponents are the Venusians and the Mercurians, both of whom are able to raise considerable space fleets, and the Lunarians, who can defend their turf in a variety of ways both military and economic. RAM's fleets have been patrolling the space lanes leading to Mercury and Venus from both Mars and Earth, and it is not uncommon for a RAM fleet to run across Mercurian and Venusian vessels also engaged in

what both sides call "standard reconnaissance." Both sides are careful to adopt a nonthreatening posture whenever their ships come within sensor range of one another, but everyone remains poised to react to the act of aggression (whether it turns out to be real or trumped-up) that is probably, ultimately, inevitable.

With the Venusians and Mercurians keeping it busy in space, and the need for constant surveillance of its own population keeping it busy at home, RAM doesn't have enough resources left to mount an ongoing, concentrated effort against NEO. The military policy at present is to employ primarily Ground Enforcement troops and Internal Affairs goons against NEO. The leaders of RAM don't take the upstarts from Earth especially seriously at this point, and perhaps that's the correct thing for them to do . . . for now.

Satellites of Mars

Phobos

Orbital radius: 3,750 mi.

Size: $16.7 \times 13.0 \times 11.1$ mi.

Period of revolution: Not applicable

Gravity: Negligible

Escape velocity: Less than 3 mph

Atmosphere: None

Status: Off-planet terminus of Mars-Pavonis Space Elevator

Population: Varies (mostly transient)

Government: Civilian, RAM-controlled

Deimos

Orbital radius: 12,000 mi.

Size: $9.3 \times 7.4 \times 6.2$ mi.

Period of revolution: 30 hrs., 18 min.

Gravity: Negligible

Escape velocity: Less than 3 mph

Atmosphere: None

Status: RAM military outpost, academy, and prison

Population: Varies (soldiers and students)

Government: Military, RAM-controlled

Space scientists and explorers have long known that the moons of Mars are merely rocks, ill suited for major colonization efforts in light of the riches of the planet below. But they do have their uses.

The scientists of the Russo-American Mercantile Combine, in the earliest days of the Mars terraforming program, found Phobos rich in carbon compounds that could be put to good use on the surface

of the planet. The satellite was also a potentially ideal site for the off-planet "anchor" of a space elevator—an idea that was advanced and acted upon almost immediately.

Phobos was extensively excavated, the raw materials were shipped to the surface, and the hollowed-out hulk that remained was sufficiently reduced in mass so that it could be maneuvered into a new orbit. The satellite already circled Mars at an angle only slightly tilted with respect to the planet's equator, so it was a fairly simple matter to install it directly above Pavonis Mons in a geosynchronous orbit (revolving at the same rate that Mars rotates, so that it stays directly above the same place on the planet surface all the time). The vast caverns left behind by the excavation have been converted into spacedocks, warehouses, refitting stations, and hotels. (For more information on the Mars-Pavonis Space Elevator, see *The Technology Book* and the preceding description of Mars.)

Deimos, the outer moon, was used as a construction shack during the early terraforming of Mars, and has since been converted into a major RAM fleet base and a space academy. It is ruled by the equivalent of the RAM admiralty. The base includes a "stockade" where military and political prisoners are held . . . some of them for a very long time.

The Asteroid Belt

Debris between the orbits of Mars and Jupiter

Orbital radius: 214,000,000 to 307,000,000 mi. (2.3 to 3.3 AU)

Diameter: Varies widely; largest 663 mi.

Status: Artificial environments

Government: Democratic anarchy

The Asteroid Belt is a widely flung collection of small bodies, most of which share the same general orbit between Mars and Jupiter. In the 20th Century, roughly 2,000 separate "minor planets" had been given names. By the middle of the 21st Century, the number of named asteroids had more than doubled, but at that point scientists decided not to bother with counting or labeling any more of the rocks. It is generally thought that around 100,000 asteroids exist (including the scant few whose orbits do not lie entirely within the area between Mars and Jupiter), but the vast majority are so small—a mile or less in diameter—that they are all but meaningless. Except, of course, to the settlers who occupy them. (Unlike the way they were often presented in 20th-Century motion pictures, the asteroids are separated from one another by hundreds or thousands of miles; it is very rare for two of them to be visible to the naked eye at the same time.)

Many asteroids have been tunneled and cored for settlement. Some have been excavated, leaving huge vaults beneath the surface, and given a spin to simulate gravity for the inhabitants within. Others are left in free fall (no spin, no gravity). The tough, no-nonsense inhabitants of these barren rocks are known throughout the Alliance as Belters.

Belters tend to be independent, strong-willed, and radical in nature. They are well aware of the legend that surrounds them—the rough-hewn, "Forty-Niner" type prospector with a fast gun and faster fists—and they know better than anyone that the legend is more fact than fiction.

The most important permanent asteroid settlements, of the dozens that exist, are the nine civilizations described in the remainder of this section.

Vesta

Orbital radius: 219,000,000 mi. (2.3 AU)

Diameter: 310 mi.

Period of revolution: 1,320 days (3 yrs., 7½ mos.)

Gravity: Negligible

Escape velocity: Less than 500 mph

Atmosphere: None

Population: 7,000–10,000

Ports: One Class B (military), one Class C (civilian)

Vesta is the third largest asteroid, home of one of the oldest civilian settlements in the Belt and currently the site of the major RAM military base in the outer solar system (including all of the area beyond the orbit of Mars).

The civilian population is fairly constant at about 5,000; the overall figure varies because the number of RAM personnel present at the base at any time can range from 2,000 to 5,000.

The soldiers and civilians coexist quite well, without friction, because RAM has not tried to exert its influence in a direct takeover of Vesta and the increased population due to the military presence has helped Vesta's economy to prosper. The asteroid is not viewed by other factions as an ally or a satellite state of RAM, just as a place where RAM has chosen to establish an outpost. The citizens of Vesta have a reasonably good life, and don't really require "liberation" from RAM, although they may have little choice in the matter if some adversary of the Martian superpower decides differently.

Fortuna

Orbital radius: 227,000,000 mi. (2.44 AU)

Diameter: 135 mi.

Period of revolution: 1,364 days (3 yrs., 9 mos.)

Gravity: Negligible

Escape velocity: Less than 300 mph

Population: 5,000

Port: One Class C

Fortuna is a zero-G environment (no spin-induced gravity), essentially a very large orbital colony, that contains a number of engineering and pharmaceutical factories, specializing in the creation and development of products that attain their greatest purity or degree of precision when they are manufactured in the absence of gravity.

These enterprises are supported and funded by various concerns, most of them privately owned and politically neutral. The scientists and technicians who work on Fortuna owe their allegiance to those who supply them with technology and raw materials so they can continue their research.

Ceres Co-Op

Orbital radius: 257,000,000 mi. (2.76 AU)
Diameter: 663 mi.
Period of revolution: 1,680 days (4 yrs., 8 mos.)
Gravity: Negligible
Escape velocity: 1,100 mph
Atmosphere: None
Population: 20,000
Port: One Class B

The largest asteroid, Ceres is the economic and technological center of the Belt. Shipments from the inner planets earmarked for any of the very small asteroids are often dropped off here instead of being delivered all the way to their destination, since the smaller places usually don't have docking facilities adequate to handle large ships. The Ceres Co-Op charges a fee for the services of offloading and storage, and then if the customer doesn't pick up the merchandise within a reasonable time it is put up for auction or sold outright to someone else who wants it.

Ceres is also the location of the main computer that electronically connects all of the civilizations in the Belt. The computer is used for information storage, message transmission, transfers of payments, and the recording of votes when an issue arises on which all Belters must voice their opinions. (For more information on this subject, see the section on Politics and Government below.)

Pallas

Orbital radius: 257,000,000 mi. (2.76 AU)
Diameter: 335 mi.
Period of revolution: 1,680 days (4 yrs., 8 mos.)
Gravity: Negligible
Escape velocity: Less than 500 mph
Atmosphere: None
Population: 7,000
Port: One Class C

Even more individualistic and hermitlike than most Belters, the natives of Pallas do not deal with visitors on the asteroid, but rather on an orbiting moonlet (diameter 5 mi.) named Gateway.

As far as anyone can determine, Pallas has nothing to hide; the settlers simply prefer to be left alone. They have carved out a bare-bones existence for themselves, and they only interact with outsiders when it's absolutely necessary—for instance, if they need replacement parts for machinery or computer equipment.

Psyche

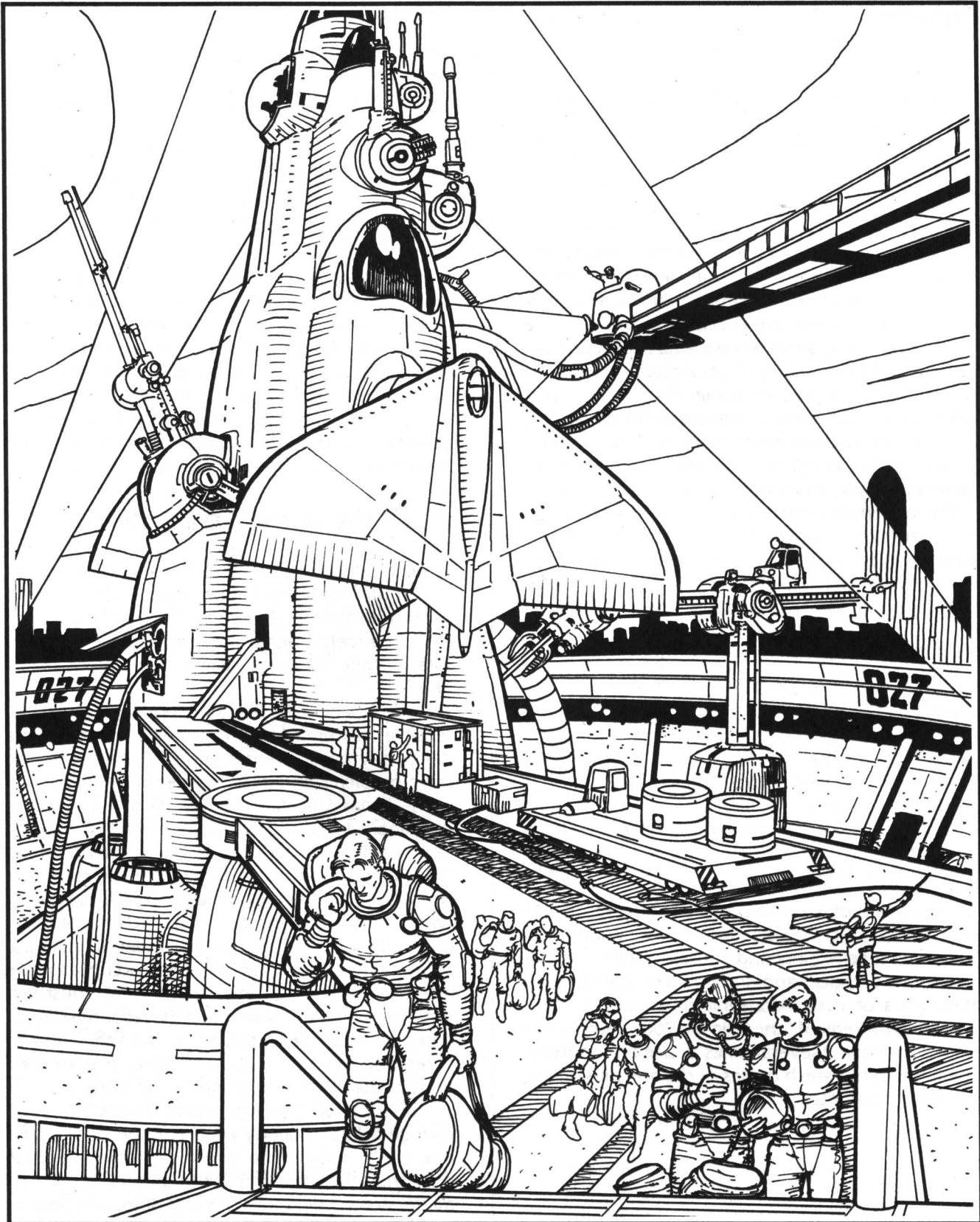
Orbital radius: 272,000,000 mi. (2.92 AU)
Diameter: 127 mi.
Period of revolution: 1,633 days (4 yrs., 6 mos.)
Gravity: Negligible
Escape velocity: Less than 300 mph
Atmosphere: None
Population: 5,000
Port: One Class B

Popularly known as the Boatyard, this asteroid is one of three major Belter ship-construction bases. The cost of having a ship constructed at the Boatyard is at least 50% higher than the usual rates (see the *Characters & Combat* book for standard prices), but the quality is exceptional; any ship built on Psyche has 10% to 20% more hit points than a normal vessel of the same type.

Juno

Orbital radius: 248,000,000 mi. (2.67 AU)
Diameter: 145 mi.
Period of revolution: 1,680 days (4 yrs., 8 mos.)
Gravity: Negligible
Escape velocity: Less than 400 mph
Atmosphere: None
Population: 6,000
Port: One Class B

Also known as Academy, Juno is the second major Belter shipyard (standard prices, standard quality). The asteroid also has a training base for rocketjocks. If they want to, graduates of the academy can stick around and pick up some quick cash taking newly finished ships out on their shake-down cruises.



Travelers disembark while their ship is serviced at the Ceres Spaceport

Hygeia

Orbital radius: 293,000,000 mi. (3.15 AU)
Diameter: 254 mi.
Period of revolution: 1,860 days (5 yrs., 2 mos.)
Gravity: Negligible
Escape velocity: Less than 500 mph
Atmosphere: None
Population: 9,000
Port: One Class B

Hygeia is the third large shipyard in the Belt, specializing in the construction of micro-sized orbital colonies, nicknamed "bottles." These made-to-order, self-sufficient environments range in size from 70 feet long by 40 feet wide up to several hundred feet in each dimension, at a cost ranging from 5 to 10 times the price for a ship of equivalent size. Each bottle is fitted with a detachable fusion booster during construction, tailored to provide enough power and enough fuel to move the bottle to where the owner wants it located.

The vast majority of bottles are located in the Belt and in the areas beyond (the systems of Jupiter and Saturn). Inhabitants of a bottle are considered citizens of the Belter Anarchy regardless of the location of the bottle.

Aurora

Orbital radius: 293,000,000 mi. (3.15 AU)
Diameter: 136 mi.
Period of revolution: 1,860 days (5 yrs., 2 mos.)
Gravity: Negligible
Escape velocity: Less than 300 mph
Atmosphere: None
Population: 3,000 (permanent, plus many transients)
Port: One Class B

The citizens of Aurora operate the largest publicly owned casino in the solar system—the entire asteroid is devoted to gambling houses, restaurants, entertainment spots, and lodging for the tens of thousands of customers who pass through here every year. (Think of "the Strip" in 20th-Century Las Vegas, multiplied several times in size and sporting the latest in high-tech games of chance, plus all the traditional favorites.)

Thule

Orbital radius: 400,000,000 mi. (4.3 AU)
Diameter: 100 mi.
Period of revolution: 2,400 days (6 yrs., 7 mos.)
Gravity: Negligible
Escape velocity: Less than 250 mph
Atmosphere: None
Population: 100 (on-station guards, plus many transients/prisoners)
Port: One Class C

Located far from the main area of the Belt, Thule is the Anarchy's prison. Criminals are allowed to roam through the honeycombed tunnels, but that's the extent of their freedom; they can't really go anywhere. Security devices and a small number of robot guards keep the prisoners under control, while a minimal staff of specially designed gennies operates the spaceport and deals with communications from the outside world.

Politics and Government

Technically, the rowdy rockhoppers, roustabouts, and rough customers who inhabit the Belt are known collectively as the Free Asteroid Democracy, but to themselves and the residents of the rest of the solar system, the name "Belter Anarchy" suits just fine.

Government in the Belt is a curious, yet somehow sensible, mixture of democracy and anarchy. On a day-to-day basis, every group of Belters is free to solve problems and decide issues on an individual basis—Pallas watches out for Pallas, Juno cares only about Juno, and so forth. But when something must be decided that affects the Belt as a whole (RAM wants to yank out a few more icerasteroids for continuing its terraforming of Mars; someone wants to "borrow" a rock to turn into an orbital colony), all of the Belters operate under an absolute democracy where every sentient occupying any asteroid—human, gennie, mechanical construct, whatever—has the ability, and the responsibility, to vote. All issues are resolved by the tabulation of votes transmitted simultaneously, at a prescribed time, to the Belt's main computer on Ceres.

This form of decision-making makes for some strange politics. Nobody's vote is influenced by anyone else's, because no one ever knows for sure how the other guy voted; the only numbers that matter are the big totals of yeas, nays, and abstentions. But that doesn't keep people from trying to persuade others to see things their way. Coalitions

form, vanish, split, and modify on an almost daily basis. The Belter population is highly educated and well informed (like the miners of the Old West, most of these guys haven't got much else to do while sitting around on a rock except read), which makes it very difficult to pull the wool over their eyes.

Any citizen of the Anarchy is not only allowed to, but expected to, vote on any issue deemed significant by the Ruling Council (which is currently made up of a group of elected computer personalities living in the Ceres Co-Op mainframe). Issues have a week-long pending period, although in special cases (like a decision on declaring a war), that period may be shortened. The system has a certain amount of flexibility, but not much: Belters who are visiting other planets, or are in transit somewhere outside the Belt, are not required to vote since they can't always establish a link with the main computer. Any citizen who fails to vote (when he is able to do so) more than five times is subject to severe penalties—at the least, imprisonment and revocation of all rights of citizenship; at the most, a complete economic and physical quarantine, including loss of rescue rights, air rights, and water rights.

As a military force, the Belters are not a serious threat to RAM. There are as many sides to the RAM-vs.-NEO controversy as there are Belter communities, and any group of Belters is just as likely to support one side as the other, depending on the community's current political views, the question being discussed, and whether a good fight is in the offing (Belters love a good fight). RAM does give the Belters a large amount of leeway on the individual level, simply because, even though they're not necessarily military-minded, the "rock monkeys" are usually well armed and spoiling for a scrap.

The Black Brotherhood

One of the most powerful groups in the Solar Alliance has no nation and no government. This is the Black Brotherhood—freebooters, pirates, and brigands who travel the solar system looking for plunder. The Brotherhood claims a long and infamous history; traditionally, the pirates of the Caribbean on Earth in the 18th Century were also known as the Black Brotherhood, and these present-day space pirates have gone out of their way to uphold the legacy of their ancestors.

Theoretically, economics dictates that space pi-

racy is impossible, but physics means that travel routes between the inner planets and their various outposts are going to follow certain paths and patterns. Along these routes, as well as in the more heavily traveled areas of the Belt and the area beyond, lurk the Black Brotherhood's members.

Whether its members are acting as privateers (freelancers hired by a legitimate government and given papers of authority to attack "enemy" ships) or true pirates, the Black Brotherhood is far more an alliance of information than of weapons. The pirates maintain elaborate spy networks, hundreds of informants, and extensive communications and computer systems, all to help locate where a possible victim is going to be. Space is just too big to just lie around in wait for a passing ship. You have to know where and when to strike.

It is the combination of information and manpower that makes the pirates a serious threat to the Solar Alliance. Armed with fast ships, powerful weapons and bases strategically hidden all over the system, the Brotherhood can strike at will. RAM battlefleets are easily outmaneuvered; wealthy Sun Kings are taken hostage and traded for power and concessions; secret weapons mysteriously vanish. . . . The pirates are, in short, a pain in the neck to the entire Alliance.

One group with whom the pirates do have an excellent rapport is NEO. Like the pirates, NEO spends most of its time on the run, striking against RAM whenever possible, and hiding its forces in out-of-the-way places. The pirates also find NEO useful for other things—the rebels are often willing to trade information or supplies, and are always willing to buy any ships the Brotherhood doesn't want or need.

Recently, under the direction of such leaders as Black Barney (see the NPC Profile Card in this boxed set), the pirate brotherhood has become an even more powerful force, openly displaying some of its battlefleets and bases. Whether the Black Brotherhood will take up a position as a power in the Solar Alliance is yet to be seen, but for now, whether official or not, the pirates are a force to be reckoned with.

The Outer Worlds

The term "Outer Worlds" applies to the huge Jovian and Saturnian systems at the boundaries of explored space. While humans have traveled to the edge of the solar system (and, it is rumored, beyond in a few lost colony ships), knowledge about the areas beyond the Outer Worlds is in the realm of rumor, not fact. Even the Outer Worlds themselves are relatively unexplored, and conditions change every day.

Politics and Government

While each moon and planetoid has its own variation of government, most also belong to the Outer Worlds Conference. This is a loose union of the colonists on and around Jupiter, Saturn, and the satellites of those planets. These worlds are all too distant, too sparsely settled, or too small to have a strong impact on the politics of the Solar Alliance individually, but as a group acting through the Conference, they are able to occasionally keep RAM from running roughshod over them and their territories.

The Conference has no real space navy (ships) or army (soldiers), and its factions are too divided for them to form a true centralized government. There's only one thing all of the Outer Worlds colonists agree on all the time, and that is that they dislike the "insystem people" more than they dislike one another.

Jupiter

5th Planet of Sol System

Orbital radius: 483,880,000 mi. (5.2 AU)

Diameter: 89,000 mi.

Period of revolution: 4,337 days (11 yrs., 10½ mos.)

Period of rotation: 9 hrs., 50 min.

Gravity: 260% Earth normal

Escape velocity: 136,000 mph

Atmosphere: High pressure; mostly hydrogen and helium, some methane, trace oxygen

Status: Unterraformed; partially settled by genetically modified humans

Population: 120,000

Government: Tribal

Ports: Several Class C, all airborne platforms (unnamed)

Major imports: Technology, especially biotech

Major exports: Gas, chemicals

Jupiter is the largest planet in the solar system, a gas giant with a primarily hydrogen/helium atmosphere. The planet has been referred to as a protostar, but it's about 10 times smaller than it would need to be to become a star. However, it does give off more energy than it absorbs. The atmosphere is under extremely high pressure, which creates heat; at a certain point deep within the outermost layers of frozen clouds, there is an area where water vapor and habitable temperatures exist.

The atmosphere does support life . . . but not true human life. Jupiter is the home of one of the most strangely modified types of genetic humans yet developed, known as Stormriders. These gennies were created to be the foundation of a new ecosystem in Jupiter's atmosphere, and they have fulfilled their role admirably. Through bioengineering projects of their own, they have created other species that are able to survive in the Jovian environment (and which provide the Stormriders with sources of food), including a form of algae, raylike creatures called Mantas, and quadruped "cattle" known as Bloats.

The Stormriders live in spherical cities that float atop the high-pressure atmosphere beneath them, in much the same fashion as the Aerostates that circle Venus. In fact, the Stormriders have imported a lot of the Aerostaters' technology, and the two groups have formed a tenuous alliance despite the vast distance that separates them.

Stormriders are humanoids with keel-like chestplates, more efficient muscles, batlike wings developed from the arms, and ears sensitive to radar and radio. Due to their design, living requirements, and depth inside Jupiter's gravity well, they have little contact with regular humanity. But they are experiencing a "genetic revolution" similar in scope to the industrial revolution of 19th-Century Earth; research into new and even more different life forms is going on all the time, and within a handful of years the Stormriders may have developed the ability to leave Jupiter in living spaceships.

The only other significant activity around Jupiter is an occasional visit by one of the privately owned Skimmerships, huge vessels in elliptical orbits that dip into the extreme upper atmosphere to collect methane and other gases for resale elsewhere in the system. Skimmerships do not come into contact with Stormriders, and vice versa.

Far away from Jupiter but taking the same route around the sun are the Jovian Trojans, two collections of cored-out asteroidlike bodies located 60 degrees ahead of and behind Jupiter in its orbital path. Ruled by the Dominion of the Trojans, a loose coun-

cil of the most powerful of these settlers, the Jovian Trojans are a hotbed of illegal activity. They claim no allegiance with the Outer Worlds Conference, and consider any ship or outpost fair game for thievery and plunder. The only travelers who visit the Trojans are those who want to sell stolen goods or offer illicit services—and anyone who approaches these criminals without the manpower and the firepower to stand up to them will promptly find himself minus a ship . . . or worse.

Satellites of Jupiter

Metis

Orbital radius: 79,500 mi.
Diameter: 25 mi.
Period of revolution: 7 hrs.

Adrastea

Orbital radius: 80,000 mi.
Diameter: 15 mi.
Period of revolution: 7 hrs.

Amalthea

Orbital radius: 112,500 mi.
Size: 160 × 100 mi.
Period of revolution: 12 hrs.
Status: Artificial environment
Population: 3,000
Government: Corporate council

Thebe

Orbital radius: 138,000 mi.
Diameter: 45 mi.
Period of revolution: 16 hrs.

The three smallest of Jupiter's inner moons have scattered, irregular and temporary settlements. Only Amalthea, a relatively large, oddly shaped rock, has any permanent settlements.

Amalthea has been cored into five vaults and is controlled by a number of cooperating corporations, including Skimmertech, which oversees the Skimmerships that are "mining" Jupiter's atmosphere; Solar Geographic, a research lab; and the Genetics Foundation, which created the original Stormriders and claims "ownership" of the Jovian gennies.

Io

Orbital radius: 262,000 mi.
Diameter: 2,300 mi.
Period of revolution: 42½ hrs.
Gravity: 16% Earth normal
Escape velocity: 5,600 mph
Status: Unsettled and unpopulated; orbital colonies nearby
Population (of colonies): 9,000
Government (of colonies): Representative democracy

Io is one of the most geologically active planets in the solar system, dotted with volcanoes that spew forth sulfur dioxide and other noxious gases. The satellite is close enough to Jupiter to be continually distorted by the force of the big planet's gravity. This tidal pull actually changes Io's shape as it revolves around Jupiter, and a layer of its interior as close as three to six miles from the surface is molten. Old volcanoes die out and new ones spring up all the time, making surface settlements impossible.

However, Io is a potent source of energy, both because of the volcanic activity and because its orbit lies deep within Jupiter's magnetic field. The highly developed colonies in orbit around Io make a lucrative living by tapping into this energy source. The Io-nians will never be serious rivals to the Sun Kings of Mercury, but they do collect enough energy to supply—for a price, of course—the other settlements on and around Jupiter's moons.

The people of Io's orbital colonies are fairly rich, and they have a large and well-drilled navy. They haven't had to defend their territory from encroachment, and probably won't have to as long as they continue to provide energy for all the other settlements in the Jovian system.

Europa

Orbital radius: 417,000 mi.
Diameter: 1,950 mi.
Period of revolution: 3½ days
Gravity: 8% Earth normal
Escape velocity: 2,500 mph
Status: Underwater arcologies
Population: 30,000
Government: Various hostile states

The outer surface of Europa is an iceball, cracked and grooved by Jupiter's tidal forces. Its inhabitants are groups of people who came here for a variety of reasons. One group has staked a claim on behalf of RAM (without RAM's consent or support); another has claimed the satellite on behalf of "free Mars"; a

third supposedly represents the interests of the Belter Anarchy; and so it goes. . . .

The groups are housed in ten underwater arcologies (each of roughly the same size) beneath the ice, and all of the permanent residents have been very mildly genetically modified to help them withstand intense cold: few blood vessels near the surface of the skin and a thicker covering of fine, silky body hair.

Because of their diverse political and social beliefs, the arcologies of Europa are in a continual state of conflict. Most of the time, each settlement is officially at war with one other state and unofficially at war with several others. Europans have long memories, hold grudges, and tend to be violent.

The orbits above Europa (like the planet itself) are not controlled by any ground-based nations, and as a result are a mixture of Belter bottles, corporate satellites, and independent private habitats.

Ganymede

Orbital radius: 666,000 mi.

Diameter: 3,250 mi.

Period of revolution: 172 hrs. (7 days, 4 hrs.)

Gravity: 30% Earth normal

Escape velocity: 7,000 mph

Status: Underwater civilization

Population: 4,000

Government: Genetic hierarchy

Major exports: Foodstuffs

Major imports: Technology

The civilization of Ganymede has four layers: its orbitals, the ice crust forming the outer surface of the planet, the liquid water beneath that crust, and the rocky core of the planet proper (minimally excavated, but as yet unsettled).

The inhabitants of Ganymede's watery depths are genetically modified humanoids known as Ganymen. Their bodies are streamlined, more fishlike than human in many respects. They are bioluminescent, giving off a dim, eerie glow that slightly illuminates the immediate area. They have gills, webbed fingers at the ends of their arms, and a semi-rigid "tail," resembling a fish's dorsal fin, running along the spine. The bones of their skulls function much like sonar detectors, enabling them to "hear" by sensing differences in vibrations. Ganymen are expert geneticists and aquafarmers, and do export some of the high-protein food they raise, but have little reason to visit the solar system outside their realm.

The Ganymen's contact with the outside is pro-

vided by means of six widely scattered Ice Stations punched through the moon's icy shell. These are the remains of former ice-based colonies, now inhabited and maintained by immigrants from Europa, who fled from that moon to get away from the interarcology conflicts. Ironically, however, the "icemen" didn't really escape—competition between the Ice Stations is very intense, since each one wants to be the one and only middleman in dealings between the Ganymen and the outside world.

The near-orbit area around Ganymede is filled with space stations and small orbital colonies owned and operated by various business concerns that deal with the Ganymen. The Ganymen have a single "government" beneath the surface of the planet, but they have no desire to enter or influence interplanetary politics. The Belters, RAM, and the Ishtarians each maintain a token military presence with a base in orbit around Ganymede.

Callisto

Orbital radius: 1,170,000 mi.

Diameter: 3,000 mi.

Period of revolution: 400 hrs. (16 days, 16 hrs.)

Gravity: 20% Earth normal

Escape velocity: 6,400 mph

Status: Self-contained arcologies

Population: 15,000

Government: Imperialist economic cartel

Callisto is similar in appearance to Ganymede: a miles-thick covering of ice over a deep, planetwide ocean of water, all of it surrounding a rocky core. But instead of opting for genetic alteration and an underwater civilization (such as Ganymede and Europa have done), the settlers of Callisto preferred to find physical and mechanical solutions to the problems posed by the planet.

Callistans live in rock-and-metal citadels built on and into the ice; they journey below into the oceans only to work, harvest, and make repairs to equipment. Each citadel is powered by an underwater nuclear reactor beneath the surface of the ocean. Like the Ganymen, the Callistans make a living by cultivating and harvesting a form of genetically modified algae that is high in protein and other nutrients; they use some of it for their own food needs and export the rest.

Callistan government is stratified, with only the three largest arcologies having full voting rights; the other, smaller citadels are considered "colonies" of the big three. Callistans, unlike residents of the other large Jovian moons, also claim rights to the

space around their home, and to protect those areas from unauthorized incursions they have a well-developed laser defense system.

Callistans are human in appearance, and they have a distinct dislike of all modified races, including Europans, Ganymen, and the other genotypes who populate the Jovian system.

Leda

Orbital radius: 7,000,000 mi.
Diameter: 15 mi.
Period of revolution: 240 days

Himalia

Orbital radius: 7,120,000 mi.
Diameter: 100 mi.
Period of revolution: 251 days
Status: Ravaged by mining operation

Lysithea

Orbital radius: 7,260,000 mi.
Diameter: 15 mi.
Period of revolution: 259 $\frac{1}{2}$ days

Elara

Orbital radius: 7,290,000 mi.
Diameter: 20 mi.
Period of revolution: 260 $\frac{1}{2}$ days

Ananke

Orbital radius: 13,000,000 mi.
Diameter: 14 mi.
Period of revolution: 617 days (1 yr., 8 $\frac{1}{2}$ mos.)

Carme

Orbital radius: 14,000,000 mi.
Diameter: 19 mi.
Period of revolution: 629 days (1 yr., 9 mos.)

Pasiphae

Orbital radius: 14,600,000 mi.
Diameter: 35 mi.
Period of revolution: 739 days (2 yrs., 9 days)

Sinope

Orbital radius: 14,700,000 mi.
Diameter: 30 mi.
Period of revolution: 758 days (2 yrs., 1 mo.)
Status: Settled, built-up colony

The eight outermost Jovian moons are relatively small, and have been claimed en masse by the government of Callisto. The first four of these outer moons are Leda, Himalia, Lysithea, and Elara. Himalia, the largest of the four, has been extensively burrowed and strip-mined by the Callistans to provide them with raw materials for the construction and upkeep of their citadels.

The orbits of the outermost four moons are all severely "tipped" compared to the paths of the other satellites. Ananke, Carme, Pasiphae, and Sinope move around Jupiter in more of a north-south orientation (approximating polar orbits) rather than the east-west orbits (roughly encircling the planet's equator) of the inner moons. In addition, their orbits are retrograde—they move around the planet in the opposite direction from the other satellites. Both of these facts strongly suggest that the outer moons are not natural satellites, but actually wandering asteroids that were captured by Jupiter's gravitational pull.

The Callistans may claim all of the outer moons, but of course the claim is only enforceable when Callistans are present, and they do not regularly or frequently patrol these areas. A number of small, independent operations have done some excavation work on the outer moons, but the only permanent settlement is on Sinope, the remotest of all Jovian satellites. Sinope has been extensively mined and expanded, such that it is now an artificial world 30 miles across—nearly twice its original, natural size. Formerly a pirate haven, it has become "respectable" but will still deal with anyone with the correct price or pull for shady operations.

Saturn

6th Planet of Sol System

Orbital radius: 887,140,000 mi. (9.5 AU)

Diameter: 75,100 mi.

Period of revolution: 10,759 days (29½ years)

Period of rotation: 16 hrs., 39 min.

Gravity: 120% Earth normal

Escape velocity: 82,000 mph

Atmosphere: High pressure; mostly hydrogen, also helium, minute traces of other gases

Status: Uninhabited

The gas giant Saturn has no native or implanted life forms, though in theory bioengineered creatures could survive in its middle atmosphere just as the Stormriders do on Jupiter.

Saturn is best known for its rings, the huge belts of rock and ice fragments that give the planet its distinctive image when viewed from a distance. These rings are the home of the Ringers, independent miners who comb the rings for usable water ice, long-string hydrocarbons, and minerals. Ringers are a combination of man and machine, physically wired into their large, crustaceanlike spacesuits to produce a synthesis of humanity, robotic mechanism, and techno-organic creation. A Ringer and his suit are inseparable once the man has been installed in the machine; the creature would die if forced to abandon the suit under any conditions.

Each Ringer is an independent entity, and has no loyalty to any national, planetary, or corporate

state. Ringers congregate only with other Ringers and avoid "fleshy" humanity whenever they can (although they do engage in commerce, trading raw materials for energy supplies). They view community living as obscene, and think even the independent Belters to be too open and expressive.

The rings of Saturn are also the home of many of the solar system's Spacers—members of an incredibly modified gennie race who can live in free space for an unlimited time. The Spacers have no government, politics or even society. Loners in the extreme, their worldview is possibly the most alien among all the races and varieties of mankind.

Satellites of Saturn

Atlas

Orbital radius: 85,000 mi.

Size: 30 × 13 × 12 mi.

Period of revolution: 14½ hrs.

Prometheus

Orbital radius: 86,200 mi.

Size: 30 × 15 × 12 mi.

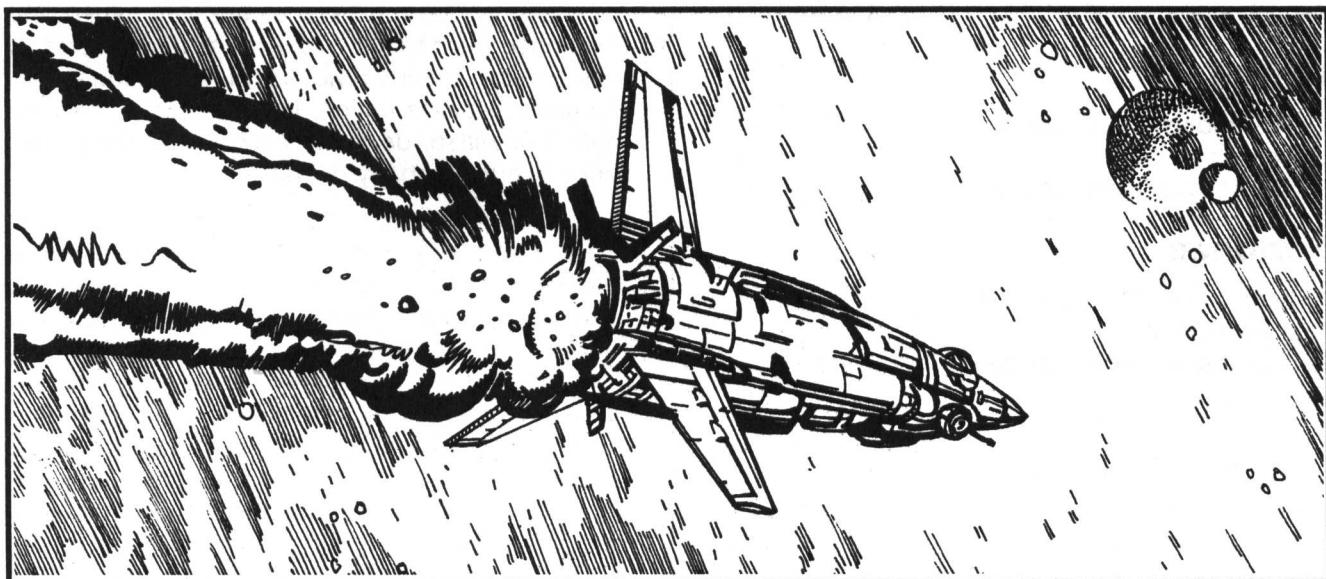
Period of revolution: 16 hrs.

Pandora

Orbital radius: 88,000 mi.

Size: 90 × 50 × 50 mi.

Period of revolution: 17 hrs.



A ship blazes its way through the void on the way to one of the Outer Worlds

Janus

Orbital radius: 99,000 mi.

Size: 90 × 65 × 50 mi.

Period of revolution: 18 hrs.

Population: 2,000

Ports: One Class B

Epimetheus

Orbital radius: 99,000 mi.

Size: 135 × 100 × 100 × mi.

Period of revolution: 18 hrs.

Population: 3,500

Ports: One Class B

The five innermost moons of Saturn lie within the thickest part of the planet's ring network, and as a result their general inclination is toward the Ringer civilization. There are a number of scattered settlements and space habitats in and around these moons.

Atlas, the closest moon, is used as a Ringer congregation point and is the location of a Ringer repair facility, where a miner can get a replacement for a piece of faulty spacesuit equipment.

Prometheus and Pandora are used as Ringer trading bases. Organizations from the major civilized areas of the Saturnian system send representatives here to bid on discoveries in the rings and on futures commodities dealing in ring products.

Janus and Epimetheus are found as the rings begin to thin. They are used as supply bases for the inner moons, and each one has an active spaceport. The artisans of Janus are also accomplished builders of small, specialized spaceships. These two moons occupy practically the same orbit, and in fact they actually exchange orbits in a regular pattern that repeats itself about every four years.

Mimas

Orbital radius: 115,300 mi.

Diameter: 245 mi.

Period of revolution: 22½ hrs.

Status: Single domed colony

Population: 2,000

Government: Dictatorship

Ports: One Class C

The first major moon of Saturn is a medium-sized body dominated by a huge crater in its northern hemisphere, called Herschel. This crater has been domed over to form a single huge arcology, which is ruled by decadent madwoman and her court. The ruler, Agatha Kiribashi, literally owns everything in

the settlement, including all citizens of the settlement. More than 200 Earth years old, she has been extraordinarily successful at keeping her aging process at bay by the use of drugs and genetic augmentation. She maintains control of her small empire through the use of cloned and genetically manipulated troops.

Enceladus

Orbital radius: 147,500 mi.

Diameter: 310 mi.

Period of revolution: 33 hrs.

Status: Unsettled; orbital habitats nearby

Population: 3,000

Government: Democratic council

Enceladus is an ice-world in the pattern of Ganymede and Callisto, though it is probably a soupy mix of ice and water clear to the core. The settlement of Enceladus is in orbit, a collection of various space habitats gathered together under the supervision of a single ruling council. Attempts at settlement and terraforming of the satellite itself have so far been delayed by lack of funds and interest.

Tethys

Orbital radius: 183,000 mi.

Diameter: 650 mi.

Period of revolution: 46 hrs.

Status: Single domed arcology

Population: 4,000 (plus transients)

Government: Merchant council

Ports: One Class B

Civilization on Tethys is concentrated in a 900-mile-long chasm that runs almost halfway around the planet. The chasm is nearly two miles deep in places and about five miles across at its widest, and has been domed over for its entire length and converted into a habitable arcology. It has been called the solar system's biggest shopping mall.

Tethys is the center of commerce within the Saturnian system, and is run by a council of "retired" merchants and corporate officials. Free trade is the order of the day; literally anything can be bought, sold or bartered in the marketplace of Tethys, as long as the people who run the place get their cut of the proceeds off the top.

A pair of Trojan moons orbit Saturn in the same path as Tethys, 60 degrees ahead of and behind the large satellite. The leading Trojan object is **Calypso**, a rock 20 × 15 × 15 miles in size, which has undergone extensive burrowing and has been converted to a prison that operates under the name "Calypso

Rental Facilities." Owned by the same merchants who run Tethys, the facility rents "storage space" to other governments and powerful individuals.

The trailing Trojan object is **Telesto**, 20 x 16 x 15 miles in size. Telesto is also under the control of Tethys, but this satellite is maintained as a separate government, which then sells citizenship, ship-registry rights, and living quarters to individuals seeking anonymity; in effect, it is the planetary version of a dummy corporation. Telesto "backs" spaceships of dubious quality and purpose, mercenary groups, and financial organizations of questionable repute.

Dione

Orbital radius: 234,000 mi.

Diameter: 700 mi.

Period of revolution: 65½ hrs.

Status: Several domed arcologies

Population: 8,000

Government: Various forms

Ports: Several Class C

Dione is similar to Tethys in composition and appearance, and has a huge chasm (called Palatine) as a major feature as well. In this case, however, the chasm and a number of other craters have been settled by a wide variety of individual nationalist city-states, all of whom have attempted to retain their own identities. The result is a collection of feuding petty municipalities, each with its own firmly rooted traditions and approaches.

Roughly half of Dione's surface is crisscrossed with veins of volatile hydrocarbons. These deposits are the object of several mining operations, and brisk competition (often breaking out in trade wars) exists between the settlements.

Dione has a leading Trojan moon, named **Helene**. It is about 22 x 20 x 20 miles in size and is currently unsettled.

Rhea

Orbital radius: 325,000 mi.

Diameter: 950 mi.

Period of revolution: 4½ days

Status: Abandoned arcologies

Population: Negligible

Rhea is a moon whose colonies have failed, leaving a series of ghost towns spread across its surface. Similar in appearance to Dione, complete with veins of hydrocarbons, Rhea would seem to offer the same kinds of opportunities for mining operations. But in this case, the intense competition for excav-

ation rights turned out to be deadly: The arcologies of Rhea spent so much time and effort wrangling with one another that they all stagnated and died economically. (The people of Dione should have learned something from this turn of events; maybe, someday, they will.)

Almost all of the surface settlements on Rhea were abandoned at the same time several years ago. Before and during the exodus of people from the surface, the few orbital settlements that were still viable were towed to Dione or Titan.

Pirates, scavengers, and other less than honorable individuals still live under some of the domes of Rhea (those few that have not been ruptured or rendered powerless).

Titan

Orbital radius: 760,000 mi.

Diameter: 3,200 mi.

Period of revolution: 16 days

Gravity: 33% Earth normal

Escape velocity: 7,000 mph

Atmosphere: Nitrogen, some argon, traces of methane and other gases

Status: Multiple arcologies; fiercely contested

Population: 50,000 or more

Government: Various colonial powers

Ports: Several Class C

Larger than Mercury and second in size only to Ganymede among the solar system's planetary satellites, Titan is cloaked in a thick, soupy, smoggy atmosphere.

Long before man took his first giant steps out into space, Titan was already known as a world where conditions were favorable for the formation of life—for one thing, it is the only place in the solar system other than Earth that has a nitrogen atmosphere. Nothing has been discovered in the intervening centuries to change that assessment, and as a result Titan is being terraformed by everyone with the resources to mount an operation.

RAM is there, of course. So are the Ishtarians, the Sun Kings, Belters, Callistans, Europans, and the merchants of Tethys. The net result of all these independent efforts is a rolling ecological catastrophe as each faction tries to use its own methods to turn Titan into its idea of a habitable world. The competition and confusion continue, without breaking into open conflict, because no faction wants to earn the enmity of all the others . . . and because no one can be really sure that the other guy isn't taking the right approach.

Hyperion

Orbital radius: 920,000 mi.
Size: 160 × 130 mi.
Period of revolution: 21 1/4 days

Hyperion is a potato-shaped rock, uninhabited except for a robot-controlled emergency aid station that was installed by a special task force of the Outer Worlds Conference—one of the organization's few productive joint efforts—and is monitored by Conference members on a rotating basis.

Iapetus

Orbital radius: 2,200,000 mi.
Diameter: 900 mi.
Period of revolution: 79 1/4 days
Status: Several small domed settlements
Population: 6,000
Government: Independent democracies

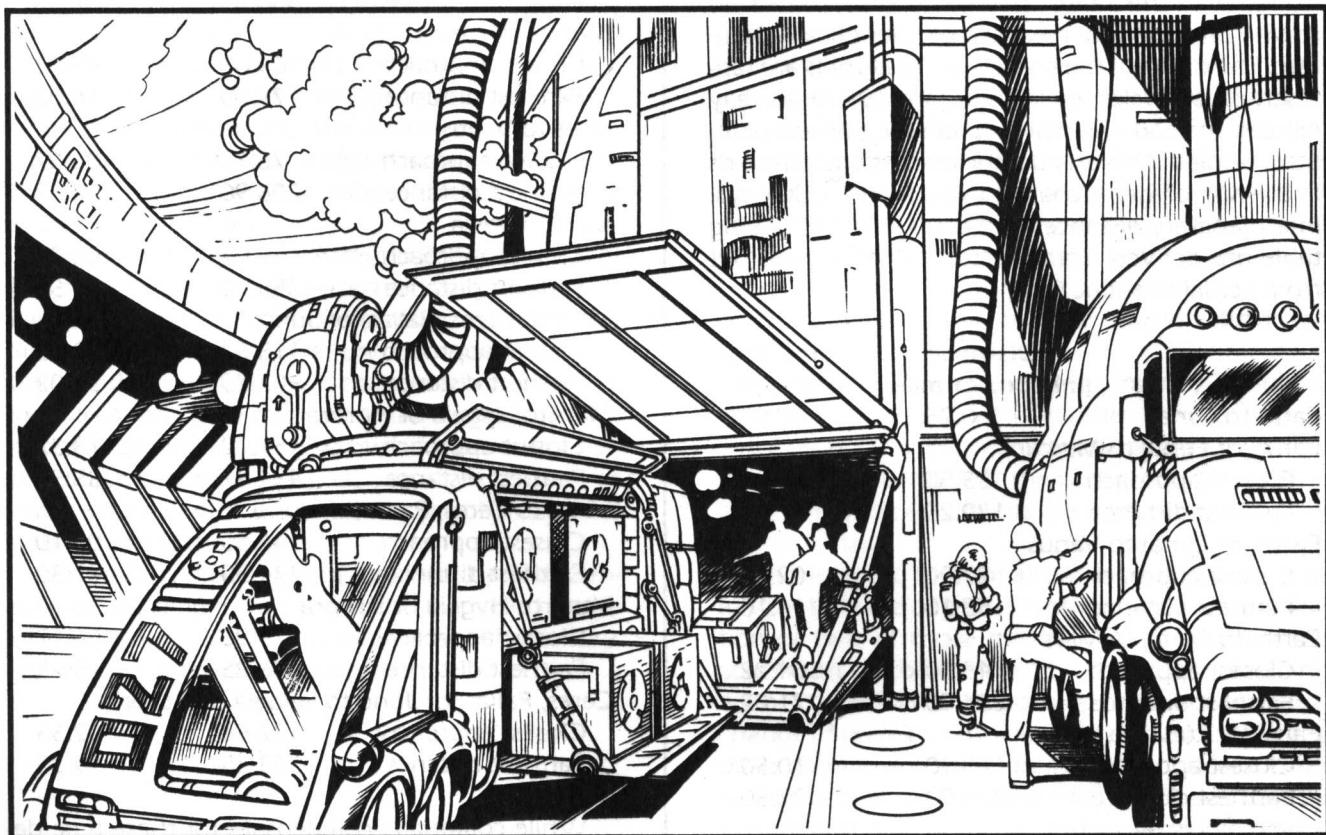
Iapetus is a two-faced moon. The side facing away from its direction of orbit is a normal-looking, light-colored iceball, while the other side is heavily coated with a thick, black, dusty paste containing a

high percentage of carbon. This black mineral is being harvested and refined by a variety of concerns, but the supply is running out; in a few years, or sooner, the settlers will have to find another way of making a living or else leave Iapetus for a greener pasture.

Phoebe

Orbital radius: 8,000,000 mi.
Diameter: 135 mi.
Period of revolution: 550 days (1 1/2 yrs.)
Status: Small domed settlement
Population: 1,500
Government: Democratic theocracy
Ports: One Class C

Phoebe, the outermost Saturnian moon, is a religious mission and sanctuary settled by members of various faiths and governed by a council of representatives from each faction. The Phoebeans have the support of the Ishtar Confederation, which has also donated a laser defense system to the cause... just in case a gently worded radio message isn't enough to keep an interloper from trying to land.



A shipment of cargo bound for a remote outpost is loaded aboard a transport

Talking Between Two Worlds

All videophones and radios capable of interplanetary communication (devices that are much more expensive than the standard "consumer" versions of the equipment, as described in *The Technology Book*) are linked to a series of powerful laserwave communications satellites scattered throughout the solar system. Signals move between these satellites at the speed of light (186,000 miles per second); however, there are still significant time delays to contend with when sending messages between planetary locations.

The information needed to calculate transit times for interplanetary messages is given on the table below. Since the distance between any two planets or satellites is not a fixed quantity, the time required to send or receive a message varies constantly. The following table lists the extremes of distance between planets; most of the time the actual distance between planets, and the corresponding time delay for communications, will lie somewhere between the extremes.

(Note: The Solar System Display map sheet included with the XXVc™ game is intended as an aid to play and is (bi)not meant to be scientifically accurate. The orbits of the planets and asteroids are represented as circles, even though they are actually ellipses. Instead of moving continually, as real planetary bodies obviously do, the planets and asteroids in the XXVc™ game change location every 30 days. Interplanetary distances and times in the following table are derived from the solar system map, not from actual scientific fact.)

	Distance (millions of miles)	Time delay (min:sec)
Earth to Luna	0.25	00:02
Earth (or Luna) to Mercury		
Closest approach	55.80	05:00
Farthest distance	130.20	11:40
Earth (or Luna) to Venus		
Closest approach	27.90	02:30
Farthest distance	158.10	14:10
Earth (or Luna) to Mars		
Closest approach	48.80	04:22
Farthest distance	234.80	21:02
Earth (or Luna) to Vesta		
Closest approach	120.90	10:50
Farthest distance	306.90	27:30

Earth (or Luna) to Ceres, Pallas, or Juno		
Closest approach	167.40	15:00
Farthest distance	353.40	31:40
Earth (or Luna) to Hygeia or Aurora		
Closest approach	199.95	17:55
Farthest distance	385.95	34:35
Mercury to Vesta		
Closest approach	176.70	15:50
Farthest distance	251.10	22:30
Mercury to Ceres, Pallas, or Juno		
Closest approach	223.20	20:00
Farthest distance	297.60	26:40
Mercury to Hygeia or Aurora		
Closest approach	255.70	22:55
Farthest distance	358.05	32:05
Venus to Mercury		
Closest approach	27.90	02:30
Farthest distance	102.30	09:10
Venus to Vesta		
Closest approach	148.80	13:20
Farthest distance	279.00	25:00
Venus to Ceres, Pallas, or Juno		
Closest approach	195.30	17:30
Farthest distance	325.50	29:10
Venus to Hygeia or Aurora		
Closest approach	227.80	20:25
Farthest distance	358.05	32:05
Mars to Mercury		
Closest approach	104.60	09:22
Farthest distance	179.00	16:02
Mars to Venus		
Closest approach	76.70	06:52
Farthest distance	206.90	18:32
Mars to Vesta		
Closest approach	72.07	06:27
Farthest distance	355.70	31:52
Mars to Ceres, Pallas, or Juno		
Closest approach	118.57	10:37
Farthest distance	402.20	36:02
Mars to Hygeia or Aurora		
Closest approach	151.12	13:32
Farthest distance	434.77	38:57
Vesta to Ceres, Pallas, or Juno		
Closest approach	46.50	04:10
Farthest distance	474.30	42:30
Vesta to Hygeia or Aurora		
Closest approach	75.80	06:47
Farthest distance	506.85	45:25
Ceres, Pallas, or Juno to Hygeia or Aurora		
Closest approach	32.55	02:55
Farthest distance	553.35	49:35

While computers compensate for these time delays somewhat—they can process an incoming

message and send an automatically generated reply (if one has been prepared) within milliseconds—long-distance communications are still more like telegraph messages than telephone calls. For a message from the inner solar system to some point in the Asteroid Belt, true two-way communication is impossible—messages are beamed much the way they would be sent along long-distance cables. After you send a message or a question, it will take at best several minutes—at worst, well over an hour—for you to receive a response from the other end. (As slow as that might seem, it's still a lot faster than sending a written communication by spaceship. And consider the way things were on Earth up until the late 1800's, when the fastest way of getting a message to the other side of the planet was a journey by sailing ship that could take weeks or months!)

Criminal Justice

The methods of punishing criminals in the 25th Century are as varied as the societies that administer punishment. For instance, on Venus, the Ishtarans would merely have the criminal's mind "altered" in a humane way; the Aphroditans would kill him and break him down into spare parts for their organ banks. RAM uses both of these methods of dealing with criminals (depending on the offense and, sometimes, the mood of the judge issuing the sentence), and also maintains prisons on Deimos, Earth, and in the Asteroid Belt for its more recalcitrant criminals.

The Outer Worlds (the Asteroid Belt and beyond) have "contract" prisons—secure asteroids which can be rented for the incarceration of criminals. Such locations can also be used to store merchandise or other types of goods that the renter wants to keep in a very safe and out-of-the-way place. The agencies or individuals who own the prisons generally don't care who or what you store in them or what you do with the prisoners (or objects) once you've locked them up.

The most common type of justice in the 25th Century is fast, simple, and dispensed from the muzzle of a laser gun. After all, even in the 25th Century, the frontier is still the Frontier.

Money

Logically, one would expect that currency transactions in the 25th Century would be electronic, and to a large extent, this is the case. Transfers of funds are carried out via telecommunications whenever possible. But there's still no substitute for getting your hands on a large chunk of valuable metal—and there's no way to transfer money electronically when it's being exchanged over a gambling table or between two shady characters in a dark alley.

For a while, it was projected by economists that the universal unit of value would be energy or power (the electrical, solar or atomic variety, not the political kind). This view was heavily promoted by the Sun Kings of Mercury, who knew a good thing when they saw it. With their easy access to solar energy of incalculable proportions, they would have become instant multi-megamillionaires. But, just as the oil sheiks of the Middle East in the 20th Century were unable to make oil the basis of currency, neither did the "power brokers" succeed in making energy the universal unit of exchange.

Energy is a relatively unwieldy monetary unit, economically speaking. Before you can receive a transmission of "currency," you need a place to store the stuff (a belt-pouch just won't do), and of course it takes energy to transfer energy. And no matter what substance is the backbone of the monetary system, it's tough to hand a bribe to a cheap politico or pay off a blackmailer when the exchange of currency has to be conducted electronically. In addition, the Last Gasp War taught everyone a valuable lesson about electronic and theoretical currency when electromagnetic pulses from the bombs that exploded wiped out the world's stock exchange systems.

In the 25th Century, the word "money" is still associated with gold, silver and other precious metals. Substances such as these haven't lost any of their value, because on all of the other worlds mankind has settled, these elements are even rarer than they are on Earth.

On the street, coins of all types are exchanged, as long as they are of gold, silver, copper or a combination of two of those metals. And, of course, the coins must be coins minted by a recognized issuing agency; normal transactions do not involve the exchange of jewelry, raw ore, or precious metal in any other form that it might be found in. No one cares what planet the coins came from; deals are done by weight and type of metal, and most people have a good idea of the relative value of a Martian newru-

ble versus a Venusian tang. (Luckily, for the sake of those with a lot of pocket change, most coinage is small and thin.)

Electronic credit/debit cards are often used by RAM executives and upper-echelon Lunars, who can afford to have accounts in banks, and less frequently by affluent members of other groups or societies. Mercurians, as a rule, still tend to use hard currency only. Some independent arcologies on Earth often have debit-card systems for transactions between residents of the arcology, but only the most dependable of these small-scale banking systems are backed up by a reserve of metal to support the currency.

Officially recognized paper money is nonexistent except in RAM-controlled work camps; each institution issues scrip to be used for purchases within that camp. Of course, the time-honored IOU is still a valid piece of currency (to use the term loosely), as long as the recipient agrees to accept it.

Banks—that is, large-scale financial institutions—are few and far between in the 25th Century. Many cities, arcologies, and even some smaller communities have “banks” that cater exclusively to their residents, but their influence doesn’t extend beyond the boundaries of the particular community. A resident of Chicagorg, for example, can’t necessarily walk into a bank in New Yorg and arrange for a transfer of funds from his hometown bank; as far as each institution is concerned, the other one doesn’t exist (or, at best, it does exist but can’t be trusted).

Two financial behemoths in the solar system are more or less universally recognized, such that someone with an account in good standing at either one of them can make any other smaller bank sit up and take notice.

Coprates Bank, Ltd.

This is one of the largest banking firms in existence, based in the RAM capital and with offices on Luna and Aphrodite (on Venus). Most RAM transactions pass through here, and this institution handles the accounts of most of the wealthy and powerful members of the Solar Alliance.

Firste Luna Geschaft-Zollstelle, GB

The Lunars are cultural descendants of the great Swiss banking houses of Old Earth, and this heritage shows in their banking system. The most trusted and honorable banking house of the Solar Alliance, Firste Luna (the short form of the name) is the place for numbered accounts, safety deposit boxes, gold and silver reserves, and “delicate”

transactions. There are several branches, the main one located at Tycho.

The Credit

In the early days of colonization, the Alliance established the *credit* as the standard denomination of value. A credit, abbreviated “cr,” was defined as the wage earned by an “average” person for one day of “average” work. As with all such semiarbitrary definitions, the distinctive meaning of “credit” has been blurred through the passage of time; economic fluctuations (inflation, recession, etc.) have changed the wage structure in various places throughout the solar system, so that hardly anybody makes exactly 1cr per day any more. But the term remains, and is useful as a common ground for transactions involving more than one type of currency. Electronic transfers of currency are always expressed in credits, and converted to the local currency when needed. Most of the time, prices in the XXVc™ game will be referred to in credits for ease of play.

Most Common Monetary Units

Planet	Name	Cr Value	Composition
Mars	Newruble	10.00	Gold
	Dolarube	1.00	Silver
	Penny	0.10	Copper
Venus	Tang	20.00	Gold & Silver
	Tak	1.00	Silver
	Tael	0.50	Copper
Mercury	Konig	20.00	Platinum
	Marquis	10.00	Gold
	Baronet	5.00	Silver

Earth, Luna, and the various independent civilizations in the Asteroid Belt do not have their own currency designations; residents in those areas simply use a hodgepodge of whatever coins they might have on hand. For instance, someone on Luna making a 65cr payment could hand over three tangs and one baronet, or five newrubes and one konig (getting five dolarubes or the equivalent in change), or any other combination that adds up to at least 65cr.

Digital Personalities

The computer systems of the 25th Century are extremely advanced—so advanced that an entirely unique level of computer programs exist. These programs, known as Digital Personalities, are fully aware, computer-based intelligences. There are two kinds of DPs, Constructs and Translated Personalities.

Constructs are purely computer-generated—they are created by a complex series of mathematical formulas, which generate a "personality." A primitive version of this would be the electronic brain of Masterlink, a Soviet "defense satellite" put into orbit in the late 20th Century. A more advanced version—certainly the state of the art for a constructed personality in the 25th Century—would be Doctor Huer (refer to the NPC Profile Card inside this boxed set), who, while based on Buck Rogers's memories of the original Dr. Faustus Huer, is primarily constructed mathematically. In most societies where they exist, Constructs have limited legal rights; they can own property, but cannot vote.

Translated Personalities are programs created by "mapping" the brain-wave patterns of a living human being, then translating these patterns into mathematics and generating a computer-based "clone" of the original. The biological person must be alive at the time of translation. A good example of this type of Digital Personality would be RAM Chairman Simund Holzerhein, who had his mind translated to a computer matrix shortly before the death of his body. The legalities of Translated Personalities are somewhat complex—current doctrine is that until the biological person is dead, the computer personality has no legal rights whatsoever. But upon the death of the original person, the computer copy assumes the full legal rights and privileges of the former. Needless to say, a computer copy that schemes to murder its original can and will be executed for murder.

To distinguish between the two types, the suffix ".dos" is applied to the end of the names of Constructs, while ".dop" is applied to the end of Translated names—for example, Huer.dos and Holzerhein.dop. In both cases, Digital Personalities are referred to as "it," unless (as in the case of both Huer and Holzerhein) the personality is so "human-like" that people tend to respond to it as though it were a living person.

Both types of Digital Personalities are extremely complex—so complex that, like crystals and snowflakes, no digital person can ever be replicated twice, or copied as a backup. Killing a Digital Per-

sonality is a tall order—they are thousands of times faster than any human, and can only be dispersed by using sophisticated "killer virus" programs. Destroying the computer itself isn't enough; in most cases, the Digital Personality will detect the attempt to destroy it virtually instantaneously, and by the time the killer virus is in a position to do any harm, the Digital Personality will have already left for another base. At best, such an attempt may prevent the Digital Personality from taking along many of its key information files and programs (the equivalent of Digital Personality possessions).

Digital Personalities live in computer systems of mainframe size (a personal computer or microcomputer, even of the 25th Century variety, is far too small). They are able to move around from place to place in the vast, connected network of telecommunication lines and radio links known as Computerspace. Computerspace reaches all over the solar system, and Digital Personalities moving within it are limited only by the speed of light. (Huer.dos, for example, could move himself from Earth to Mars in about three minutes, and then contact Buck Rogers anywhere on the planet by patching into a telephone, radio or video circuit.) Life in Computerspace is unfathomable to human thought, but Digital Personalities say that it's much like living in a dream world, which they can perceive in any way they wish. Movement is like teleportation to these superspeed mentalities.

Digital Personalities think and act much faster than any mere human can. However, in order to deal with the world of people, they must use some form of interface. This interface could be a telephone, radio, TV, videophone, or hologram. One common method of interfacing is the holoprojector, a small box about the size of a pack of cigarettes, with a radio link to Computerspace and a laser hologram generator. The Digital Personality simply enters the holoprojector through Computerspace and appears any way it wishes.

In fact, holos of all sorts are the most common means by which Digital Personalities manifest themselves to the outer world. Digital Personalities can "take over" almost any holo linked to Computerspace, unless special precautions have been taken to prevent this. Since holos are commonly used for advertising displays, receptionists, video-phones and TV screens, Digital Personalities have a lot of places in which they can "pop" up in unannounced.

Life Suspension

The original design for a life suspension device was developed in 1999—just in time to be installed aboard the vessel that Captain Buck Rogers piloted to his rendezvous with Masterlink. In Buck's case, the device was an outer-space version of an escape hatch, and it ended up serving exactly that function.

The system, known as a "dry suspension unit" in 25th-Century parlance, used electrodes for putting the brain into a dream state, while a computer overrode the autonomic nervous system and reduced life functions to the absolute minimum, creating a state of hibernation.

Medical theoreticians in the 20th Century were confident that a human being could survive in such an environment for as much as one year, based on experiments with laboratory animals and the known fact that some creatures—without the benefit of any medical technology whatsoever—lived for several months at a time in such a condition and suffered no ill effects. But they were not willing to suggest that an artificially hibernating man could live for ten years or even five.

How, then, did Buck Rogers stay alive for more than four and a half centuries? In the 20th Century, such an event was inconceivable; in the 25th, it is explainable.

Examination of Buck's ship after he was rescued revealed that the cooling chamber around his laser was ruptured at the very end of the battle with Masterlink, at roughly the same time that the life-suspension device was automatically activated. His cockpit was flooded with the coolant, and possibly the liquid reacted with gases and other substances that were loose inside the cockpit. The solution passed through his skin and permeated his cells. As the cold of space froze his comatose body, the solution acted as a sort of antifreeze, keeping his cells from rupturing. This additional, unforeseen step in the suspension process put a halt to Buck's life functions altogether—but without actually killing him.

The secret of this so-called "wet suspension" is yet to be unlocked, primarily because no one had an opportunity to give Buck Rogers a thorough physical examination immediately after he was revived. Apparently, as soon as he regained consciousness Buck's body began to assimilate or transmute the chemical that had kept him in stasis, and within hours thereafter no trace of the substance remained in his system. It remains for future scientists to reconstruct the elusive formula that helped Buck Rogers beat the unbeatable odds.

By the 25th Century, testing and refinement of the dry suspension method has made it 100% dependable for preserving life for as long as one year. The chance of surviving decreases by 10% for each year or part of a year thereafter—90% at one year and one month, 80% at three years, 60% at five years, and so on. No recorded case exists of a person being revived after more than ten years in dry suspension. The standard cost for undergoing the process is 2,000cr per month of suspension—payable in advance, of course.

While his body is in life suspension, all of a person's mental and physical processes, including disease and all forms of aging, are slowed to the point where they are detectable only by monitoring devices; to an observer using his physical senses, the patient appears comatose or dead. Typically, a person chooses to undergo life suspension if he is suffering from an incurable, terminal disease (hoping that a cure will be found while he's "in the tank") or if he wants to beat Father Time on a short-term basis for some reason.

It is possible for someone to be revived from dry suspension and subsequently "resuspended," but at least six months must go by before the process can be repeated without causing the death of the patient, and there is no known instance of a person having lived through four life-suspension treatments.

Food

Microwaveable food, which first came into vogue in the late 20th Century, has been drastically refined and improved in the intervening five hundred years. Anything edible that needs to be heated or cooked before being consumed can now be found in a custom-designed package—complete with a built-in, battery-powered microwave generator that cooks the food right inside its package: Just pull a tab, which exposes a solar cell or activates a microbattery, and seconds or minutes later the food is cooked to perfection.

Dozens of companies produce every level of ready-packaged meals from gourmet dinners to fast food, all of them requiring no refrigeration or special storage. Even plates and forks are included. (Most of these companies are subsidiaries of RAM, of course, but you knew that, didn't you?)

Even on extensively terraformed worlds, there isn't a whole lot of open acreage, so that by the time the average citizen sees the food, it's already been packaged. Fresh food is still available, how-

ever, if you have the money or if you live in one of the more affluent arcologies where hydroponic gardens yield fruit, vegetables, and spices. Fresh meat is a real rarity, since very few livestock farms and fishing industries remain in existence, but synthetic steak or halibut is virtually indistinguishable from the real thing—and since most people have never tasted the real thing, they don't know the difference anyway.

Nutrient pellets and pastes—the stuff of science-fiction stories and early outer-space exploration during the 20th Century—do exist, but are not popular or in widespread use. It's conceivable (maybe even a good idea) for someone planning an extended journey into the wilderness to take along a supply of easy-to-carry food pills, since he literally may not know where his next real meal is coming from. It has happened, on occasion, that some subsidiary of RAM in charge of an enormous construction project will import a large amount of food pills to dole out to the workers on the site; this can be more convenient and more cost-effective than shipping in tons of real food. But, given a choice, most people prefer good-tasting food that they can sink their teeth into, and the satisfying feeling of having a full stomach when the meal is over.

Cybernetics

Microengineering and improved computer technology have advanced the science of cybernetics to a level that was only dreamed about in the 20th Century. The function of nearly any part of the human body can be duplicated—sometimes even improved upon—by an electromechanical device.

In combination with the advancements in gene manipulation, cybernetics becomes cybernetics:

the process of creating organisms that are human, not human, and more than human all at the same time, depending on which part of the creature is under consideration.

Eyes and ears with enhanced abilities can be grown in tanks, then grafted onto computer brains that approach their programmed responsibilities with a single-mindedness that the biological human brain can't match. In a similar fashion, the rest of the organism's body can be composed of a mix of biological and mechanical parts. The result, in the case of this example, might be the world's best security guard—eyes and ears that don't miss a thing, coupled with a brain that concentrates on what it's supposed to do because that's all it knows how to do.

The creation of gennies (a short term for genetically altered organisms) is a discipline that's related to cybernetics, because some gennies do have nonbiological parts, but most are entirely organic—the result of gene-splicing that combines attributes of more than one species into a single creature. (The *Characters & Combat* book and the later section of this book contain more information on gennies.)

While gene manipulation has been practiced successfully for hundreds of years, cybernetics is still in its infancy. The cost of creating a cybernetic organism is so high that only governments and enormously rich business concerns can afford the necessary laboratory equipment, raw materials, and scientific talent; the process is still very much one of trial and error, so that even after you've paid your money, you still have to take your chances. Player characters in the XXVc™ game universe shouldn't even think about having cybergennies made to order—no matter how much money they have, it won't be enough—but they should be aware that such organisms do exist.

Players: Read no farther!

The remainder of *The World Book* contains information that is meant to be seen only by referees. If you are a player, please don't turn the page. Much of the enjoyment of the XXVc™ game, for players, comes from not knowing everything that the referee knows—until the referee chooses to reveal some information during the playing out of an adventure.

If you act as a referee for one XXVc™ game campaign and also participate in another campaign as a player, you'll need to become familiar with at least some of the information on the following pages. But when you run a player character, you'll have to do your best to "forget" the things you have learned in your capacity as a referee.

FOR THE REFEREE ONLY

Designing Your Own Gennies

If you're familiar with the AD&D® game or other role-playing games, it probably didn't take you long to realize that the gennies of the XXVc™ game universe are the equivalent of the "monsters" that are part of those other game rules. You've probably also discovered by now that the XXVc game doesn't include a collection of creatures similar to the old AD&D game *Monster Manual* or the newer *Monstrous Compendium*.

But that certainly doesn't mean that "monsters" don't exist in the XXVc game world—in fact, there are more strange creatures out there than you can shake a laser pistol at. The *Characters & Combat* book introduces you to some of the more prominent gennie-types, the races that players can choose from when creating their characters. Of course, all of those creatures—true humans included—can also be non-player characters and adversaries for the player characters. Even if those were the only types of "monsters" you could choose from, forever and ever, you'd still have a hard time exhausting all the adventuring possibilities of Spacers, Stormriders, Desert Runners, and the rest of these not-quite-human, not-quite inhuman character types.

But those aren't your only choices. In the line of modules and other game accessories planned to support the XXVc™ game, we'll be presenting and describing gennies that were designed especially to fit with those adventures and environments. And here's the really good news: You too can be a gennie creator. We want you to be. In fact, we feel so strongly about it that this section of *The World Book* is devoted to that subject.

The Procedure

Of course, you—the all-powerful referee—will always succeed in creating a new gennie whenever you want to. And as long as you follow the guidelines given in this section, your gennie will seem perfectly realistic to your players. But if you want to do your genetic research "by the book," the following procedure will help you determine which of

your creations actually turn out the way you want them to. This procedure should usually be used when you "arrange" for a non-player character Scientist to try to make a gennie—and should always be used if that Scientist is working on behalf of one or more player characters. (You can lead a Scientist to the laboratory, but you can't *make* him succeed.)

Manufacturing a new type of gennie takes a long time. Genes must be spliced using specialized equipment, then implanted in a receptive egg cell of the proper type. The new genotype must then be grown to maturity; even with advanced growth techniques, this may take several months. And even after all of that, the design may be a failure; the original blueprint may have been faulty, or an unexpected mutation may crop up.

After an embryo has been created, a gennie will require one day of time in a growth vat for every pound of weight of the finished organism. For example, a 180-lb. humanoid would need 180 days, or six months, to reach maturity. When half of the required time has passed, the Scientist will be able to tell whether his creation is capable of surviving. (Roll a Difficult Skill Check using the creator's Bioengineering skill; a failed roll means that the gennie is not viable and will die.)

When the gennie reaches maturity and is removed from the growth vat, the first thing the Scientist will do is examine it to see if it turned out the way it was supposed to. (This operation requires an Average Skill Check; failure indicates that the gennie has been "born" with an unforeseen mutation.) It will be up to the Scientist, or whoever commissioned the Scientist to do his work, to decide whether the creation should be allowed to survive or not.

A human-based gennie, like a human infant, is absolutely helpless at first; it must be trained to talk, walk, feed itself, and do the other things that an adult human is capable of. Fortunately, a humanoid gennie learns these things much more quickly than a human infant: This part of the process takes from 4 to 7 months (1d4 + 3), further modified by the Charisma of the Scientist as follows:

Charisma 8 or lower: +2 months
Charisma 9-10: +1 month
Charisma 11-12: -1 month
Charisma 13 or higher: -2 months

When the creation process is complete, your gennie is ready to take its place in the XXVc™ game universe. But just what sort of creature is it? Well, it could be almost anything, as long as it falls within the framework of the rules that follow. Although

there are restrictions on what a gennie can and can't be, you'll see that there's still room for plenty of variation.

The Three Basics

Every new gennie, regardless of what it looks like or how it acts, has these three characteristics:

1. It is based on real abilities. It's not possible to make a gennie that's capable of doing something that no existing Earth creature can do. For example, you can create a gennie that can move through the air by gliding or flapping its wings, because a wide variety of birds, lizards and small mammals have this ability. But you can't make a gennie that has no wings and flies by means of levitation, because this is not possible for any existing Earth animal.

2. Its characteristics are variations on traits that exist in one or more of the "source" creatures. In other words, use what you started with as a basis for what you end up with; heighten, enhance, or otherwise overdo normal traits, but don't carry the "enhancement" beyond the bounds of reality. A human-based gennie can be extraordinarily beautiful, strong or tough. It can have blonde hair whiter than any normal human's, legs longer and shapelier, muscles harder and leaner. It could also be uglier, more feral, and more nasty than anyone on Earth. What it couldn't be is a monstrosity with a third arm coming out the top of its head, or its heart where its liver should be and vice versa, because such creatures are biologically impossible to create with existing genes.

Also, don't fall into the "superintelligent animal" trap: You can't make a frog as smart as a man by simply saying that the frog's skull has a human brain inside it, or that the frog's brain has been upgraded to human ability. Intelligence is, to a great degree, a function of brain size, and you can't get a man's entire brain inside a frog's (or a dog's, or a horse's) brain cavity. You can *modify* an animal's brain to have improved (more humanlike) characteristics, but if you want a gennie that's as smart as a human, you have to start with a human.

3. It is designed for a purpose. The science of gene manipulation is advanced, but not so advanced that someone can walk into a laboratory and say, "Let's see what we get if we cross a garter snake with a platypus." It's a waste of time, not to mention money, to just throw together some chromosomes and find out what happens. Gennies such as the Terrine, the Stormrider, and the Delph were

all created to serve a purpose and fill a need; any gennie that you or your players create should likewise have a *real* reason for existing. Don't engage in "mad scientist" experimentation yourself, and don't allow your players to do that, either. If they try, then anything they want to create—assuming they find a Scientist who's willing to indulge them—will simply not survive. (But . . . if you like the idea of a crazy professor in a deserted outpost, turning out monstrosities that no "normal" Scientist would think about making, go ahead and set up his shop. Then leak some information to the PCs about his whereabouts, and watch the fun begin!)

The Gennie Profile Sheet

At the end of the *Characters & Combat* book, you'll find a couple of forms, one page designed for use with player characters and the other one especially for gennies—your creations. You can photocopy this Gennie Profile Sheet or use it as the basis of a form tailored to your individual needs. As you proceed through the following guidelines, fill in the appropriate places on the sheet with the information that you accumulate.

The Guidelines

It follows, from the basic rules given above, that there must be a lot of logic behind the design of any gennie, whether it's a variation of a human being or an animal that doesn't have any human genes (otherwise known as a "monster"; see the text later in this section). And to make sure that the end result is not only logical but realistic, here are the guidelines to follow when you get down to making specific decisions about what your gennie is and does.

One: Environment

The place where a gennie is created, or is meant to be used, will have a great effect on its appearance and general makeup. Its body should be engineered so that unusual or un-Earthlike conditions of its environment don't seriously affect the gennie's ability to survive and function.

For example, a gennie designed to live on Mars would have to cope with a thinner atmosphere and lower gravity than on Earth. It would need larger lungs and a slower respiration rate and would have thinner bones than an Earth creature of the same general type. To exist inside the atmosphere of Jupiter, a gennie would have to handle extremely high air pressure and strong gravity; thus, it would prob-

ably have strong, small lungs and thick, heavy bones.

To get you started, here are some examples of unusual environments and how they would affect a gennie's construction:

Planetary Condition	Modification
Light gravity	Thin bones, elongated body
Heavy gravity	Thick bones, huge muscles
Thin air	Huge lungs, large ears for hearing
Dense air	Strong lungs, small ears
Dim light	Large eyes, night vision
Bright light	Deep-set or small eyes
Absolute darkness	Eyes replaced by "sonar"
Extreme cold	Blubber or heavy fur
Extreme heat	Thin skin, radiating fins for cooling
Dangerous environment	Natural weapons, armored skin
Sand, snow or dust	Wide feet, eye-covering membranes
Aquatic environment	Webbed feet or fins, possibly gills

Two: Genotype

This guideline is a close relative of rules 1 and 2 above. Stick to the traits that Earth animals have, and in addition be sure to base your gennie on *one* kind of creature, referred to as its genotype. Most of the time, it should be obvious by a gennie's appearance or behavior what genotype was used for the foundation of your creation.

Gene manipulation is a process that involves splicing or grafting—you start with a foundation, and then you modify it by replacing some genes or tacking on some different ones to get the desired result. Resist the temptation to "mix and match," and always remember rule 3: You're designing a gennie to serve a certain purpose, not just tossing a bunch of different chemicals into a vat to see what comes out.

For instance, if you want to make a "dog-man," combining human intelligence with a dog's innate viciousness and extraordinary senses of smell and hearing, then start with a human genotype and graft on the dog genes for the characteristics you want to improve or alter. The result may be a man with an ugly disposition and the nose and ears of a canine—but it will be obvious that a human geno-

type was the basis for the creation. Or, tackle the project from the other direction: Start with a dog genotype, give it an improved memory and sense of awareness, and put "fingers" on the ends of its paws so that it can manipulate tools. The result still looks like a dog . . . but looks can be deceiving.

Three: Physical/Cultural Data

Now that you know what environment your gennie is designed to operate in, and what type of creature it's based on, you can make some decisions about what it looks like and how it behaves.

First, give it a name and make that the first entry on your Gennie Profile Sheet. Then fill in the blanks for the next few categories on the sheet. (You don't have to write out as much detail as we did for the gennie descriptions in the *Characters & Combat* book; sometimes a word or a short phrase will be all you need. If you need more room, use a separate piece of paper or the back side of a photocopied Profile Sheet.)

Physical Size: The height and weight of an average specimen.

External Covering: Skin color and texture, fur, scales, etc.

Eyes: Variations in color or shape; special abilities, if any.

Ears: Variations in size or shape; special abilities.

Mouth: Shape and size; special notes, especially related to eating habits.

Nose: Shape and size; special abilities, especially related to breathing.

Genotype: From guideline two (above), the basic creature type, plus a note of which other creature(s) contributed genes to the finished product.

Cultural: Notes on the gennie's society, including government, clothing, traditions, family life, etc. This information is not always necessary, especially for a monster gennie.

Put a lot of thought—especially imagination—into this part of the process, because these pieces of information are the nucleus that the rest of the gennie will be built around. And don't be afraid to keep building: You can add personality traits, quirks, good and bad habits . . . anything that individualizes your gennie and makes it a "person" that your players, for better or worse, will never forget.

Four: Balance

The key to applying this guideline is understanding that there's no such thing as a "super gennie." For every advantage that a gene-altered creation

has, it also has at least one disadvantage, and the two qualities are usually related in some way. For instance, a dog-man with super-sensitive hearing is able to pick up high-frequency vibrations—but those same vibrations, if they're very intense, might cause the gennie pain or some other difficulty, whereas a human with normal hearing wouldn't be affected by the vibrations at all.

It isn't logical (and probably isn't good for the game) for a gennie to have more strong points than weak points. You should always balance the gennies you create—and if your player characters want to make a gennie that's super-strong, super-smart, invulnerable, and utterly beautiful, let 'em go ahead and try. Increase the Bioengineering Skill Check to Impossible (or worse!), and if the creature manages to survive to maturity, then pick a good time to break the news to the PCs that their invincible "pet" seems to have developed a slight flaw: When it's exposed to any light source brighter than a twinkling star, it goes insane and attacks the first character it sees. How's that for a disadvantage? . . .

Here are a few examples of advantages and disadvantages, paired up according to how they might coexist in the same gennie.

Advantages	Disadvantages
Increased strength	Musclebound; low dexterity
Enhanced eyesight	Sensitive to bright light
Improved hearing	Injured by loud noises
Armored body	Low hit points
Resistant to poisons	Resistant to healing drugs
Natural body weapons	Unable to use other weapons
High intelligence	Low strength and/or constitution
Great attractiveness	Low wisdom
Enhanced reflexes	Nervous; inclined to panic
Rapid natural healing	Unable to reproduce
Water-breathing	Must remain in water
Able to fly	Difficulty walking
Resistant to cold	Low tolerance for heat
Resistant to heat	Low tolerance for cold

Five: Game Statistics

Now that you've described your gennie in words, you need to give it some numbers—the statistics that enable the creature to operate within the XXVc™ game universe and interact with other characters and creatures. In general, for creations based

on a human genotype, this process is pretty similar to creating a player character.

Attribute scores: Necessary for human genotypes, optional for others. Roll 3d6 seven times, assigning the results to Strength, Dexterity, Constitution, Tech, Intelligence, Wisdom, and Charisma. Arrange the numbers in a way that makes sense based on any advantages and disadvantages you've decided on; for instance, a gennie with enhanced strength probably has an above-average base score (11 or higher) in that ability. If the dice aren't cooperative, you can chalk the results up to bad luck (or a clumsy Scientist), or you can "create" an appropriate attribute score, either higher or lower than what you actually rolled.

If you're creating several gennies of a certain type, you can dictate that one set of dice rolls stands for every creature in that group, or you can roll separately for any or all of the individuals—just as player characters are all created one by one, even though two or more members of the same group of PCs might be the same kind of gennie.

Now is also the time to think about Racial Modifiers—the bonuses and penalties that certain races receive to their dice-generated attribute scores. If the highest number you rolled on 3d6 was a 14, and you really think your super-strong gennie deserves more muscle, then you can tack on a Strength bonus to bring that number up a little more. On the other hand, if the lowest number you rolled was a 10, and your creation was supposed to be rather dumb, then use that "low" score for Intelligence and reduce it by applying a penalty. It's a good idea to stay within the range of -4 to +4 when you decide bonuses and penalties; as you can see from the Racial Modifiers Table in the game rules, none of the "player character gennies" have modifiers greater than 3 in either direction. Keep in mind that once you establish a Racial Modifier for a certain type of gennie, you should use it for every new gennie of the same type, whether you make separate dice rolls for each creature or not.

One way to refine the process of generating attribute scores even further is to dictate that a certain score has a minimum or maximum: A muscular gennie won't have a Strength score of less than 12 (or whatever), and a dumb one can never have an Intelligence score of more than 8. You can reroll "illegal" dice results, or you can simply assign the minimum or maximum score instead of the number you rolled. Remember, it's *your* creation; the dice are there to help you, not to defeat your purpose.



A scientist checks the progress of his latest genetic creations

Combat stats: Assuming your gennie is going to get into a fight every now and then, it will need some hit points, an Armor Class, and a THAC0 number. To generate hit points randomly, you'll have to decide what size Hit Dice the creature uses and how many of those dice to roll. Gennies that are created especially for combat, with enhanced physical characteristics, will probably have d8's or d10's for Hit Dice, while creatures that rely more on intelligence and sensory abilities will probably use d6's or even d4's. Again, be realistic: Don't load up a gennie with more Hit Dice or hit points than it deserves.

Assign an Armor Class by comparing the gennie's outer body with the types of protection given in the game's Armor Class Table (refer to the descriptions in *The Technology Book* for more information on what the armor types are made of and what they look like). Adjust this number if the creature is considerably larger or smaller than a normal human. For instance: A bird, even though it has a delicate body, deserves a good Armor Class because its small size makes it tough to hit; an elephant, despite its tough skin, is a pretty easy target to hit, so you might want to raise (worsen) its Armor Class slightly.

Deciding on a THAC0 number can be the most

difficult part of this step. If it's possible, locate a place on the game's THAC0 Table that corresponds with the gennie's nature and its combat ability: Does it have the attacking ability of a 7th-level rocketjock, or is a 1st-level medic closer to the truth? If your gennie was designed to have a certain career (just as player character gennies can have), then just use the number that corresponds to its Hit Dice (level) and career. Otherwise, take all of the gennie's characteristics into account and assign a number that seems appropriate.

Saving throws: Pair up your gennie's list of advantages and disadvantages with the game's Basic Saving Throws Table. If you have a good reason for doing so, adjust one or more of the numbers on the table. For example, resistance to radiation might lower the number needed to make a saving throw (13) by anywhere from 1 to 3; a gennie that's resistant to extreme cold and vulnerable to heat would have its "Heat & Cold" saving throw number altered in both directions. If you don't have a reason for changing a number, then just use the value from the basic table. Except in extraordinary circumstances, no basic saving throw number should be modified by more than 6 in either direction.

Movement rate: Does it walk like a man, dart around like a Desert Runner, or lumber along like a Worker? Using the Movement Rates Table in the game rules as a basis for comparison, decide how fast your gennie can move. If it's a swimmer or a flier, then use the figure for the Delph or the Stormrider as a starting point—but keep in mind that those gennies were designed specifically to be swimmers and fliers, so their movement rates are probably about as good as they could get.

Six: Skills

Only a human-based gennie can have skills, and even then it isn't necessary to hand them out; this is simply a matter of imagination and individual decision. If you want a gennie to be able to pilot a jetcar, give it that skill—but probably not at a high level. On the other hand, if you've designed a gennie especially for the purpose of flying a jetcar, then it must have a high level of skill in that ability.

If you want to incorporate skills into the process of creating a gennie, go ahead; just remember that every skill is an advantage (even if the skill is at a low level), and for the sake of balance you should build in a corresponding disadvantage. A gennie that's created to be a jetcar pilot might refuse to voluntarily go aboard any other kind of vehicle . . . which could be a real problem if you want to take it on a trip from Earth to Luna.

Making "Monsters"

Gennies that don't start with a human genotype are collectively known as "monsters" (even though some of them might be friendly and gentle creatures). As a standard way of describing monsters, we'll use the format from the *Monstrous Compendium* accessories for the ADVANCED DUNGEONS & DRAGONS® game. If you're familiar with that game, you'll recognize the list of monster characteristics on the Gennie Profile Sheet. (Omitted from the standard *Monstrous Compendium* presentation are all of the statistics—Armor Class, size, etc.—that you've already put down in other places on the sheet during the above process.) Here's how to fill in the blanks in this section of the sheet:

Climate/Terrain: The monster's native planet or natural habitat.

Frequency: A relative term related to the likelihood of randomly encountering the monster in its natural habitat; either common, uncommon, rare, very rare, or unique (one of a kind).

Organization: The basic social group (family, herd, swarm, etc.) of the monster. "Solitary" is also

a possible entry here.

Activity Cycle: If the creature is more active in darkness or daylight, or in a certain seasonal period, here's the place to say so.

Diet: Any food that the creature prefers or must have to survive. "Omnivore" applies for a monster that will eat anything.

Intelligence: If the monster doesn't have specific attribute scores, this is a general statement of its intelligence: nonintelligent, animal, etc.

No. Appearing: The usual population of an encountered group of these creatures, often expressed as a number range with particular group size determined by a die roll.

Special Attacks and Defenses: This information, usually concerned with combat abilities of some sort, should be mentioned under "Advantages" (see above), but can also be put down here in short form for easy reference.

From Theory to Practice: Building the Ganyman

You first met this "fish-man" earlier in *The World Book* as part of the description of Ganymede, one of the moons of Jupiter. Now we're going to create the Ganyman, using the guidelines given above.

Guideline One: Environment. Our gennie will be living under the ice of Ganymede. It will function in an aquatic world with light gravity. Hundreds of millions of miles from the Sun, this underwater world will be extremely cold and dark.

Guideline Two: Genotype. We want the Ganyman to have humanlike qualities where intelligence and psychological makeup are concerned; also, it needs fingers to manipulate tools and equipment. So we begin with a human genotype—but after that, things get pretty fishy. The Ganyman will have a fin along its spine, extending into a stiff but still flexible tail that is separate from its legs; flipperlike extensions in place of human feet; and webs between its fingers, all to enable it to move through the water. The scales making up its skin are very tough but also very small, so that the creature's exterior appears smooth even under close examination. A layer of blubber between the skin and the interior of the body provides insulation from the cold. For streamlining, the head merges gradually into the upper arms; the body has no neck or shoulders, in human terms. Of course, the creature will have to breathe through gills (located low on the sides of the head). Human-type ears are replaced

with a fish's auditory system; sound vibrations are picked up by the bones of the Ganyman's skull and then transmitted to the inner ear, which is not exposed to either the water or the cold. The eyes resemble a fish's more than a human's, with enlarged pupils to take in as much light as possible. The Ganyman also has natural bioluminescence, a characteristic of some deep-water fish that enables them to radiate a soft glow of light directly from their bodies.

Guideline Three: Physical/Cultural Data. Because we worked out the Genotype description above in quite a lot of detail, much of this data already exists. Here's how we'll summarize the creature so far:

Physical Size: 9 to 10 feet long, 250 to 300 lbs. (We want the Ganyman to be long and strong, streamlined but still bulky enough to have a decently thick layer of blubber.)

External Covering: Very small scales; "skin" appears smooth and is bioluminescent. Fins and webbing for locomotion. Coloration black, gray, or a pattern of varied shades of these colors.

Eyes: Large fishlike pupils, green or black. Membrane covering provides protection and insulation. Wide range of visual ability, from bright light to near blackness.

Ears: Vibrations sensed through skull bones, transmitted to fully enclosed inner ear.

Mouth: Narrow slit across the bottom of the head, filled with rows of needlelike teeth that are used only for defense. The Ganyman takes in food (see "Cultural" below) without needing to bite or chew it. Speech is a system of whistles and clicks, similar to the way a dolphin "talks." A Ganyman could speak the words of a human language, but with great difficulty.

Nose: Nonexistent; no sense of smell.

Genotype: (Covered in the preceding section.)

Cultural: Talented geneticists and aquafarmers, the Ganymen live in the ocean of water between Ganymede's icy outer shell and its rocky core. They were designed to colonize Ganymede, and as part of that effort to create and cultivate a special form of bioengineered algae that is used as a food source not only for the Ganymen but for members of other civilizations among the Outer Worlds. Their cities are enclosed by domes—not to keep the water out, but to keep the "algae farms" from drifting randomly through the ocean. They contact the outside world, when necessary, by traveling to several Ice Stations that were built on and into the icy crust by former col-

onists (who have long since abandoned the places).

The original Ganymen (several dozen were created all at once, to "seed" the environment), as part of their nurturing, were given a very basic education in biogenetics so that they would be able to maintain the crop of special algae. Then they were taken to Ganymede and dropped off, along with some basic pieces of equipment and a starter supply of algae. Over the years, the Ganymen have not only survived but prospered. After scavenging raw materials and technology from the Ice Stations, they built their underwater domes and furnished them with power sources (turbine-driven) and scientific equipment. The Ganymen have built on their basic knowledge of gene engineering to the point where their algae crop is many times harder and more protein-rich than the original strain, and it is thought that they now have the ability to create new gennies of their own design. However, since they don't have access to raw genetic material, it is safe to assume that—for the time being, at least—they aren't actually working on such projects.

Ganymen, by their nature and because of their environment and location, are extremely reclusive. Since they are virtually self-sufficient, they only trade with the outside world when they have a large excess of algae or a real need for some item from the outside (such as, perhaps, the ingredients for a new gennie).

Guideline Four: Balance. Now we'll go back through what we've written and compile lists of advantages and disadvantages to see how well balanced the Ganyman is:

Advantages	Disadvantages
Water-breathing	Must remain in water
Resistant to cold	Low tolerance for heat
High Constitution	Low Wisdom
High Strength	Low Charisma
Natural weapon (teeth)	Can't use rifles (no shoulders)
Bioluminescence	Inability to conceal self
Tough skin (improved AC)	Can't wear normal armor

The references to attribute scores will be explained in the following section. As for the last two disadvantages, they weren't mentioned earlier—because we just thought them up, as ways to balance the advantages they're associated with. It's nice to have a constant, internal light source, but if the Ganymen are ever attacked by outsiders, they

won't be able to use darkness as a means of cover or concealment. Their tough skin gives them a good natural Armor Class, but since they can't wear normal armor (and haven't manufactured any special armor for themselves) that's as good as it will get.

Guideline Five: Game Statistics. The Ganyman's large and heavy body deserves a +2 bonus to its Strength score, and we'll give it a generally high Constitution (another +2 bonus) to reflect its ability to survive in the inhospitable environment of Ganymede. The bad news is that Ganymen have low Wisdom (-3 penalty) because of their isolation from the outside world, and their Charisma is very low (-4) with respect to how they're seen by members of other races. However, a Ganyman suffers no Charisma penalty when dealing with others of its own kind.

Let's say that a Ganyman must have a minimum Strength of 9 and a minimum Constitution of 11. Its Wisdom can be no higher than 10, and the same goes for Charisma. (Maximums and minimums apply to the scores generated by dice rolls, before the bonuses and penalties are taken into account.)

Although the Ganyman wasn't built for combat, it could probably hold its own in a fight against opponents of moderate strength. We'll give the creature a natural Armor Class of 4 (perhaps modified by Dexterity), 3d8 for Hit Dice (with a possible bonus to hit points for high Constitution), and a THAC0 number of 19 (slightly tougher than a 1st-level player character).

For assigning saving throws, our job is fairly easy because modifiers for another water-breathing creature, the Delph, are already given in the game rules. We'll use the same modifiers, with two exceptions: The Ganyman's resistance to cold and vulnerability to heat are both more extreme than the Delph's, so we'll use the maximum modifier of 6 in each case. Thus, the Ganyman's saving throw numbers are these:

Explosion/Plasma Bolts:	12
Electrical Shock:	12
Paralyzation/Stun/Falling:	12
Toxic Atmosphere/Gas/Poison:	13
Suffocation:	12
Radiation:	12
Extreme Heat:	19
Extreme Cold:	7

Ganymen, like Delphs, were engineered to be aquatic creatures, so we'll give them the same movement rate—a top swimming speed of 600 feet per round. Could Ganymen also move by walking on their flipper-feet? Sure; although they don't use

this method of movement in their current environment, we should prepare for the possibility that they'll develop some sort of water-helmet that will enable them to leave their liquid domain. In that case, they could slap along at 240 feet per round.

There are two more game statistics to determine: damage and range for the Ganyman's bite attack. We'll say 1d8 and 6 feet, the same figures as for a sword. (Of course, the Ganyman's mouth doesn't extend six feet away from its body, but we'll assume that the creature can lunge out and strike against any target that gets that close.)

Guideline Six: Skills. As outlined in the Cultural information above, Ganymen have the Bioengineering skill—ordinarily available only to Scientists, but which these gennies needed in order to serve the purpose for which they were designed. If it ever becomes important to know if an individual Ganyman succeeds in using the skill, here's some advice you can try.

Only a Ganyman that has received training in Bioengineering (a member of the original group, or a descendant that has been taught by his ancestors) can have the skill, and the creature's basic level of ability will be from 11 to 20 (1d10 + 10).

For a Ganyman with the skill, replenishing the supply of algae requires an Average Skill Check, improving the algae is a Difficult task, and creating a new gennie is an Impossible job. Creating a new gennie also requires access to the proper raw materials, which is even tougher than Impossible for Ganymen to obtain at this point in time. But one of these days, someone might make the mistake of trading gene samples to the Ganymen for algae. Will that happen, and what events will follow? Well, those are questions that we're leaving up to you to answer.

... And that's the Ganyman, a creature that certainly falls into the category of "strange but true." Strange, because a *working* hybrid of man and fish is certainly still in the realm of fiction, from our 20th-Century point of view. But true, in the context of the *XXVc™* game universe, because we stuck to the guidelines and followed the rules: The Ganyman isn't capable of doing something that a man or a fish can't do. Externally and internally, it is a reasonable variation on the basic human genotype; we haven't given it four arms, a head at each end of the body, or anything else *really* weird. And it was designed for a specific purpose—a purpose that we've used as a foundation to give it a logical body structure and a believable culture and society.

The XXVc™ Game Adventure

The XXVc™ game draws directly from the rich heritage of 1940's and 1950's science fiction. This type of adventure fiction combined the heroic action of early pulp serials with theories from the frontiers of scientific knowledge to create its own unique genre: a type of space opera with machines that *worked* and heroes that had the right stuff.

In the 1990's, the flavor hasn't changed—but the ingredients are different. Compared to what we knew about the solar system at the start of the Space Age in 1957, our knowledge of the planets and their satellites has increased immeasurably. Advances in computer hardware, rocket propulsion systems, and other areas of technology and science are, from a 1950's perspective, nothing short of astounding.

So, what does all of this education and sophistication do to the pulp-hero style of science fiction? The answer, in this case, is: absolutely nothing. At least, nothing bad.

The stage upon which the XXVc™ game is played out combines the best of both worlds. The cast of characters are cut from the same mold as the colorful, memorable heroes and villains of yesteryear. The props are taken directly from today's scientific fact and theory—and then put on "fast forward" as we imagine how much farther, physically and technologically, man will be able to go in the next few centuries.

The result is a role-playing game with untold potential for excitement and adventure. You, the referee, are standing on a high plateau in the center of the stage. You can see for millions of miles in any direction. You have a pretty good idea (if you've read the earlier sections in *The World Book*) what's out there. You, and your players, can go anywhere you want.

The opportunities are out there, but to take advantage of them you have to craft *adventures*—things for the player characters to do, and reasons for doing them. The stage is set, the props are in place, and the characters are waiting in the wings. All that's lacking is a script—and that's where you come in.

In this section of *The World Book*, we'll give you general advice on how to create exciting and challenging adventures. We'll toss in a few specific story ideas along the way, mostly in the form of examples, but the main thrust of this section is toward

giving you a framework that you can apply to any adventuring idea you come up with. We're also going to publish adventures and other accessories designed for use with the XXVc™ game, of course—in fact, you'll find a short piece called "Ghost in the Machine" just a few pages farther on, to get you started right away. But if you and your players get together frequently, they'll be counting on you to compose adventures for many of those game sessions. Here's how to go about doing that.

The Setting

As the saying goes, you've gotta start somewhere. Well, the solar system is a big place made up of lots of little places, each one different from all the others. What are some of the places that interest you the most, and why are they interesting to you? How can you turn that interesting aspect into the germ of an adventuring idea? Jot down a few ideas for adventure settings, and don't worry right away about how to whittle down the list; that will occur naturally as you consider other factors.

For example, it's never a bad idea to start beginning player characters on Earth—make them fight their way out of the sprawls, or smooth-talk their way into an arcology that doesn't let just anyone inside its dome. Have them make a trip to one of the Venusian Aerostates as couriers charged with carrying a supply of gravitol back to the rich merchant who hired them. Send them off to Chryse, on Mars, to investigate rumors of a vein of uranium discovered at the bottom of the Boreal Sea. And don't forget that ships can be settings, too: Put them aboard a space liner (as crew members or passengers) and see what they do when a RAM cruiser orders the liner to stop for "inspection."

As you can see from those examples, deciding on a setting involves more than just naming a place. By identifying something interesting about the setting—whether that something is real, such as the threat of a RAM cruiser intercepting a liner, or out of your imagination, such as the uranium vein near Chryse—you've already started to make decisions about the player characters' situation and the adversary or challenge they would encounter in that setting.

As you've probably figured out by reading the other game materials, the center of all the forces shaping the XXVc™ game universe is RAM—and more specifically, RAM's role in subjugating and plundering Earth. The major non-player characters we've described—Buck Rogers, Wilma Deering,

Black Barney and the rest—are involved, directly or indirectly, in the struggle of NEO versus RAM. And all by itself, that struggle could provide enough adventuring ideas for years of game-playing. But in the 25th Century, there's a *lot* more than that going on. We hope and expect that Buck and the other NPCs will play a significant role in your version of the XXVc™ game world, but they don't have to be part of every adventure setting you come up with. (Of the four setting ideas we've presented above, only one has anything to do with RAM.)

The setting that you decide to expand upon will depend on some facts and circumstances particular to your playing group. What types of characters do your players want to role-play? If you're designing an adventure for an ongoing campaign, what's the current situation (location, finances, equipment) of the PC group? Does the group prefer adventures that can be played out in one session of gaming? Do the players enjoy out-and-out combat missions, mysteries and puzzles, or a combination of both approaches?

As you answer these questions, you'll be able to eliminate some possibilities from your list, or put the elements on the list into an order of preference. Eventually, one idea will rise to the top. Go with it. And then move on to the second major element of any adventure: conflict.

The Villain

Settings come and settings go, but a good villain (unless vanquished) goes on and on. He can be the driving force behind dozens of adventures. He's a great resource and should be used as fully as possible.

Don't settle for making a faceless bad guy with a lot of hit points into a major villain. A well thought out villain is much more than that. He could be handsome, brave, intelligent, even romantic. He should be driven by desires more complex than just "I want to kill the player characters." He or she should have feelings, ambitions, weak spots, and quirks.

For example, Killer Kane is handsome, clever and heroic. In some ways, he's a mirror image of the XXVc™ game's major heroic figure, Buck Rogers. But Killer is driven by two strong forces beyond his control: his love for Wilma Deering (whom he can't have), and his desire to prove himself better than all the Martian overlords who have scorned him. His desire for vengeance and the rejection of his love have twisted an otherwise noble character into a

villain capable of destroying whole worlds for the sake of ambition.

Unless he's insane (an aspect of villainy we won't consider), no villain is bad simply because he enjoys being bad and wants all the good guys in the solar system to gang up on him. Every villain has a goal, and doing evil deeds is necessary to attain that goal. Possible goals, out of the multitude that exist, include the domination of a city or an asteroid; the acquisition of incredible wealth; the destruction or ruination of another person whom the villain hates for some reason; and the hijacking of someone else's battler.

The goal of the villain in your adventure should directly threaten the player characters, or at least cause them a lot of concern; otherwise, they won't care one way or the other about it. For example, the big goal of RAM is the total domination of the solar system. If this doesn't bother your PCs, maybe that's because they haven't had any first-hand experience of what the attainment of that goal would mean to them. So . . . arrange for them to be surrounded by a squad of RAM troopers; they either have to fight their way out (which should *not* be easy) or risk being captured and thrown into an asteroid prison. No matter how things work out, they'll feel differently about RAM from that day forward.

You may want to create several villains, working together or at cross purposes. This level of play allows you to throw more complications at your adventurers; they may find themselves forced to cooperate with one villain in order to defeat a greater threat, or up against the combined forces of several villains at once.

Villains don't always have to be would-be planetlords or even bad guys with a lot of manpower and firepower backing them up. In the "Chryse uranium" scenario, for instance, the villain might be another group of (non-player character) adventurers who heard the same rumors and will try to beat the PCs to the right spot. They could be weaker but craftier than the player characters, stronger but dumber, or almost an exact match in numbers and weaponry. And in this case, the bad guys have the same goal as the PCs—the difference is in what the bad guys are willing to do in order to reach that goal.

The XXVc™ game world contains several "prefabricated" villains—first and foremost, the evil Martian empire of RAM, personified by its computerized, soulless leader, Simund Holzerhein. There's also Ardala Valmar, the seductive and ruthless Martian princess, and Killer Kane, who was briefly described above. (All three of these char-

ters have their own NPC Profile Cards in the XXVc™ game box.) Some other bad guys are easy to identify, either by name or general type, such as Agatha Kiribashi, the decadent queen of Mimas; corrupt Sun Kings who have sold out to Mars; the power-hungry Callistans; the misfits and outcasts who inhabit Rhea. Even Luna, a politically neutral world, has its share of shady characters who'll do anything for the right price or the right reason.

Henchmen

Henchmen are subvillains, the guys under the villain in the hierarchy of bad guys. While the villain often stays behind the scenes, his henchmen are constant and obvious threats to the player characters; they are the guys sent to commit the assassinations, steal the secret plans, plant the bombs and do all the other jobs the villain considers beneath him. If your major villain is a really nasty, powerful sort, using henchmen is a good way to start the player characters off small. Early in a series of consecutive adventures involving the same villain, henchmen can be almost as weak as the beginning characters; as the heroes knock them off, new and more powerful henchmen can arise to create greater challenges. The villain, of course, stays tantalizingly out of reach, pausing to sneer, threaten, and set another evil plot in motion against our hapless player characters.

Thugs

Thugs are to henchmen what henchmen are to villains. In any organization of bad guys complex enough to have more than two levels of authority (RAM has *lots* of levels), thugs are the low-level operatives: the faceless legions who exist to intimidate or overwhelm player characters. They are guards, kidnappers, knucklebusters, safecrackers, and other types of spear carriers—threats that are not important enough to be made into individual personalities, but which can kill PCs just the same.

Allies

To counterbalance the bad guys, you'll need to create a cast of supporting characters to aid the PCs on their missions. Like villains, these allies should have their own personalities, motivations, and quirks. Supporting characters can be family members of the PCs, employers, law-enforcement authorities, or other adventurer types (non-player characters) who have a score to settle with the bad

guys. Two major supporting characters in the Buck Rogers saga are Doctor Huer, the digital personality based on Buck's friend from the 20th Century, and Black Barney, the gennie and former renegade who became Buck's ally.

Constructing the Adventure

You have a situation, a villain, a few good (. . . er, evil) henchmen, and a cast of supporting characters to aid the heroes. Now it's time to design an adventure that uses all these parts.

A good XXVc™ game adventure should work like an old-fashioned adventure serial; it should have thrills, chills, villainy, heroism, and maybe a touch of romance. The best adventures have a good "hook" at the end, suggesting another adventure to follow, so that your players will be eager to come back for the next game session.

One way to get that serial feeling is to know where you plan to go with an adventure. The first step is to sit down and decide what the goal of the adventure is. Are your player characters just going to defeat Evil? Too general. How about if they learn about a rogue Mariposa and find out that they have to disable it before it turns its microwave projectors on the dome over Tycho Spaceport? Better. That's a distinct goal, one that can be achieved in one or two game sessions.

Your villains will give you good ideas about goals for player characters, because the mission of the PCs in any adventure will almost always be the opposite of a villain's goal. What is one of your villains currently doing to achieve his goal? Is it something that might call for PCs to get involved? For example, in the "rogue Mariposa" scenario, the villain's goal (domination of Luna) will be achieved if he manages to hold the entire planet hostage with his death machine. The player characters' goal will obviously be to prevent this from happening, and in this particular adventure that means stopping or destroying the Mariposa before it can get into position to do its dastardly deed.

Other adventure goals don't have to spring directly from what a villain is up to. The PCs can get a secret mission direct from Buck Rogers. They can explore some area in search of lost treasure. They can stumble onto a strange gennie civilization.

Once you settle on an adventure goal, decide all the steps the player characters will have to go through before they achieve that final goal—their

subgoals. For example, to defeat the rogue Mariposa might require the PCs to:

1. Discover that the plot exists . . .
2. Find out who's behind the plan . . .
3. Come up with a way to stop the Mariposa (a special weapon of some sort) . . .
4. Gather the materials to build the special weapon, and finally . . .
5. Lead the assault to stop the villain.

Jot down the subgoals down on a sheet of paper. Now, around them, write down all the ways that the players could possibly achieve each subgoal. For example, discovering the plot could result if:

The PCs intercept a suspicious-sounding radio transmission and decide to investigate;

A wounded messenger comes to them with information;

The daughter of the Mariposa's chief engineer asks them to locate her missing father, and they agree to look into the case;

Or, in dozens of other ways.

Go to the next subgoal. Decide how achieving the first one would create new ways to achieve the next one. For example, a wounded messenger had to come from somewhere; maybe they could track him back to his point of origin, which turns out to be the villain's last hideout. The daughter of the engineer could be kidnapped by a henchman, requiring the party to rescue her—and in the process identifying the bad guy who's behind the plot. Their interception of the radio transmission wouldn't go unnoticed—and that could call for a visit by a henchman, who tries to kill them. All of these incidents are ways in which to move from one part of the adventure to another subgoal, as well as providing convenient cliffhangers throughout the adventure. Each subgoal should lead to the next, as complete and interlocking pieces of the plot line.

Sets, Props, and Bit Players

While you're doing all this, you will also want to attend to a few other aspects of your XXVc™ game adventure: sets, props, and bit players.

Sets are the locations where each part of the adventure takes place. For example, the villain's hideout, a bar on Luna where the heroes meet the engineer's daughter, and the control room of the rogue Mariposa are sets that could come into play in this adventure. Each set usually requires you to have at least a sketchy map of the area, showing where the furniture is, how far apart objects are, what items or objects in the area are of interest. The

maps in the adventure that follows, "Ghost in the Machine," are examples of the sort of work you'll have to do—not necessarily a lot of detail, but enough so that you and the players will be able to visualize what those places are like.

Props are any devices, tools, or objects that are important to the adventure: a tube with a secret message concealed behind a false panel; an advanced invention that's necessary for the PCs to obtain; a jetcar placed where the heroes can steal it and make a getaway. If some of your props are unique items not described in the game rules (this is always a good idea, to keep players off balance), you'll have to do some design work to make them game-specific: How is the message tube constructed? Does it have a security device that must be bypassed—and if it isn't bypassed, how much damage will it do to an unsuspecting character who tries to open the container? What does the special invention do that no other gadget in the game can do? Does using it require a character to make a Skill Check? What happens if it isn't used properly—does it simply fail to work, or does it backfire?

Bit players are neither enemies nor allies of the PCs, but their actions are controlled by you, just as you control the major non-player characters. Bit players exist in the background, doing mundane things like driving a cab, tending bar, blurting out a piece of information that the characters are supposed to pick up on.

Sometimes, a character you create as a bit player ends up taking a significant role in the adventure because of something the player characters—whom you can't control—decide to do. For instance, the PCs may succeed in healing the wounded messenger and then insist that he lead them back to where he came from. The bit player has now become a fairly important non-player character, and to fit him into the adventure you'll need to be prepared with a list of statistics and personal information: Does he have a weapon, or do the PCs need to lend him one? Is he going along willingly, or will he try to escape at the first opportunity? Or maybe the whole thing is a setup—the messenger is actually a henchman, and is leading the PCs into a trap.

By putting detail into the sections of the story dealing with each subgoal and then combining the subgoals, you can construct a tight and easy-to-manage adventure for your XXVc™ game. Just keep the action fast and suspenseful, fill the story with lots of atmosphere and intriguing characters, and you'll be an ace referee in no time.

Ghost in the Machine

A XXVc™ Game Adventure for 4-6 characters of levels 1-2

About This Adventure

"Ghost in the Machine" is a special short adventure for the XXVc™ role-playing game. It's designed to get you started right away on adventuring in the far future, and can also be the starting point for an entire XXVc game campaign.

NOTE: As with the two previous sections of *The World Book*, the text of this adventure is directed toward the referee, and should *only* be read by the referee. Players who are familiar with the adventure before their characters start to go through it will ruin the enjoyment of the story for themselves and the other members of the playing group. If you're a player and you intend to run a character through this adventure, please stop reading now.

Before you plunge into the game session, take some time to look over the adventure. Think about how you'll describe the non-player characters and play their dialogue. Will you want to add some accents or mannerisms? Get familiar with the locations the PCs will visit, so that you can make them seem realistic when you describe them during play. You'll notice that the adventure is designed to make use of two of the map sheets in the XXVc™ game box: the overhead view of the Tycho Arcology Spaceport and the ship cross-section diagrams. Have these maps handy for when they're needed as the adventure unfolds.

The parts of the adventure text inside boxes are meant to be read directly to the players (you can, of course, change or add to these sections as you see fit); the other parts of the adventure are information for you—facts that you will only reveal to the players if it's appropriate to do so as the action proceeds.

Once you've done your homework, get your friends together. If they don't have characters already, the first thing you'll need to do is create a party of PCs. The best mix for success in this adventure consists of at least five characters: a rocketjock, a rogue, an engineer, a warrior, and a medic. Each one should be either 1st level or, at most, 2nd level. If you have more than five players, or if some players are able and willing to run more than one character, it would be a good idea to add an extra rocketjock and an extra warrior to the party.

Of course, everyone will need weapons and other equipment; you can provide them with appropriate gear, or the players can go through the process of randomly generating starting money and buying whatever their characters can afford. (But don't let any PC start the adventure with a lot of cash in his pocket; as you'll see, they're supposed to be practically broke when the action begins.) Once everybody is ready to go, start the adventure by reading the Players' Introduction below. Good luck!

Players' Introduction: Stuck on Luna Again

There are a thousand great places to be in the solar system. And this isn't one of them.

Let's just say that things haven't been going your way these days. Twenty-two hours ago, all of you were gainfully employed by the Transplanet Freight Corporation, a small but thriving business that hauls light cargo on the Luna-to-Ceres route. Twenty hours ago, the megacorporation known as RAM bought out 78% of Transplanet's stock and absorbed the company into its monolithic structure of subcorporations. RAM retired the old General Manager, with a healthy pension, and installed a bright and shiny new General Manager (the son of a RAM board member who needed a job) in his place.

The new manager's first act was to fire all of the company's workers—including you—and replace them with RAM employees.

You've gathered together in the Free Fall Bar & Grill at the end of a long day spent combing Tycho Spaceport for work. The news isn't good—it seems no one on needs to hire rocket crews right now. You're running out of cash, and it doesn't look like things are going to improve in the near future.

As you slump in your booth dejectedly, comparing notes about today's futile job search, you notice an extremely stunning young woman walk in. She holds a small carryall in one hand, and looks around the restaurant before her eyes alight on your group. She swings the carryall to one shoulder and walks toward you.

"Captain [name of a PC rocketjock]? My name is Shandry Roberts," she begins. "I'm a lawyer from Chicagorg, Earth. I heard you and your

friends are looking for a job. I've got one for you, if you want it." She looks you over with an appraising glance. "It's simple enough. I've been sent by a wealthy client to buy a ship on his behalf. I need a crew to fly it back to Earth. I'll pay you a thousand credits apiece for a one-day job."

You think about it. A thousand a day is *good* money. Maybe this deal is too good to be true. But is it too good to pass up?

Referee's Background

This is the first of many so-called "decision points" in this adventure where the PCs don't really have any choice about what to do next. They must agree to take the job, or else the rest of the adventure is useless. Or, at best, you'd have to modify the story severely to give them a way of locating the ship without Shandry's help.

A longer and more complex adventure would have alternative paths for the characters to follow, but a short story such as this one can't take into account all of the possibilities. Keep in mind—and remind your players, if necessary—that this is an introductory adventure, and their characters can't necessarily do anything they want to.

Now, back to the story . . .

If the players press Shandry for more details, she will tell them the following:

While she was trying to round up a crew, one of the firms she spoke with recommended you. You recognize the name of Champion Solar Freight, since one of your group dropped off an application there this morning.

No, she won't tell you who her client is; only that he's very, very wealthy and wants to add the ship to his private fleet.

She can't fly the ship herself; she's a lawyer, not a rocketjock. Besides, the vessel is big enough that it will take at least three other people to get it to Earth.

Give the PCs a little time to question Shandry, discuss things among themselves, try to drive a better bargain, etc. Then, after about five minutes of conversation, read the following:

All of a sudden, the thugs show up.

Well, that's what they look like, anyway. Three heavily built men dressed in subdued suits, packing obvious bulges on their hips, each wear-

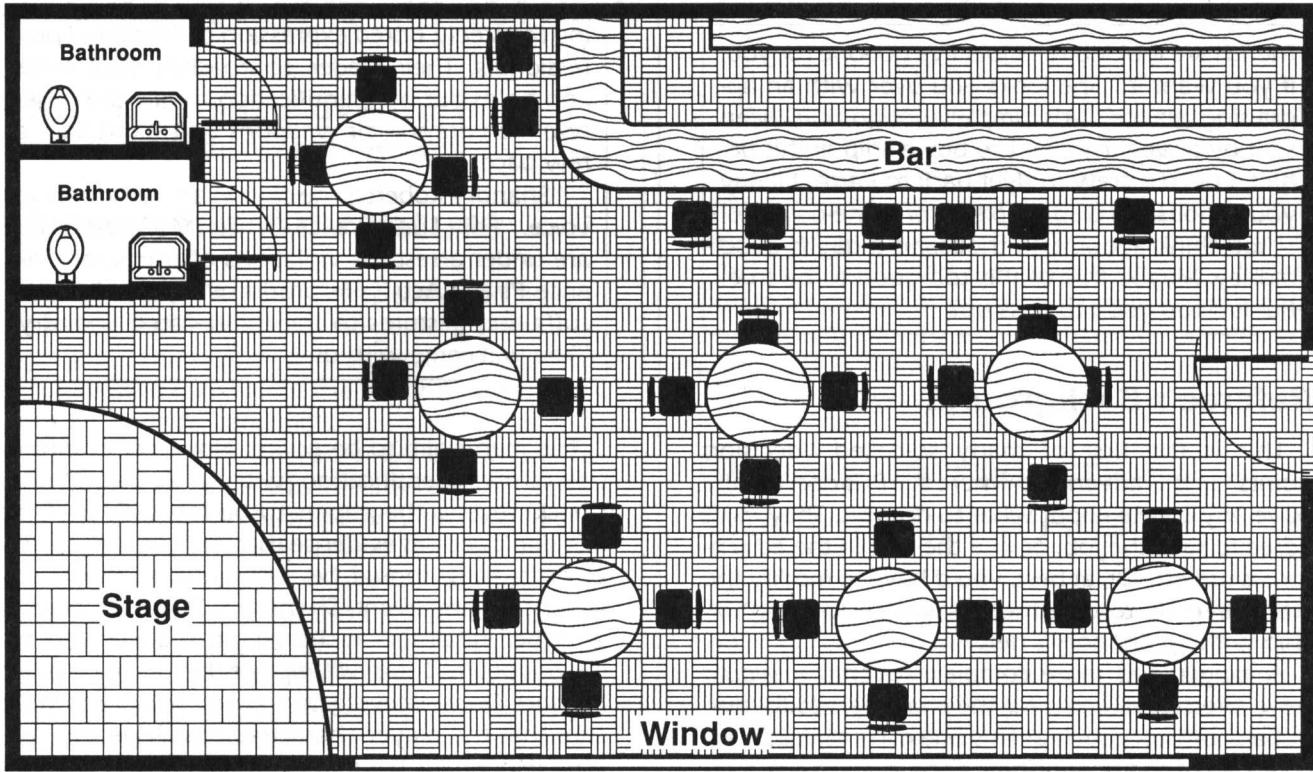
ing the steely, bored expression of hardened professionals. Their leader approaches your table and holds out his identification, while the other two men draw their weapons and stand back a few paces.

"Shandry Roberts," he says in an authoritative voice, "I am Lunar Peace Officer McGarrett. You are under arrest for violations of the Solar Alliance Piracy Acts." He produces a pair of handcuffs and gestures to the white-faced Shandry. "You will come with us."

The men claim to be police. However, examination of their identification (with an Average Notice Check) reveals the papers to be fakes. Even if the PCs don't get this evidence that the "police" are impostors, they should be suspicious of the thugs' actions. In any event, Shandry will not go quietly; after her initial shock, she will struggle against being handcuffed and will implore the PCs to help her. In short: Do whatever you have to do here to make sure that the player characters challenge the "police." (Hopefully, the players will recognize this as a combat situation, and will have their characters act accordingly.)

As soon as anyone in the party objects to what the "police" are doing, the thug with the heat gun (see below) will fire a warning shot that intentionally misses the PC group and sets some nearby piece of furniture aflame. (At this point, the guy behind the bar puts in a call for the *real* cops.) That should be enough to convince the player characters that these men are not good guys; the PCs will draw their weapons and dive for cover, and the shootout will be under way. The "police" will do their best to avoid harming Shandry (they want her alive, for the time being), but have no compunctions about fighting the PCs.

If the "police" win the battle, they will put handcuffs on any surviving PCs and drag them and Shandry off to an unknown fate. (For this to happen, the players will have to be very unlucky—because, as you'll see shortly, the fight won't last more than five rounds in any event. If the PCs do get hauled away, you can either call a halt to the proceedings and start over, or you can give the characters and Shandry a chance to escape from their captors.) Should the PCs gain the upper hand quickly, their assailants will either retreat or commit suicide. They are all outfitted with poison capsules and will kill themselves rather than face capture.



Free Fall Bar & Grill

0 6 Feet
SCALE

After the fight breaks out, you'll need some basic information about the non-player characters who appear in this scene. All of the necessary details and numbers are provided below. Notice that we've given a full description for Shandry, including attribute scores and skills, because she's designed to play a continuing role throughout the adventure. On the other hand, the thugs simply come and go; all you need to know about them are their combat stats.

Shandry Roberts

2nd-level Terran rogue

AC 7, hp 15, Dmg 1d8 (laser pistol), THAC0 20

Str 13, Dex 16, Con 8, Tech 8, Int 14, Wis 9, Cha 16
Hide in Shadows 40%, Move Silently 36%, Fast Talk 50%, Pick Pocket 35%, Open Lock 18%, Bypass Elect. Security 20%, Climb 35%, Notice 40%.

Thug McGarrett

3rd-level Lunarian warrior

AC 4, hp 25, Dmg 1d8 (laser pistol), THAC0 18

Thug #1

2nd-level Lunarian warrior

AC 7, hp 13, Dmg 2d6 (heat gun), THAC0 19

Thug #2

2nd-level Lunarian warrior

AC 7, hp 20, Dmg 1d10 (microwave gun), THAC0 19

Five rounds after the conflict between the PCs and the "police" begins, both groups will hear the sounds of sirens rapidly approaching. The "police" will beat a hasty retreat, yelling "We'll be back!" over their shoulders.

"We'd better get out of here," yells Shandry, looking around at the damage to the tavern as the sirens grow louder. "Unless you want to spend the night, or longer, in a Lunar jail." You dive out of the tavern into the cold blue light of a Lunar evening. Melting into the crowd of pedestrians, you vanish from sight as a group of heavily armed Lunar Peace Officers storms into the damaged interior of the Free Fall Bar & Grill. As you quickly put distance between you and the real police, Shandry says, "I think there's some other things I'd better tell you. Let's find a place where we can talk."

Referee's Background

As soon as the PCs can find a safe place to talk (a restaurant or a hotel lobby will do), Shandry will begin to recount her full story.

To handle this part of the adventure, you'll need to be very familiar with the next few paragraphs. Tell the story as you think Shandry would tell it, and allow the PCs to break in with questions if they want to. If you can answer their questions by building on the information below, go right ahead and do so; at this point, it won't hurt to tell the PCs as much as they want to know, and every bit of information they can get will help the adventure seem more realistic to the players. (Of course, you won't carry this to the extreme of telling them things that aren't part of Shandry's reason for being here.)

Several years ago Alexis Holzerhein, a high-ranking member of the RAM Board of Directors, directed that an executive yacht be built for his personal use. The yacht was outfitted with the latest in RAM technology, including a very sophisticated computer which Holzerhein used to store his most important information. The only other copy of this highly classified data was stored deep within the RAM Main Computer on Mars. Both files are protected by a secret code number buried inside each of the computer systems.

About six months ago, the yacht was captured by pirates. Holzerhein was ransomed back, but the pirates kept the ship. RAM Security hunted all over the solar system for the vessel, but finally gave up the chase when evidence indicated that the yacht had been destroyed in a battle between groups of rival pirates.

Then, about two months ago on Mars, NEO agent Shandry Roberts was approached by an old asteroid pirate who offered to sell her some information. He claimed to be a member of the crew who had originally hijacked the yacht, and told her that the ship had not been destroyed in combat after all. (The pirates wanted everyone to think so, in order to get RAM off their backs.) Actually, the pirates recently sold it to a Lunar scrap merchant. Why? Well, the old pirate warned Shandry that the ship was "cursed" and that it was sold because it had caused the mysterious deaths of three of his companions.

But, as Shandry points out, there are a lot of superstitions in deep space. . . .

Now that Shandry knew the ship was out there for the taking, she decided to do something about it. Shandry broke into RAM Main with the help of her

Digital Personality partner, Lady Lynx. The DP was caught by a virus hunter, but was able to download the code number for the yacht's data file into Shandry's compdex before being disintegrated. Shandry immediately booked passage to Luna, determined to locate the ship and get it to Earth so she could hand it over to NEO.

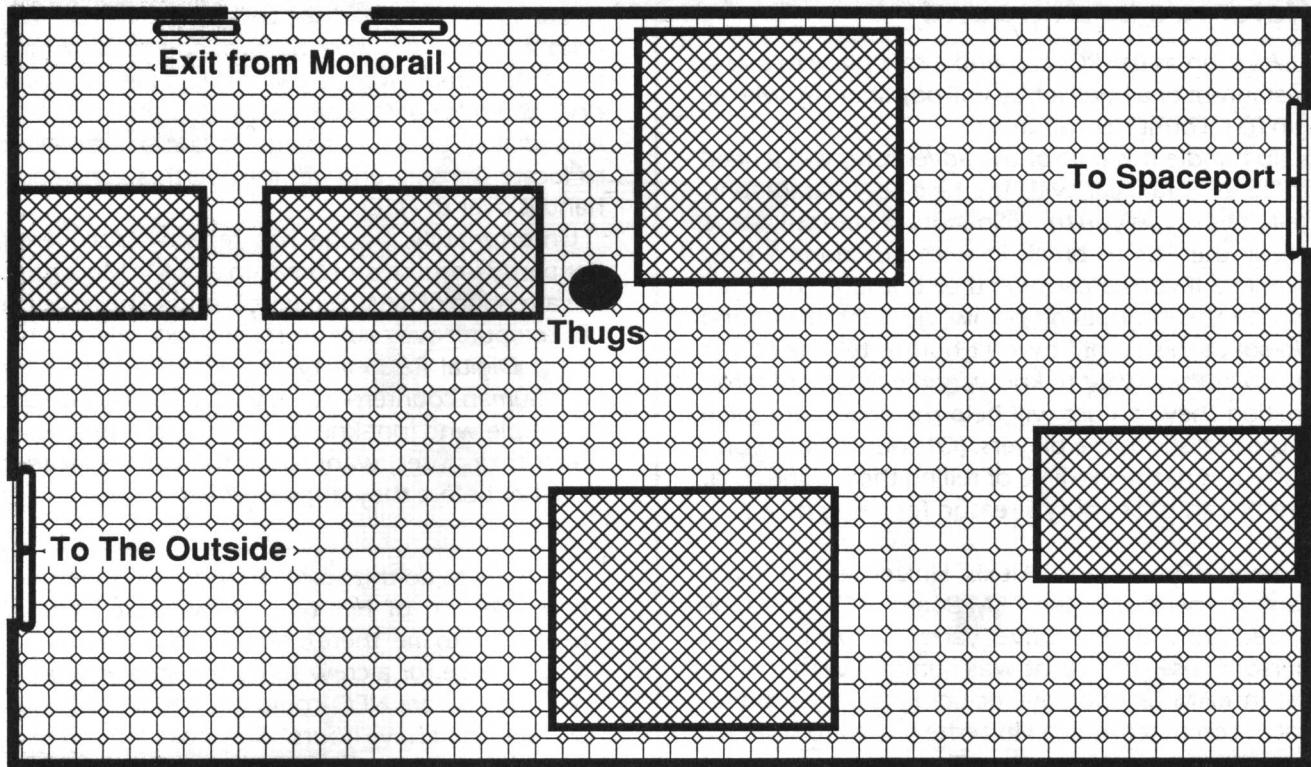
Unfortunately, as she has recently discovered, her partly unsuccessful break-in at RAM Main drew the attention of RAM Security. She assumes that the big computer was able to reconstruct selected bits of the Digital Personality and identify her as the DP's human counterpart. Now she's being pursued by people who (not knowing the ship is practically under their noses) want to get the yacht's location from her before they dispose of her.

"I have to do this solo," Shandry says, getting near the end of her tale. "Now that I know they're on to me, there's no time to contact NEO and arrange for a crew to fly the ship. It would be hours before NEO could get agents to Luna, and we don't have hours." She looks around her, then lowers her voice still further. "If you'll help me find the ship and fly it to Salvation [NEO's base in near orbit around Earth], I'll ask my people to give you the yacht when they're done stripping the classified data out of it—plus a thousand credits apiece, like I promised before. After all, they only need the computer information. What do you say?"

The PCs have to go for the deal in order for the adventure to continue. If they try to get Shandry to promise higher pay, she will gently but firmly refuse; what they're being offered is more than fair compensation for what she's asking them to do.

When the action resumes, Shandry will tell them that they first need to help her retrieve a bank draft and some other papers from her stateroom aboard the *Triplanetary Angel* (the liner she took from Mars). She suggests that, to reduce the chances of their being followed, they take the monorail to the edge of the spaceport and then double back toward the launch bays on foot.

The trip to the monorail station is uneventful, but you can build in as much false suspense as you want: real police (on normal patrol) who seem to be spending a lot of time looking at the group; shady-looking characters (just your standard "subway rats") who are especially interested in Shandry; an anonymous drunk (yes, he really is drunk) who



Monorail Station

0 10 Feet
SCALE

staggers up to one of the PCs and claims to know him or her from somewhere. None of these incidents leads to anything important, but devices like this are a nice touch to keep players from predicting when the next important event is going to occur. . . .

idly toward you. "This time it's over, NEO scum!" shouts their leader as they go for their guns. The station erupts with blazing plumes of superheated plasma!

Fireworks at the Station

... And this is it.

Another group of RAM Security thugs, alerted to the fact that Shandry is loose and that she now has allies, has taken up a post in the monorail station on the assumption that the people they're after will come there sooner or later. As the party enters the station from the monorail car and starts toward the exit to the spaceport, the attackers move in. There are as many enemies as there are members of the party (including Shandry).

Thugs

2nd-level Martian warriors
AC 7, hp 10, Dmg 2d6 (heat guns), THAC0 19

Suddenly, you know you're being watched. Moving out of the shadows beside a nearby wall are [insert the proper number] men, moving rap-

The thugs will continue to fight until they are down to two men; the survivors will then flee or, if this is impossible, commit suicide.

If the PCs examine the bodies of the thugs after this encounter, they will discover that each one carried a small metal card, embossed with the logo of RAM Security, Section A. If they express interest in the cards, Shandry tells them that they are electronically imprinted and each can be reprogrammed to accept the ID of a new person (on a Difficult Electronic Repair Check).

Shandry will try to get the PCs out into the street as soon as possible after the battle (the better to hide, once again, from investigating officers). Then the group will start to make its way toward Launch Bay #4 (in the top right corner of the *Tycho Arco-logy* map), where the *Triplanetary Angel* is docked, perhaps pausing along the way to do some quick healing or (if they picked any of them up) try to reprogram the security cards.

She's No Angel

Alerted by an informant in the Triplanetary Lines Mars office, a RAM Security team was dispatched to Shandry's cabin on the liner. They were unable to find any information, and have decided to wait until she returns. There are three on the team:

Thugs #1 through #3

1st-level Martian warriors

AC 7, hp 8, Dmg 1d10 (rocket pistols, "stupid" ammo), THAC0 20

The Triplanetary Angel is a 420-ton luxury liner, a slender needle more than eight hundred feet tall. Her main entryway is open and the dock ramp extended to allow passengers to get in and out. A single crewman stands at the entrance, a compdex in his hand. As you start up the ramp, you can see him eyeing you with some suspicion.

The guard at the entrance has orders (from his boss, via RAM Security) to watch out for Shandry. If she shows up, he is to allow her to board the ship—but he is supposed to turn away anyone she's traveling with.

However, the PCs can get aboard without a hassle if they have at least one RAM Security card that has been reprogrammed and if they use one or more cards to pose as RAM agents. The guard will let anyone pass who is accompanied by one or more RAM agents; he knows better than to challenge them.

If the PCs don't have the cards or can't use them, they can still get aboard by simply forcing their way past the guard (no need to use weapons, since the man is unarmed). But the guard will immediately send a message to the ship's security office, and armed guards will begin combing the ship for suspicious-looking characters.

Triplanetary Security Officers (5 per squad)

3rd-level Martian warriors

AC 7, hp 13, Dmg save vs. paralyzation (sonic stunners), THAC0 18

Once on board, the group will take the central elevator up eight levels to where Shandry's cabin is located. For a map of the cabin, refer to the "Passenger Cabins" section of the deck plans for the 200-500 ton cruiser and use any room you want (they're all the same size). The RAM Security agents de-

scribed at the beginning of this section are waiting in the room. Detecting their presence before entering (the door was slightly damaged when they broke in) will take a Difficult Notice Check.

Once the PCs enter the room, the fun begins. If they know someone is inside, they might decide to try using the cards again to impersonate RAM agents. This won't work, because the security men inside will know right away that they're not the real thing. They can storm in with weapons blazing, making themselves excellent targets as they do so. Or, they can enter quietly (whether or not they know anyone is inside), in which case nothing will happen until the door slides shut behind them:

The door hisses shut. A moment later, three men pop up from behind various pieces of furniture. "Drop your weapons and freeze," one of them says quietly. All of them have pistols drawn and ready.

The bad guys will wait just long enough for the PCs to either drop their weapons (which, of course, they won't do) or dive for cover (which they'd better do). Then the thugs will start firing, getting off one shot per round. They will not shoot at Shandry, since they have orders to take her alive, but she can certainly fire at them.

Two facts are in the PCs' favor in this battle: First, the thugs will fight offensively, standing out in the open (no cover or concealment benefits to AC) and blasting away. Second, the bad guys' rocket pistols have only three shots apiece remaining. If a thug runs out of ammo before he is killed, he will make a break for the door, and if the PCs let him escape, he will not be heard from again.

When the fight is over, Shandry will need 2 rounds to collect the papers she came back for. If the PCs take that time to search any of the thugs' bodies, they will find more of the RAM Security ID cards (just in case not everyone in the group has one yet).

Just as the group leaves Shandry's cabin, they will be confronted by Triplanetary security guards (see statistics above) responding to an alarm raised when the fight was taking place. On an Average Fast Talk Check by Shandry, the guards will be convinced of the truth and they will let the characters go on their way. However, if any of the PCs aroused the suspicion of the guard at the entryway when they boarded the ship, this Skill Check becomes Difficult.

If she fails the first check, Shandry can continue to try to convince the security men (one check per round). Eventually, she will succeed, and as long as the PCs sit tight, nothing else will happen. But if one of more of the player characters tries to fight the security men or escape from them, the offender(s) will be knocked out by the guards' sonic stunners—saving throws, in this case, will automatically fail. When Shandry is able to persuade the guards to let her and her companions go, everyone will be revived and the adventure will continue.

One Owner, Low Mileage

Now that Shandry has a crew to fly it and the money to buy it, it's time to go shopping for a rocket. Not just *any* rocket . . .

The characters head for the used rocket field on the edge of the spaceport (another uneventful trip, although you can spice it up any way you want). When they arrive, tell the players what their characters see:

The used rocket field covers a large expanse of ground and is packed with ships in all states of disrepair. Ancient freighters, old liners, a couple of obsolete light cruisers stand out against the blue-black Lunar sky.

After you stroll the field for a few minutes, Shandry points. At the far end of the blasted field of powdery moondust stands the arrowhead-shaped yacht. "It matches the profile," she says, "even with the registry numbers changed."

The characteristic red RAM paint job has been stripped to primer gray, and there are a few patched holes where the pirates fired on her, but even through a liberal coating of grime and blast marks, you can see that she's a fine ship.

And, if things go right from here on out, she could be yours.

Use the Ship Data Card for the *Princess of Mars* to represent the Holzerhein yacht. The yacht's interior can be constructed by using the deck plans for the 20-200 ton cruiser in the following order from stem to stern:

1. Control Deck
2. Weapon Turrets
3. Crew Cabins
4. Lounge/Main Cabin
5. Airlock Deck
- 6-7. Cargo Decks
8. Power Deck/Reactor

Shandry goes to talk terms with the owner of the establishment. After a bit of dickering, a price is set, and Shandry pays with the bank draft. The lot owner walks you back to the yacht and hands Shandry the code-key that allows entry.

"You know . . . it's rumored that the yacht is haunted," he says. Now that he's got his money, he seems to take some pleasure in telling Shandry and the characters that they've just bought a cursed ship.

The purchase price includes a full tank of fuel—more than enough to get you to Earth—and having the ship towed to Launch Bay #11 (the circle in the lower right of the launch bay area), where it is set up and made ready for takeoff. This process takes roughly an hour, after which time the characters are free to board.

You climb into the airlock and cycle through. The inside is a bit dusty, and there are signs that the ship was given a hasty repair job, but on the whole, she looks pretty good. [An engineer, or the most technically minded member of the group] goes down to the power deck and checks the reactor, bringing it on line. A deep humming begins to thrum through the ship, as its many dormant systems come alive after months of shutdown. [The rocketjock who will pilot the ship] checks the gauges: All Systems Go.

"Let's get into space," says Shandry.

Minutes later, after getting clearance from the control tower, you're climbing on a pillar of fire toward the Salvation orbital base.

Intercepted!

Before abandoning the yacht, the pirates took the reactor off line; without power, the computer went dormant. What neither the pirates nor the used rocket dealer discovered is that inside the now dormant computer is a very powerful Digital Personality known as Horatio.dos.

Horatio was programmed to defend the yacht against anyone who isn't a Holzerhein or has been okayed by a Holzerhein. It will wait until the crew is unawares, then attack them one by one in various ways (details in the following section).

It was by this kind of "sabotage" that the DP managed to eliminate three members of the pirate crew, making their deaths look like a series of accidents. Pirates being a superstitious lot, they decided to sell the ship to the first buyer rather than keep it

for themselves.

Now the DP is awake again.

Realizing that the yacht is still occupied by interlopers, the DP has entered the communication system and is transmitting a secret coded signal on the RAM emergency band. Having been alerted by the yacht's distress signal, the RAM cruiser *Maximus Argyre* has turned and is trying to chase down the yacht.

You knew it was going too easy. You're less than an hour out of Lunar space when the radar display starts screaming! The screen identifies the sinister shape of a RAM cruiser—heading in your direction.

The commo board whistles: An incoming message is waiting for you to pick it up. You tune in the receiver and put the message on the video screen. A harsh, angular Martian face glares down at you. Behind the red-uniformed officer, you can see the sweep of a cruiser's control deck. The sardonic Martian rasps out:

"This is Executive Commander Mikalov Friedman of the RAM Military Ship *Maximus Argyre*. You are in possession of an official RAM vessel, in violation of the Solar Alliance Piracy Acts. Stand by to cut your engines or be blasted from space."

"Our only chance is to outrun him," Shandry says to [the character piloting the ship].

She's not a pilot, but she may be right. What do you do?

The situation, if you want to set it up on the Tactical Display map sheet, is this: The yacht (use a light cruiser ship marker) is in the middle of the hex grid, moving toward one of the short edges. The heavy cruiser is eight hexes directly behind the yacht, chasing it.

The smaller vessel has enough speed that it can elude the RAM cruiser by simply moving as fast as possible in the direction it's already headed; there will be nothing the *Maximus* can do to get within weapon range if the pilot chooses this tactic. Within three rounds, the yacht will have moved off the hex grid and left its pursuer in the distance.

If the characters decide simply to run, there's no need to set up the ships on the hex grid; just take the action round by round, throw in some "artificial" dice rolls to heighten the suspense, and then announce that the chase is over.

From the Ship Data Card for the *Princess of Mars*, the players will know that their vessel is armed with

two missile mounts and one beam laser. The Data Card for the *Maximus* (which you can see, but the players can't) shows that it has five beam lasers, three gyrocannons, one K-cannon and one heavy acceleration gun. This is *not* a fair fight . . . but if the PCs insist on trying, there's not much you can do.

If they adopt any tactic other than running away (not moving at full speed for some reason, or changing course to get in position for combat), then there is a good chance that the *Maximus* will get close enough to use its lasers—and if it is able to use its medium-range weapons, then the PCs have a *real* problem. The adventure could end at this point, if the characters insist on holding their ground and fighting the heavy cruiser. The *Maximus* will fire to disable, not destroy, the yacht; the PCs will be taken prisoner and (if you want to continue this story line) their lives will never be the same again.

There is a chance that the PCs will be able to engage the *Maximus*, trade weapon fire for a while, and still get away. If the yacht doesn't lose any Speed as a result of hits on the engine and is still able to be controlled, it can pull away from the *Maximus* even if it's damaged. If the characters succeed in outdistancing the RAM cruiser, they will have a ten-hour trip in front of them before arriving at the NEO base.

Ghost in the Machine

But that ten-hour trip will be far from leisurely. Unbeknownst to the PCs, Horatio.dos, realizing that another RAM ship will not be able to get to the yacht in time, has decided to take matters into his own programming. By electronically infiltrating the airlocks, radiation baffles, and other ship systems, Horatio sets out to kill the PCs one by one.

Every hour, Horatio will randomly pick one PC for elimination (assign each crew member a number and roll a die):

If the PC is on the Control Deck, Horatio can attempt to electrocute him by passing a current through the floor. (Roll an attack with a THAC0 number of 20; if it hits, the PC must save vs. electrical shock or take 1d8 points of damage.)

If the PC is on the Power Deck, Horatio can momentarily pull back the radiation baffles to the reactor and flood the compartment with a dose of radiation. (The character automatically takes 1d6 points of damage, or half of that amount if a saving throw vs. radiation is successful.)

If the PC is on the Crew or Lounge Deck, Horatio can lock the interdeck elevator in place and bleed the air into space. (The character must save vs. suf-

focation or die in 3 rounds, unless he or she puts on or is already wearing a breathing apparatus.)

If the PC is on the Cargo Deck, Horatio can attempt to crush him or her using the cargo loading arm (THAC0 19, hp 50, Dmg 4d6).

Every time the DP attempts to do something during this part of the adventure, two things will happen. First, there is a chance that someone on the Control Deck of the yacht will notice unusual computer activity. An Average Notice Check is enough to alert a PC in the area.

Second, before attacking, Horatio.dos will always ask the PC for identification. Here's another use for the RAM Security cards the party should have discovered back in Tycho Spaceport: If a character produces one of these cards and shows it to the ID sensor in the chamber he or she is occupying, then Horatio will do nothing else. This tactic will succeed whether or not the security card has been altered.

The PCs have several options, once they realize that something (someone?) inside the computer is causing them problems:

They can try to disable the parts of the computer that Horatio uses to interface with the various systems. On an Average Computer Repair Check, this attempt succeeds and Horatio is helpless for the rest of the trip. If the check fails or no one has the skill to try, someone can attempt to disable the computer by hand (disconnecting wires, pulling out chips, etc.). On each such attempt, there is a 4 in 6 chance—a result of 1-4 on 1d6—that one of the ship's computer-sensitive systems (sensors/commo, controls, or life support) will take 10 points in damage. If this approach is tried often enough that three attempts result in no damage to the ship (die rolls of 5 or 6), then Horatio is defeated.

They can call the Salvation base, ask for a tow, and then cut the power to the control deck computer. Horatio has a 30% chance of jamming any outgoing communication each time such an attempt is made. But if the call gets through, NEO will send out a rescue vehicle immediately. Without power to the control deck computer, the ship's sensors and controls will be dead . . . but so will Horatio.

One of the PCs could use an altered RAM Security ID card to convince Horatio that they are really a group of undercover agents. To try this, a character must show an altered card to an ID sensor and then make an Average Fast Talk Check. If it succeeds, Horatio won't bother the crew for the rest of their journey.

Epilogue

One way or another, the PCs eventually dock with the Salvation orbital base. The NEO computer technicians go to work on the ship's innards, purging Horatio from the system and recovering the classified information that was buried deep in the computer's data banks. After expressing her appreciation to the PCs and saying that she hopes she'll see them again, Shandry is led away for debriefing. Commander Turabian, the head of the NEO base, will thank the PCs warmly and immediately reassure them that they will receive their 1,000cr-per-person reward. He will offer them the hospitality of the base, but will not answer any more questions about the ship at this time.

When the PCs decide to take it easy for a while, read the following passage to the players:

You're settled down in the station's wardroom, finishing the first good meal you've had since this whole mess began, when suddenly Doctor Huer materializes before your eyes. He says, "I'm sorry to disturb you, but Commander Turabian would like to see you immediately in his office."

You follow the hologram image of the elderly scientist through the maze of corridors that make up the NEO station. Huer.dos leads you to a large door, then gestures for you to precede him into the office.

You knock, and Turabian opens the door. "I apologize for the interruption," he says, "but we have a problem that can't wait." He walks over to a large, battered steel table in the center of the room and gestures toward the people sitting around it. "These are members of my personal council," he explains to you. "This is Col. Dering, Sun Prince Kemal Gavilan, Flight Leader Boyington, and Captain Buck Rogers."

Turabian turns his full attention back to you. "We've just decoded the contents of Alexis Holzerhein's secret projects file. One of the things in the file described an ongoing project that, if completed, could spell the destruction of the Solar Alliance—"

"Not to mention most of humanity," puts in Huer.dos helpfully.

Wilma turns to you. "You see, you're now the owners of a RAM executive ship, and . . ."

Buck Rogers grins. He leans over the table, looks at you, and says in a conspiratorial whisper, "So, how about it? Still want a job?"



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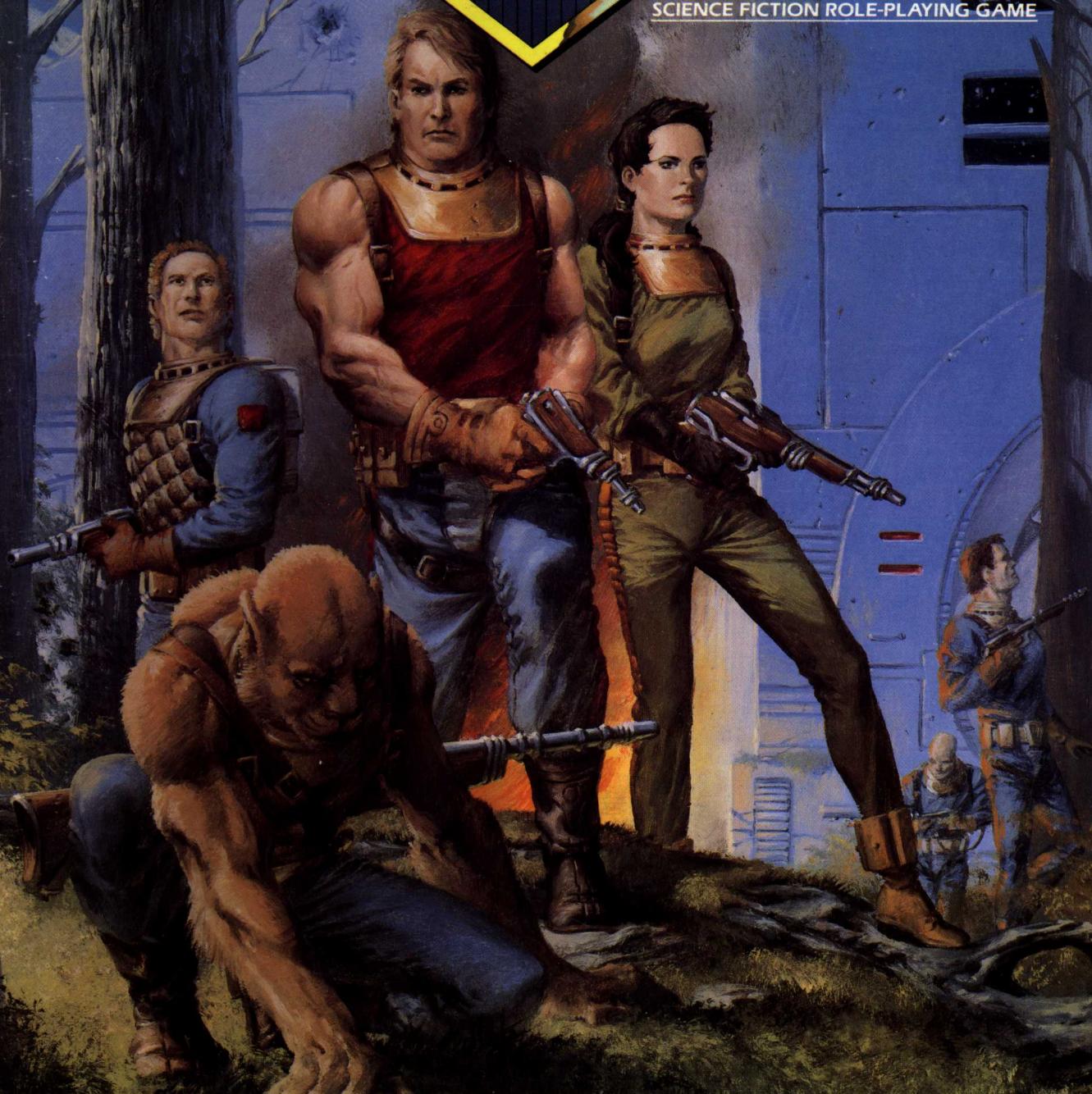
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THE 25TH CENTURY

TM

SCIENCE FICTION ROLE-PLAYING GAME



The Technology Book

The Technology Book

The year is 2456. Through the last five hundred years, the sciences of humanity have pushed back the black night of ignorance, establishing the rule of technology over the future.

The Technology Book in the XXVc™ game is a summary of advances in science, industry, transportation and warfare. It is a handbook of 20th-Century theories that have become 25th-Century fact.

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Cover painting by Jerry Bingham

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Arcologies

An arcology is basically a megabuilding in which thousands or even millions of people live and work. An arcology has its own shopping centers, hospitals, work areas, recreational facilities and living spaces all in one huge conglomeration.

The first arcologies were developed in the 20th Century by such visionaries as Paulo Soleri and Buckminster Fuller. Some were built along the same architectural schemes used by enclosed shopping malls and self-contained condominiums. After the Last Gasp War left millions homeless, the Russo-American Mercantile Combine built hundreds of arcologies as a way to house their surviving populations.

The term "arcology" is now applied to any large, multilevelled living area combining work, recreation and living spaces in one place. The communities beneath the surface of Mercury and Luna are examples, as are the huge pyramidal structures of RAM's Coprates Chasm. On Earth, the independent arcologies are the only organized cities and governments—the only alternative to the ruins of the Sprawls.

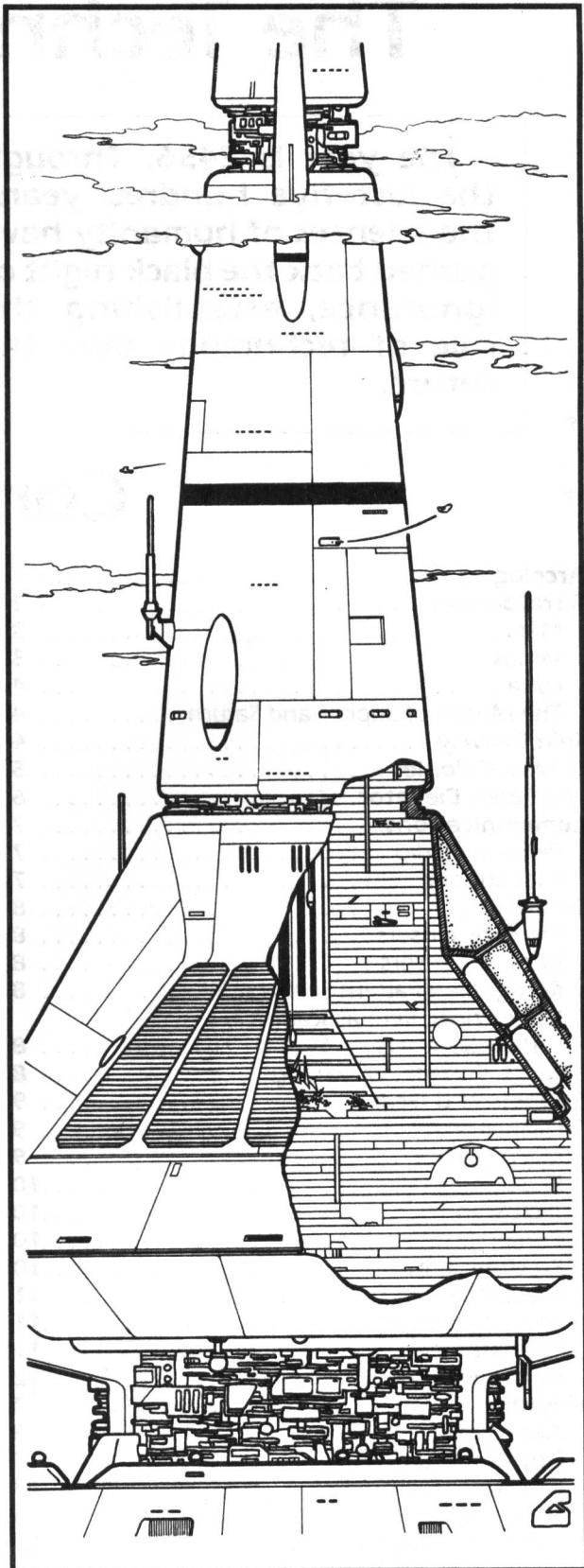
Terraforming

Face it—the solar system is a lousy place to live.

There's only one really good chunk of real estate, and you're standing on it. The rest is either too hot, too cold, too poisonous or too airless. Yet the facts are that, even with a drive capable of reaching 99.99% of light speed, it will take mankind four years just to reach the nearest star. Assuming that we can build an engine capable of reaching near translight speeds, there's still a good chance that Alpha Centauri or Barnard's Star is going to be an even lousier place.

Back to square one.

It's far simpler to change the real estate you have, actually. After all, mankind has managed to live all over the world—at the bottom of the sea, in the arctic wastes, and the jungle swamps—often with the most rudimentary technology. Assuming you can simulate or duplicate a set of basic and necessary parameters, humans can successfully live almost anywhere—complaining bitterly, but still surviving. Faced with the Einsteinian limits of relativity, the scientists of the 25th Century have forsaken travel to the stars in favor of the herculean (yet still easier) task of taming the solar system. Here's how they went about it.



One style of arcology

Mars

In the 20th Century, Mars had an average temperature of around -30 degrees F., little or no water, and an atmospheric pressure less than 1% of Earth's. Most of Mars's problems stemmed from its tenuous atmosphere; it was unable to hold in sufficient heat, which in turn froze all water or permitted it to gas off into space.

In the late 2100's the Russo-American Mercantile Combine, firmly established as the owners of Mars, began an ambitious project to terraform Mars. There were three stages to the project.

Stage One was the bombardment of the southern icecaps with "icesters" from the Asteroid Belt. The impact of billions of tons of rock and ice created an overall force of detonation equivalent to thousands of Hiroshima bombs. The heat created was trapped by the tremendous dust storms that were caused by the impacts. The ice that had been trapped in the asteroids was either vaporized into the atmosphere or remained as water in the huge craters that were created.

Stage Two was the drilling of dozens of mile-deep bores into dormant volcanoes around the Red Planet. These "mohoes" created vast volcanic eruptions, liberating tons of dust and even more heat into the atmosphere. And, once capped, they became a heat source for the next stage.

A number of these bores were drilled into the bedrock of the huge Valles Marineris, where the main colony site was planned. The huge rift, more than twice the depth of the Grand Canyon, already had atmospheric pressure at its deepest point that was great enough to hold in liquid water just below the surface. Raising the temperature inside the chasm increased this quantity of water—and a lucky bore also liberated a large amount of free water in underground aquifers.

Stage Three was the bioengineering of a microorganism which consumed iron oxide and excreted oxygen. Since Mars is mostly iron oxide, the iron-fixing bacterium was essential in raising the atmospheric pressure. Also, in the Marineris region, a modified type of lichen called neoglass was planted. Neoglass converts iron oxide into its components as well, but needs far more water (which was available at this site because of Stage Two). In addition, it prevents free oxygen from bonding with the rusty Martian soil.

Within two hundred years, Mars had been terraformed into roughly what it is today—a vast bowl canyon with two shallow seas, flanked by side canyons and valleys green with life. Surrounding these

areas are vast, empty plateaus, covered in lichen and scrubby, low brush, patrolled by gene-altered desert dwellers.

The south polar area is an ice-racked wasteland, cratered by meteor strikes and obscured by dense carbon dioxide fogs. A huge ice-sea covering much of this area is periodically vaporized by the impact of new icesters brought in by RAM "icerunners" (cargo ships specially modified for this task).

To the northwest, the vast Olympian plateau rises, thundering with newly awakened volcanoes and lava fissures. From high in orbit, huge mirrors beam reflected solar heat to the surface in the form of microwaves.

Venus

Unlike Mars, which had the problem of too little heat and not enough atmosphere, Venus presented exactly the opposite situation. It was immediately obvious to the terraformers that the best way to begin dealing with Venus was to blow off the deadly greenhouse layers of CO₂ and cool things down.

Because Venus's atmosphere was mostly free-floating carbon dioxide, it was determined that part would be consumed by a CO₂-fixing bacterium developed out of common algae, and the rest would be chemically changed into a form of carbonic acid. The best way to do this, scientists reasoned, was to create a large ocean—so for the next two hundred years, Venus was bombarded with tremendous icesters far larger than those used on Mars. By a combination of these impacts and some strategically placed fusion explosions, Venus's greenhouse layer was rapidly dispersed, bringing the surface temperature down to about 300 degrees F. In addition, the atmospheric pressure was reduced from 1,400 pounds per square inch to about 200 at sea level, and several large seas were created.

This still wasn't enough to permit humans to live on the surface. In the next phase of the plan, sulfur-eating bacteria were seeded through the Venusian cloud cover, diluting the acid and introducing water into the mix. Some colony sites could then be established, but only on the highest mountaintops, rising some ten to fifteen miles above the seething lowlands. These domed cities, as well as the vast, clustered Aerostates, were far enough out of the Venusian atmosphere to allow livable temperatures and atmospheric pressures.

Sulfur-fixing and CO₂-fixing plants were bioengineered to be seeded throughout the plains, particularly around seas newly created by the icesteroid impacts. However, there was only so much that

could be accomplished. In the end, bioengineered humans and animals were designed to exist in the hellish surface conditions of the lowlands.

Luna

Shortly after the terraforming process was begun on Mars, an independent cartel of Lunar cities began their own terraforming process. Using raw energy (with their huge solar arrays, the Lunarians have plenty), they painstakingly converted Lunar soil to its component gases. After more than two hundred years, they have successfully created air pressure in the deepest craters equal to that on Earth at the summits of the Himalayas. It will be at least another three centuries before enough atmosphere exists to obscure the disc of Earth and allow normal surface activity without air tanks and breathing devices. But the Lunarians are patient . . . and they have lots of money.

At one point in the early days of the Lunar civilization, some corporate idiots decided to speed things up by dropping an iceroid into the Sea of Tranquility. The resulting war, brief but brutal, was a resounding defeat for the System States Alliance. The Lunarians are *tough*.

Free water will probably never exist on Luna—even the viability of the atmosphere project is fiercely argued among Lunar scientists. Instead, the Lunarians have opted in the main for tunneling into the surface, creating vast caverns and underground parklands, lit by the same vast, armored windows used in orbital colonies. Tunnels are cheap, and the debris can always be converted into walls, domes or other building materials.

The Moons of Jupiter and Saturn

Most ambitious of all are the projects to convert various Jovian and Saturnian satellites into new living room.

One of the most advanced efforts is on Ganymede, the largest satellite in the solar system. The watery depths of this ice-covered moon of Jupiter are inhabited by a genetically manufactured species of fish-men, who supply many of the outer worlds with foodstuffs.

The busiest place of all is Titan. With a nitrogen atmosphere and a warm core, the largest of Saturn's moons is more like Earth than any other body in the solar system. RAM scientists, for reasons known only to them, have used biogenetic algae to seed its atmosphere with oxygen—and then have ignited the volatile mix with fusion bombs to

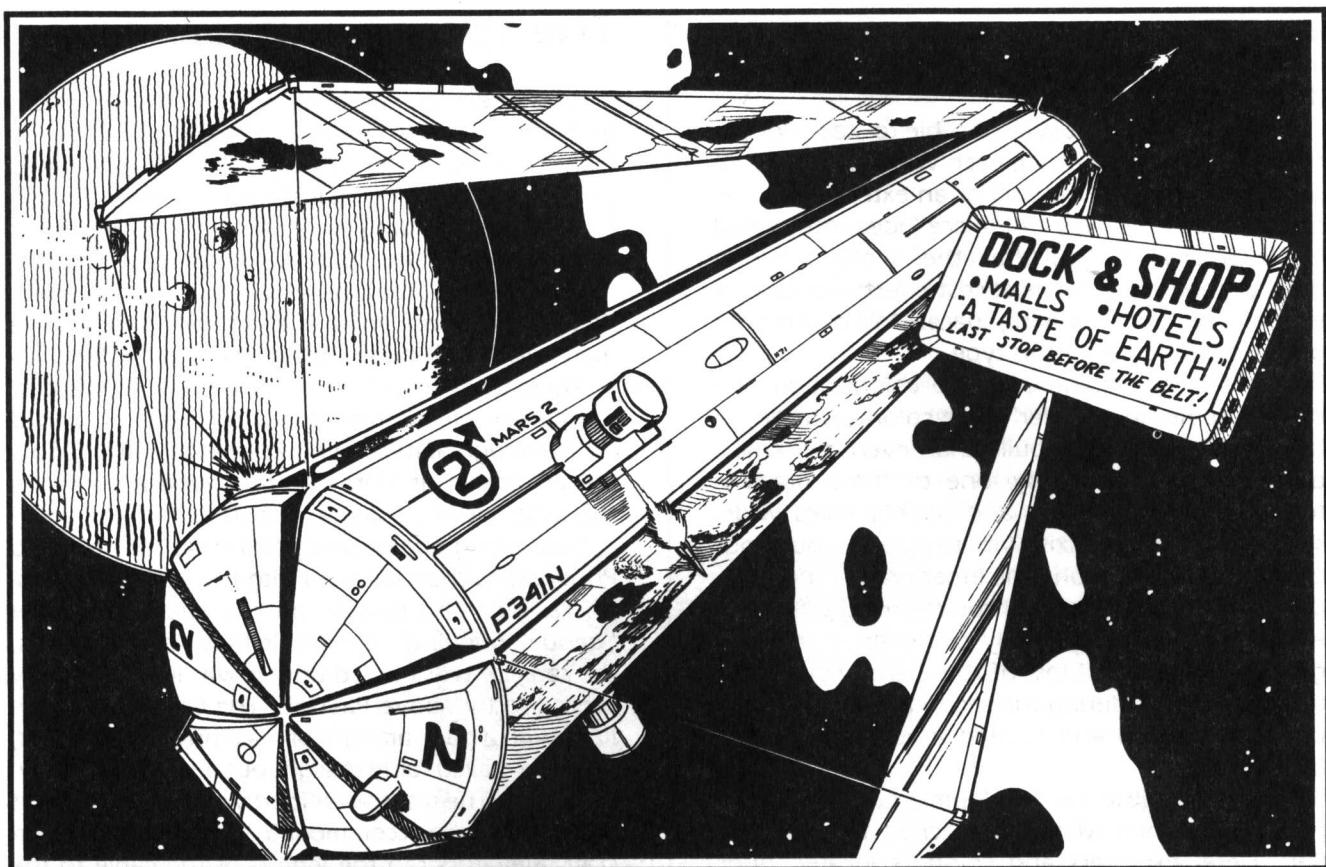
burn off the majority! With Venusians, Europans, Callistans and other groups also trying to have things their way in this chaotic terraforming project, Titan will either end up an ecological disaster or a paradise.

Spin Gravity

Gravity has several other important effects besides determining up and down. Without it, liquids can't be poured, air stays stagnant, and plants don't grow. In addition, the human body begins to deteriorate without gravity—bones become brittle, muscles start to get weak, and the circulatory system starts to break down. In the XXVTM game universe, gravity is an important consideration, because the characters spend a lot of time in space, where there isn't any except under acceleration. Although the wonder drug known as gravitol (see the "Medicine" section below) retards the degeneration process, it may not always be available to those who need or want it. People who spend a lot of time in space need to have access to some type of gravity. Fortunately, the force of gravity is pretty easy to simulate.

If you rotate a ship fast enough on its axis, enough force is created to make things stick to the outside edge of the inner wall. This force is known as centrifugal force. (Think of the force created by a centrifuge—something is whirled around so fast that it's driven away from the center of the rotation.) The problem with using centrifugal force to simulate gravity is that the force isn't very great when either the rate of spin is fairly slow or the radius of the rotating object is small. Spinning a needle-nosed ship around on its long axis won't create a lot of centrifugal force—unless the ship is made to spin incredibly fast. And that would defeat the purpose, because the sideways force created by the spin (known as the coriolis effect) would make normal activity difficult or impossible.

To get around this problem, large ships in the 25th Century contain extendable booms on which living quarters are mounted. These booms increase the radius of the spinning object enough to create a meaningful "gravity" at a reasonably slow rate of spin. The booms are fixed on a separate hub which revolves around the ship, while the central hull of the ship stays stable (making navigation easier). Elevators within the booms travel back and forth to the main hull, which (being stationary and at the center of the apparatus) is a zero-gravity environment. Because of the complexity of this arrange-



ment, it is restricted to ships which spend all of their time in space, such as battlers. Smaller ships rely on minor bioengineering, constant acceleration and drugs to keep their crews from suffering the adverse effects of long-term exposure to weightlessness.

Orbital Colonies

An orbital colony is basically a space station. A really *huge* space station, capable of supporting hundreds of thousands of people at one time.

One thing (besides size) that distinguishes an orbital colony from a space station is that the orbital is designed to be a fully enclosed life-support system. After the initial construction period, it should be possible for residents to exist indefinitely on the station without outside food, air or water.

First, there must be some type of gravity, so that plants, animals, and people can exist within a stable environment. Like most "artificial gravity" in the 25th Century, this means that the orbital must create its gravity by rotation. This means, in turn, that the colony must have an axis to rotate around.

Forget about the fanciful drawings of space colo-

nies from the covers of bad science fiction books. In order to get artificial gravity, your station will have to be one of two shapes: a long cylinder, spinning through its long side, or a doughnut, rotating like a car tire. In both cases, people will be walking on the inside of the outermost face with the axis of rotation over their heads. Of course, once you have your cylinder or doughnut, it doesn't mean you can't add all kinds of towers, pillars or extensions sticking outward into space.

Each colony also requires the construction of a carefully balanced ecology—plants, animals, crop land, and people. It will have to generate its own food sources, produce enough oxygen to support life, and also have enough plants to recycle the CO₂ produced by animals and people.

The first colonies of the XXVc™ game universe were doughnut-shaped, with a central hub where the hole of the doughnut would be located. (Willy Ley, the great scientist and theoretician from the early days of space exploration, wasn't too far off after all. Late 20th-Century space stations and space station designs didn't look like his designs did, but only because we hadn't gotten to the point of using spin-induced gravity.) Spokes radiate out from the zero-gee hub and enter through the "roof" of the

doughnut. Mirrors on the inner face reflect light into the colony below through huge windows in the top.

As time went on, it was possible to stack doughnuts on top of each other, each with its own set of passages joining to the hub or an extension of the original hub. This "crystal palace" idea, postulated by Dr. Gerard K. O'Neill (the father of orbital colony theory), is perhaps the most cost-effective means of expanding a colony's living space. Most of the older orbital colonies are of this type.

In the second stage of space colonization, the classic "spinning cylinder" type colony was developed. Much harder to build than even the largest doughnut-shaped colony, one of these titans is forty or fifty miles long and twenty miles wide, spinning on its long axis, with people and buildings oriented "down" along the inner wall of the cylinder. Spacecraft can enter through airlocks at either end and hover weightlessly overhead in the zero gravity of the axis. Most of these enormous structures were built during the second phase of planetary colonization and located around Venus and Mars.

The final stage in the development of orbital colonies came when Mankind reached the Asteroid Belt. Here, explorers and colonists located huge chunks of rock, many of them dozens of miles in circumference. Orbital colonies made from asteroids are honeycombed throughout with tunnels, caverns and space docks, then moved to new locations. Some of the smaller, more cylindrical asteroids had gravity simulated on (or, more accurately, inside) them by inducing a spin, but the larger ones actually have very low gravity of their own (less than $\frac{1}{20}$ Earth gravity), which makes it possible to travel across the surface without the need for tethers, restraints, or magnetic "walkways"—as long as you move very deliberately. Most of the orbital colonies located in the Belt in the 25th Century are hollowed-out asteroids. In addition, these sorts of colonies are the structure of choice—and of necessity—for the Mariposas that orbit Mercury (see the World Book), since the millions of tons of solid rock in an average-sized asteroid provide plenty of protection against solar storms and flares.

The Space Elevator

A space elevator is basically a long tower or cord that reaches from the surface of a planet into the regions of orbital space. It's a quick and dirty way to get stuff offplanet—you just string a cable, hook on an elevator, and drag the stuff up the long way.

Mars was an ideal place to put up a space elevator for a lot of reasons—Mars's nearest satellite, Phobos, was close enough and small enough to be manipulated. A huge volcano, Pavonis Mons, already reaches several miles up from the surface of the planet, almost directly on the equator, and is wide enough at its crown to place a small city. So it makes sense that Mars was the first planet where the space elevator idea was tried.

First, a long, super-strong cable was connected to Phobos and then lowered into the Martian atmosphere. By using tension on this cable and some "gentle" nudging from missile blasts and big rocks, the satellite was moved until it was in a stationary orbit directly above Pavonis. The cable was stabilized with a huge amount of mass on the lower end, so that it trailed fairly straight out beneath the moving moon. The mass was fitted with a docking port large enough to accommodate a couple of small aircraft. Elevators ran the length of the cable to the docking port. A plane would fly up to the docking port, offload a cargo or group of passengers, and land again. The passengers would take the elevator up to Phobos and from there board a deep-space ship.

Next, a stable tether was constructed on a large orbiting work station and extended down to a massive base constructed at the extinct volcano. Over the next hundred years, this was widened, expanded and extended using huge terraforming machines and gennie labor. The current Martian Space Elevator (also called Mars-Pavonis) is a construct one hundred forty-six miles long and three miles wide at the base, narrowing to one mile at the upper station. Mars-Pavonis rests on three massive cables, each 1,000 feet thick and made up of braided crystalline filaments. There are some one hundred thirty-two separate "floors" to the elevator; actually, these are "spacers" many decks thick, used to keep the cables from tangling, and which have been built upon by generations of cable-users. There are restaurants, hotels, shops and facilities strung along the cable, creating a multitiered city almost as large as the capital of Coprates.

Communications

While a wide variety of communications devices exist in the 25th Century, the two most common are the personal radio and the telephone or videophone.

Personal Radio

Cost: 10cr and up

Size: Small but variable (see below)

Weight: 1/2 lb. or less

Modern personal radios are transceivers; they can be tuned to a commercial or government broadcast frequency, or they can be used to send messages over other frequencies that are not used by broadcasting stations.

Personal radios are related in some ways to the cellular phones of the 20th Century; they can patch into telephone lines and use those circuits to carry signals when both the sender and the receiver are within range of phone lines (about 20 miles from any civilized area). The signal remains strong and clear over a distance limited only by the length of the telephone circuit.

In the wilderness, a personal radio can be used for wireless communication over a range of about 100 miles; beyond that distance, the signal begins to break up, and at about 150 miles it disappears altogether. (More expensive units, equipped with stronger transmitters and more sensitive receivers, have a longer range out to as much as 500 miles.)

A personal radio is powered by a solar cell battery which, when fully charged, has enough power for 48 hours of operation. A depleted battery can be completely recharged in 1 hour of exposure to bright (normal Earth intensity) sunlight, or in 10 minutes if the radio is connected to a source of electrical power. Battery power is replenished instantaneously if the radio is used in sunlight.

Personal radios are all fairly small, ranging from pen-sized to about as large as a deck of playing cards. The smallest varieties are the weakest and least versatile, but even the simplest radio has a wireless transmission range of around 50 miles.

Videophone

Cost: 75cr and up

Size: 1' tall, 1' wide, 6" deep

Weight: 5

Telephone

Cost: 10cr and up

Size: 8" long, 2" wide, 1" deep

Weight: 1/2

While videophones are fairly common in the 25th Century, human contrariness has made them something used mostly for interplanetary communications, business conference calls and so on. Most people still prefer the option of being unseen while on the phone—it makes it easier to "call in sick." (The video pickup on a videophone can be switched off, but the boss would get suspicious if you called in on a videophone and didn't allow yourself to be seen.)

Just as in the 20th Century, telephones differ from radios in two major respects: Telephones allow simultaneous two-way communication (a radio can't send and receive at the same time), but a telephone must be wired into a circuit that physically connects the phones on both ends of the communication. (Cordless and cellular telephones are a minor exception to this limitation, but they still must be close enough to a phone line—1/2 mile or less—to make use of the circuitry.)

Videophones are a different story. More closely related to the television than the telephone, a videophone can operate without being wired into a circuit that carries its signal. Video and audio signals are sent out on a narrow beam that can only be picked up by the videophone unit or units that the sender is trying to "call." You have to know the access code (i.e., phone number) of the videophone you're trying to reach; unless you send the signal to a specific receiving unit, it will simply not be transmitted—unlike a normal radio signal, which is sent out on a certain frequency and can be intercepted by anyone with a radio receiver that is tuned to that frequency.

A note on format

Standard prices and physical specifications are given for many of the objects and devices described in this book. The key word in that statement is "standard"—sizes and weights can vary somewhat among different versions of the same item, and prices are often extremely variable from place to place throughout the solar system.

Size is expressed in feet and/or inches, weight in pounds unless otherwise indicated. Prices are in credits (the solar system's universal monetary unit; see the "Money" section of *The World Book* for details).

7



Videophone

Security

One important question about the 25th Century is, How do people protect all the nifty tools and vehicles they have access to? There are a wide variety of security systems, both complex and simple. The use of a certain system depends, in general, on how much cash you have to spend and how important the object is that you're trying to protect.

Pressure Sensors

Cost: 40cr

These super-sensitive detectors, usually inconspicuously imbedded in wall or ceiling surfaces, measure the movement of air and the changes in air pressure in a room. If an airtight chamber is pressurized or depressurized slightly just before the sensor is activated, then the opening of any door, hatch, or other aperture will cause the air pressure in the room to change, which sets off an alarm. If changing the air pressure in the room is not possible or practical, these sensors can be set to detect even the slightest movement of air (which would be caused by someone entering and moving through the room).

Infrared Sensors

Cost: 50cr

These devices notice a change of as little as one degree in room temperature, which could occur if a door or window was opened while the sensor was activated. A more sensitive form of the device (cost 75cr) can be programmed to trigger an alarm if any warm object man-sized or larger enters the area being monitored. Infrared sensors are sometimes used in combination with pressure sensors (above).

Recognition Pattern Sensors

Cost: 100cr and up

Programmed scanners constantly watch an area, matching the video and audio profiles of the people within the room against a security list of legitimate faces and voices. The detection of an unrecognized voice or face sets off an alarm.

The least expensive version of this sensor can be programmed to recognize as many as five different individuals. For each additional 25cr you want to spend, you can get a unit capable of storing five more face and voice patterns.

Voice Prints, Retinal Scanners, Palm Scanners

Cost: 25cr (average)

These are all simple and "primitive" types of ID systems dating back to the 20th Century. These devices are most often used on doors or file systems, but are not found in great abundance in most locales. Recognition pattern sensors (see above) are more commonly employed when "specific security" is desired; although considerably more expensive, recog sensors are much more sophisticated and more versatile.

Locks, Guards, Watchdogs

Cost: variable

Even in the high-tech world of the 25th Century, there is still a need for the simplest (and usually the cheapest, and sometimes the most effective) kind of security. Many watchdogs have been genetically engineered to make them faster. Similarly, human (or humanlike) guards may also be bioengineered

for better performance—more sensitive hearing, greater ability to go without sleep, and so forth. The simplest locks are mechanical (opened by keys); the next step up is an electromechanical device that is opened by a specially coded key or card.

Gadgets and Gear

The 25th Century has spawned its own types of personal electronics. Most of the items described in this section are available for purchase at any Class A spaceport and most Class B ports.

Devices that require electrical power come equipped with rechargeable batteries, usually some kind of solar cell that replenishes itself automatically when exposed to sunlight of normal (Earth-type) intensity. In the absence of light, a fully charged battery will power a device for 48 hours (unless a different battery life span is specified in the item's description). A depleted solar cell regains enough of a charge to be usable after five minutes of exposure to sunlight, will be fully recharged after one hour. A battery can also be recharged, in only 10 minutes, by connecting it to a source of electricity (such as a portable charger or a power outlet in a building or vehicle).

Plasmatorch

Cost: 60cr

Size: 1' long cylinder, 3" diameter

Weight: 1

A plasmatorch is a high-temperature, gas-fueled hand torch for cutting and welding steel and other strong metals. The torch, which is basically only a cylindrical fuel container with a nozzle and a built-in igniter, is designed to be disposable. It can be refilled with pressurized fuel and fitted with a fresh igniter for three-quarters of the purchase price.

The torch can cut through a one-foot length of quarter-inch-thick steel in one minute; adjust the time proportionately for different thicknesses or different lengths. A full torch has enough fuel to cut for one hour. To operate it, the wielder must use thumb or finger pressure to depress the igniter switch located on the surface of the cylinder a safe distance away from the nozzle end. If pressure on the switch is released, the torch turns off immediately; this feature prevents the torch from continuing to burn if it is dropped or thrown.

Welding with the torch is half as efficient as cutting; two pieces of six-inch-long, quarter-inch-thick

steel can be joined in one minute. Welding also requires the use of a flux-coated rod of metal that is used as filler material. A one-foot length of welding rod sells for 2cr.

A plasmatorch can be used as a hand-held weapon, doing 1d4 damage on a successful hit, but it is not very efficient because the wielder must be careful to keep pressure on the igniter switch while brandishing the weapon. Because of this, all attacks with a plasmatorch are made with a -2 penalty to the wielder's attack roll.

Macroglasses

Cost: 150cr

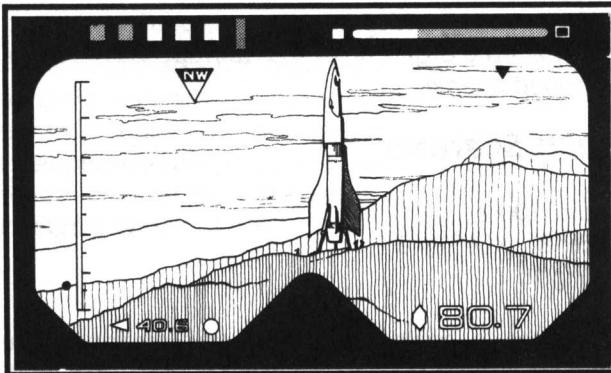
Size: 6" wide, 2" tall, 4" deep

Weight: 1/2

A pair of these computer-assisted binoculars can enlarge an image up to 10 miles distant, making any scene viewed appear as though it was only 100 feet away from the viewer. By pressing a button, the user can save a digitized record of a single image in the device's memory for replay later on its internal screen. Small displays along the outside edge of the viewscreen give readouts on an object's distance and direction from the viewer and the object's actual size.

More expensive versions of macroglasses contain additional computer memory microchips, enabling the user to store and recall as many as 10 different images. The first extra chip, for storing one additional image, costs 20cr (including the software that allows the user to switch from one image to another). Other chips cost 10cr each, so that a unit with 10-image storage capacity costs 250cr.

An adjustable strap holds the macroglasses in place on the user's head, leaving his hands free. A smaller version of the device can be installed inside



An image seen through macroglasses

the helmet of a space suit and flipped up and down, visor-style, by moving a lever on the side of the helmet.

Macroglases can't enable the user to see anything that's not in the normal visible spectrum (no infrared or ultraviolet capability). The device does not enlarge any image that is within 100 feet of the viewer, but it can be used to find the size and position (distance and direction) of the object being viewed. If the device is focused on an object that is farther than 10 miles away, the directional readout will still function—the internal gyrocompass always operates, as long as the unit has power—but the distance and size readouts will register all 9's (an "error message"), and the view screen will show the scene as it would look to the unaided eye. An image that is not magnified because it's too close or too far away can still be recorded in the device's memory.

Bioscanner

Cost: 400cr

Size: 6" x 2" x 2"

Weight: 2

Sophisticated sensors in a 2" square area on the end of a bioscanner perform a number of diagnostic and informational functions. When the sensor pad is placed against the body of a subject being analyzed and held in place for 30 seconds, readouts on the long side of the scanner show body temperature, blood pressure, pulse and respiration rates, the presence of toxins in the organism, and other information.

The basic unit, designed for use on humans only, displays warning messages if any abnormal readings are received (fever, high blood pressure, unusual heart activity, etc.). Memory modules can be purchased (for 50cr each) and installed to perform the same diagnostic functions on a particular genetically altered organism or a certain species of warm-blooded animal.

Tech Scanner

Cost: 500cr

Size: 8" x 4" x 3"

Weight: 2

Similar in basic function to a bioscanner (see above), a tech scanner detects and identifies malfunctions in electrical devices. It plugs into the socket on a device that is normally used for recharg-

ing and instantly reports whether the device has a faulty component. The scanner also gives a diagnostic report, identifying any specific malfunctions, on any electrical device with a base cost of 100cr or less. For an additional 100cr, programming can be purchased and installed that allows the scanner to diagnose specific problems in devices costing as much as 200cr, and so on; thus, it costs 900cr to purchase a tech scanner that is capable of diagnosing malfunctions in other tech scanners.

Compdex

Cost: 200cr

Size: 9" x 6" x 3"

Weight: 3

This device is a portable personal computer, usable as a stand-alone unit and also equipped with a wireless interface which allows the user to remotely contact and get information out of a particular main computer system. All compdexes are programmed to work with a specific system; a RAM compdex cannot access a NEO computer and vice versa. Compdexes cannot interface with a main computer from more than 500 miles away.

For an extra 50cr, a compdex can be augmented by an attachable printer module that enables the user to get hard copy of any screen readout.

Pressure Tent

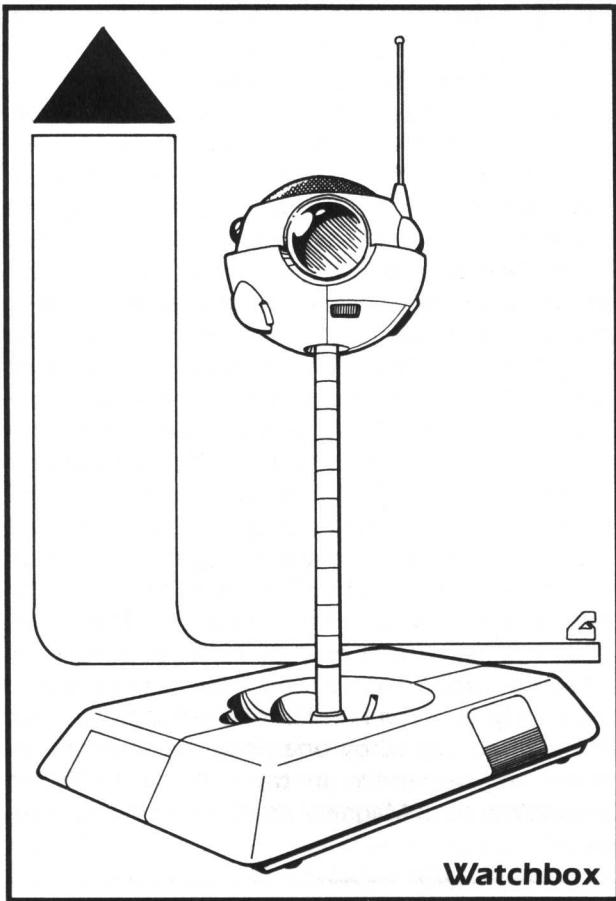
Cost: 250cr

Size: 3' x 2' x 1' (collapsed)

Weight: 5

A common type of shelter, the basic pressure tent is large enough to support two men for up to 5 days (an exception to the general rule about the life of a battery) in the vacuum of space or any other hostile environment. The exterior of the tent is made of strong, airtight metal fabric (Armor Class 3) that, during assembly, is fitted to the outside of a framework of steel tubing. A small tank of compressed air provides the initial supply of breathable atmosphere; a small recycling unit breaks down carbon dioxide as it is exhaled and releases free oxygen back into the interior of the tent.

Another unit extracts a sufficient supply of drinking water from body wastes, and a heater keeps the air in the tent warm enough to be comfortable to someone not wearing a spacesuit. A miniature airlock, only large enough for one normal-sized hu-



man, allows exit and reentry.

A two-man pressure tent can be unpacked and set up by one person in 15 minutes, or by two people in just 5 minutes. Six-man and twelve-man sizes are also available (cost 750cr and 1,500cr respectively); the time required for setup by one person is 30 minutes for the six-man and 45 minutes for the twelve-man variety.

A pressure tent's internal power is depleted once it has been used for 5 days without the battery being recharged. If a portable charger is used to keep the battery functioning, the heating unit will still operate after more than 5 days (keeping food packs and the like from freezing), but the air and water recycling units will not work again until they are replenished (cost 25cr) at a spaceport that offers this service.

Watchbox

Cost: 400cr
 Size: 1' x 1' x 1 1/2' tall
 Weight: 3

This small robot, capable of moving in a preprogrammed pattern, has cameras, microphones, and recognition pattern sensors built into the spherical "business end" of the device, which extends from its base on a telescoping neck. The machine can recognize up to five individuals; it will broadcast an alarm if an unknown person comes within 20 feet of its location (and, of course, the person must be within the watchbox's line of sight). A useful device to station just around the corner of a corridor or just inside the doorway of a room if you're worried about someone sneaking up on you.

Atomic Generator

Cost: 600cr
 Size: 3' x 1' x 6"
 Weight: 10

The atomic generator uses a small fissionable core to provide heat. The heat is converted by thermocouples into electrical power sufficient to operate the electronic systems of a small building or an astro-rover. The battery that regulates the operation of the thermocouples will exhaust its power in 72 hours, and the generator will shut down until the battery is recharged.

Gillmask

Cost: 200cr
 Size: 4" diameter hemisphere (mask)
 5" x 4" x 1" (extraction unit)
 Weight: 5

This artificial gill extracts air from water, allowing the wearer to breathe underwater. Straps hold the mask in place on the wearer's head, and inflatable pads form a watertight seal around the user's nose and mouth (one size fits all faces of human size or smaller). The other part of the apparatus is the extraction unit, which is fastened to the wearer's upper chest and connected to the mask by a hose. The extraction unit of the gillmask operates by means of a self-perpetuating chemical reaction; because it is not battery-powered, the device can be used for an indefinite period of time.

Fieldfence

Cost: 900cr

Size: 6' long, 3" diameter cylinder (each post)

1' x 9" x 4" (generator)

Weight: 8 (generator plus 2 posts)

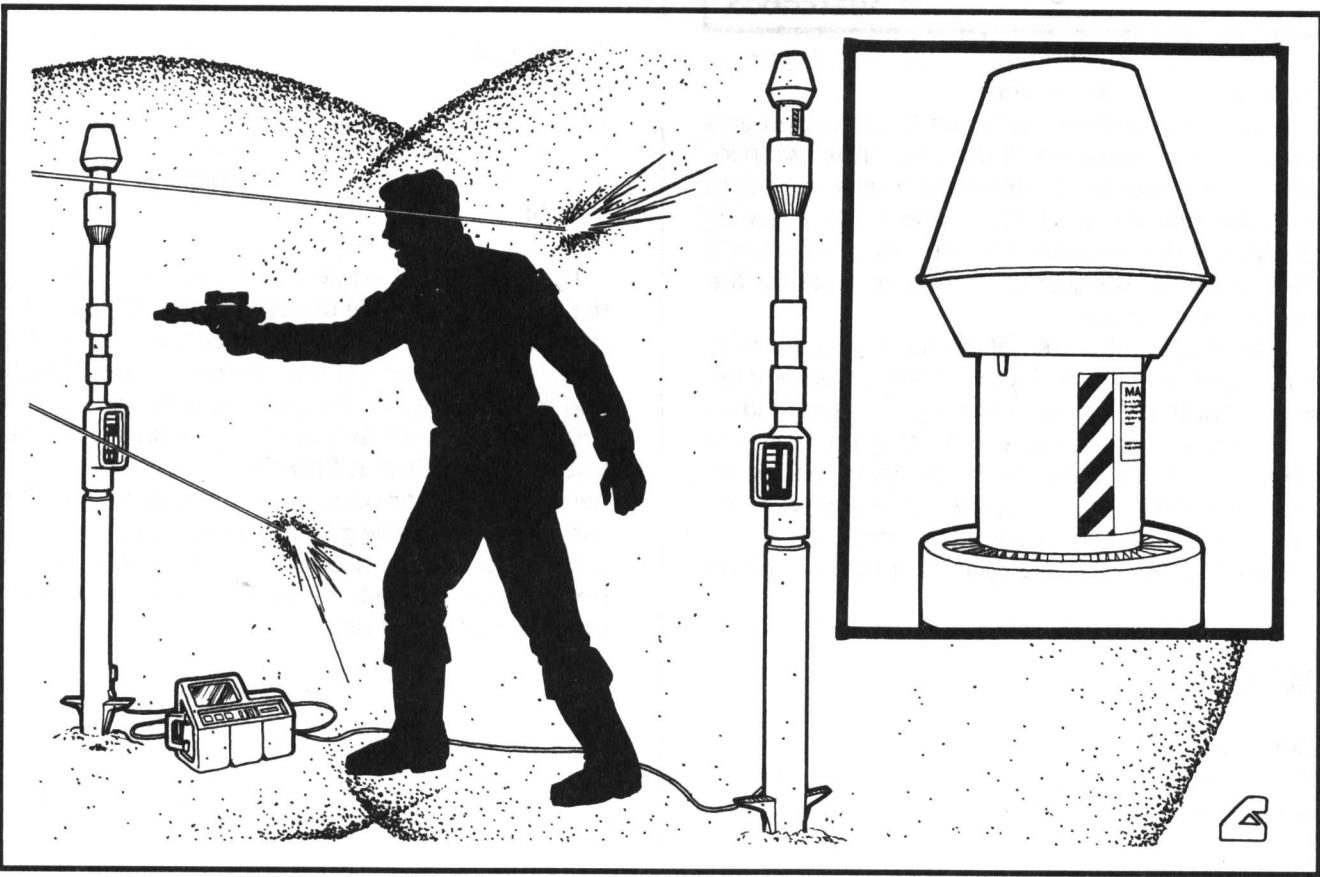
The closest thing to a force field that 25th Century science has developed, this device consists of two posts (or more), each topped by a bulbous projection containing a powerful electromagnet attached to a rotor, and a generator that supplies power to the system.

To set up the fieldfence, the user puts two or more posts on the ground no more than 10 feet apart and wires the generator to one of the posts. (If a post cannot be set into the ground, tripodlike supports can be extended from the sides of the cylinder to give it a secure base on rough or rocky terrain.) In order for it to operate properly, the generator must be positioned at least 10 feet away from the post it is wired to; enough wire is provided to locate it as much as 50 feet away if so desired. When the generator is turned on, power is delivered to the electromagnet in the first post, and in the next instant a signal is sent to any other post(s) within range. This

process continues, signals being transmitted instantaneously from post to post, until all of the electromagnets in the fence are activated.

Each electromagnet sends out a rotating, spherical magnetic field that extends 5 feet from the center of the post. Provided that the posts are set so that their fields overlap, the resulting magnetic fence acts as a barrier against penetration by any projectile that contains ferrous metal. An electronic device introduced into the field (a smart shell, for instance) will cease to function; depending on its weight and velocity, it will either fall to the ground or be picked up and carried around within the rotating magnetic field. The device may be destroyed or simply rendered inert and in need of repair, depending on the referee's judgment of the vulnerability of the item and the intensity of the magnetic field.

A fieldfence also comes equipped with small (handful-sized) packets of metallic chaff; one of these packets can be carried inside each post (if the chaff is to be used, it must be removed before the power is turned on), or the packets can be stored separately. When a handful of chaff is tossed into the field generated by one post, the small bits of metal are suspended in the field and whirled around the post. Magnetic chaff is an effective pro-



tection against laser and plasma weapons; the impulse is dispersed and dissipated before it can penetrate to the other side of the field. A person or creature coming into contact with the whirling chaff takes 1d6 points of damage per round of exposure—unless the person or creature has a natural Armor Class of 5 or better (adjustments for Dexterity, etc., don't count), in which case the chaff is harmless.

It takes a minimum of 5 minutes for one person to unpack and set up two posts and a generator, and 2 minutes for each additional post. (The posts are telescoping, collapsible to a 2' length for easy carrying.) A fence can be made of as many posts as desired and set up in any configuration, as long as each post is no more than 10 feet away from one other post. However, it would not be wise to set up a triangular fence and activate it while you're inside; the magnetic field would cover the entire interior of the triangle and ruin any electrical devices you were carrying.

If purchased separately, posts cost 250cr each and a new generator is 500cr. Packets of chaff, specially designed for use with a fieldfence, cost 10 cr apiece. Chaff is not reusable, unless special pains are taken to collect it from the ground after the generator is turned off. Ordinary metal slivers and shavings are not a perfect substitute, but they're better than nothing if no special packets of chaff are available.

Regardless of the marksmanship of an attacker, a fieldfence has a 70% to 90% chance (referee's discretion—and the number may be even lower if ordinary metal shavings are used) to ruin any attack directed toward it, as long as the field is capable of affecting the shot; for instance, a fieldfence without chaff will not stop a laser, and no type of fieldfence provides protection against a piece of hot lead from Buck Rogers's trusty pistol. If a shot does get through the field, the shooter must still make a normal attack roll (taking into account his THAC0 and the target's Armor Class, plus any other modifiers, such as adjustments for cover) in order to hit a target.

Medicine

The revolution in genetic manipulation, along with a multitude of other advancements in diagnosis and treatment, has made the practice of medicine in the 25th Century a process similar to auto repair in the 20th Century: Given enough time and the right parts, a skilled practitioner can fix just about any problem—but it still takes a lot more time and

education to become a medic than it does to be an auto mechanic.

And, lest we paint too rosy a picture, having the engine of your groundcar overhauled still costs a *lot* less than getting a new pancreas. As medicine has advanced, so have prices for the most sophisticated services a doctor can provide. You can't just walk into the clinic on the corner and have your hand replaced—and even if you could, it would cost you an arm and a leg (figuratively, of course) to have the operation performed. For that basic reason, standard prices for medical services are not given in this book. If a player character or a major NPC in your XXVc™ game campaign needs major surgery, the referee is responsible for determining the cost and availability of the service.

Setting aside the issue of cost, the quality and extent of medical services in the 25th Century are nothing short of awesome when viewed from a 20th-Century perspective. For instance:

Transplants and grafts of live organs and tissue are practically commonplace. Diseased or damaged body parts can simply be replaced with healthy ones (assuming, of course, that a donor or source is available).

Going even farther, genetic engineers have made their own planet-shaking contributions to medicine and biology. In laboratories on (or inside) each of the four inner planets as well as Luna, new limbs, organs, skin and other body parts can be grown to fit any existing genotype; then, microsurgery can attach new parts to an old body with nearly seamless precision. In general, if you live long enough to get to the hospital (and can afford the costs), you can survive practically any trauma. In fact, you'll probably be out on the street in a week.

Tailored viruses are used to kill diseases, while genetic scans and gene mapping have eliminated many hereditary diseases, other forms of birth defects, and even most cancers (again, in people and families who can pay for the services).

Autosurgery

Cost: 1,000cr

Size: 2' cube (when compacted)

Weight: 15

One of the most important advances in medical equipment in the 25th Century is the autosurgery. An autosurgery is composed of a specially programmed computer, a video sensor that "sees" the area of a patient's body that the machine will work on, and dozens of arms and attachments that ex-

trude from the central case when needed.

The device is programmed with a staggering variety of surgical and treatment techniques, based on all of the definitive medical knowledge that Mankind has accumulated over the last several hundred years. The operator (who must be a doctor or a medic character) simply inputs essential data about the patient, describes the parameters of the surgery to be performed, and then activates the auto-surgery.

The machine's arms and attachments handle anesthetizing, cutting, suturing, application of splints or bandages, and other chores automatically. The doctor or medic is left free to concentrate on specialized surgery—as "smart" as an autosurgery is, there are still hundreds of critical or extremely delicate procedures it cannot perform. If the auto-surgery's task is simple, such as setting a broken arm or removing a cyst from just beneath the skin, the doctor simply puts the machine into operation and moves on to tend to another patient.

Drug Fabricator

Cost: 500cr / 1,000cr

Size: 1' x 2' x 2' / 2' x 2' x 2'

Weight: 5 / 8

The drug fabricator is an electromechanical device that, when coupled with a supply of chemical components, can reproduce thousands of known drug compounds. (In the list above, specifications to the left of the slash mark are for the device itself; to the right of the slash, for the separate chemical supply pack.)

To operate the device, a doctor or medic keys in the scientific name of the substance he wants to obtain, plus the quantity (total volume or number of standard doses) desired. If the process for synthesizing the drug is not in the device's memory, or if the supply pack has been depleted of some of the necessary components, the machine displays an error message and cancels the request.

Depending on the complexity of the process, the fabricator takes from 1 minute to 1 hour to produce a desired drug. (Some chemical reactions proceed rather slowly, and cannot be hurried.) The end product is ejected from the device in a quick-dissolving capsule, if the drug is meant to be taken orally. If the drug has to be injected or is intended for external use, it comes out of the machine packaged in an unbreakable, reusable plastic vial with a removable top.

Not every fabricator contains the same informa-

tion; a device that was manufactured several years ago and hasn't been reprogrammed will not contain as many formulas (and will not be as expensive) as a newer model. However, even a relatively old device has at least a 75% chance of being able to synthesize any drug that a group of player characters might need. The contents of chemical supply packs also vary; in fact, it is possible to custom-order a supply pack so that it contains only the ingredients you think you will need and is only about half as expensive as a standard pack. (But if your engineer comes down with Venusian red fever and your fabricator doesn't have all the chemicals it needs, don't blame the machine.)

No fabricator is a cure-all; even the most up-to-date machine can't synthesize a drug that scientists have been unable to duplicate in the laboratory. Two drugs in this category are gravitol and lifextend (see their descriptions below); the reason the Venusians continue to enjoy a monopoly in those drugs is that, so far, they can only be manufactured from naturally grown sources.

It takes a high degree of programming skill (exact amount up to the referee) to place the instructions for a new drug in the fabricator's memory. The device cannot be used to concoct any chemical compound or mixture that is not recorded in its memory, and only an unscrupulous programmer (or one being forced to act under duress) will knowingly program a fabricator to produce a toxic substance.

A typical chemical supply pack (the item carrying the 1,000cr price tag) contains enough raw materials to synthesize 50 doses of any and all mundane drugs and medications (simple pain relievers, muscle relaxants, burn salve, etc.) and 10 to 20 doses of any drug that combats a more unusual or esoteric ailment (such as the aforementioned Venusian red fever). The supply pack holds 250 capsules and 50 vials; the vials can be reinserted in the pack and reused, provided that they are sterilized first.

Gravitol

Cost: 50cr per dose

Gravitol is a drug manufactured from plants growing on the Venusian lowland plains. In its refined form, the drug is a clear, red-tinted liquid. It retards the degeneration process caused by long-term exposure to zero gravity. The plant that provides the raw material for gravitol can't be successfully cultivated anywhere but on the surface of Venus, which is one reason the gene-altered Lowlanders were developed. Of course, having a monopoly on

the source makes the Lowlanders disproportionately powerful.

To get the maximum benefit from its properties, any person spending a long time in a zero-gravity environment must take a 1/2-ounce dose of gravitol every 30 days, either by injection or orally. Someone who does not consume the drug and spends 30 consecutive days or longer in zero gravity will lose 1 point of Strength and 1 point of Constitution after 30 days, another 1 point from each attribute after 60 days, and so on, because of the atrophying of muscle tissue and the general breakdown of the body's physical systems. If a person's Strength or Constitution drops to 2 because of long-term exposure to zero gravity, that person becomes incapacitated—able to remain conscious, but not able to perform any strenuous activity (physical labor, combat, etc.).

The point loss is halted as soon as the person is exposed to gravity (either natural or spin-induced) of 1/6G or greater. Taking a dose of gravitol negates a point loss that would otherwise occur, but does not replenish attribute points that were lost in previous 30-day periods. Lost points are regained at the rate of 1 for each ability score for every 15 consecutive days spent in a gravity environment, assuming that the person engages in normal physical activity and moderate exercise.

Theoretically, the Ishtar Confederation controls the gravitol trade, but the drug's high value makes it a major smuggling item sought by pirates, traders and RAM execs alike.

Lifextend

Cost: 100cr per dose

Another drug processed from Venusian lowland plants, lifextend is used to increase the life span of humans (including gene-altered humans such as Martians and Lunars). Lifextend works by breaking down cholesterol, removing bodily poisons, and accelerating the process of cell replacement.

By taking this expensive drug once a day, a person can slow down or avoid most of the causes of body deterioration: Hair doesn't turn gray or fall out, skin stays moist and supple, bones don't become brittle, and so forth. In essence, what happens is that the person does not age physiologically during the day after the dose is taken. Lifextend is the not-so-secret reason why many ultra-rich RAM executives and some of the higher-ups in the Lunar civilization stay so young-looking over the passage of years—they actually are physically younger than

their chronological ages would indicate.

Ultimately, however, nature will have its way. The older a person gets (chronologically), the less benefit he realizes from the drug. Someone who takes lifextend throughout most of his adult life can increase his life expectancy to about 150 years—a significant improvement over the normal human life span of 90 years, but still a very far cry from eternal life. And very few people can afford the enormous amount of money it would take to support this kind of lifestyle.

The drug's major limitation is that it has no effect on any aspect of aging that involves the brain. Someone taking lifextend is still fully susceptible to short-term memory loss, senility, and other mental or psychological maladies typically associated with advancing years.

Other Drugs and First Aid

Normal, everyday folks in the 25th Century may live their entire lives without using or even seeing a fancy device such as a drug fabricator, or expensive potions such as gravitol and lifextend. But they benefit from the advancement in medical science in many other smaller ways.

Inexpensive, over-the-counter drugs that can be purchased in any arcology are improved in many ways over their 20th-Century counterparts. Simple headaches, heartburn, upset stomachs, and the like are not things of the past—but they're always gone within minutes after you pop the appropriate pill. Scientists gave up trying to cure the common cold when they came up with a medicine that alleviates all the symptoms in a matter of minutes and continues to prevent discomfort while it fights the virus for as long as two weeks.

The term "minor wound" has practically become obsolete in the 25th Century, because any wound short of a severed main artery or an outright amputation is a minor one if it is treated in time. Synthetic skin, in liquid form, is sprayed directly on an open wound. It contains a coagulant to stop bleeding, a disinfectant, and a chemical that stimulates the replacement of ruptured cells (skin, blood vessels, muscles, etc.). Where it remains in contact with the epidermis around the wound, the liquid reacts with the skin's naturally secreted oils; it begins to dry instantly, contracting as it does so and drawing the edges of the wound together to promote faster healing. If a part of the bandage covers a place where the original skin is missing, the synthetic material can be used by the body in the formation of new skin. Most wounds that can be treated without

a doctor's aid will have healed sufficiently in a day (at most) to allow the bandage to be gently peeled away.

First- and second-degree burns of relatively small size can be treated by a salve or a spray-on liquid, both of which are identical in chemical composition. The medicine is a combination of two substances: a super-fast, selective anesthetic and a special version of synthetic skin. The anesthetic deadens all the injured pain receptors in the area it touches, providing instant relief, but does not affect other nerve endings that are still functioning properly. The synthetic skin permeates any real skin it contacts and then recombines with itself, in effect "lifting" the damaged skin away from the body. Then the body uses the substance (as in the wound treatment described above) as the foundation for growing a new layer of skin. When the new skin is ready and the body has repaired damage to nerve endings, the dead, burned skin simply falls away.

Power Sources

Solar

Most of the power used by civilizations in the 25th Century originates from the sun. Vast arrays of mirrors, microwave satellites, and transmitters are spread all over the solar system, reaching their electronic collectors toward the life-giving star that is the center of the system in more ways than one. Collected power is beamed all over the Alliance by means of microwaves.

One major example of solar power systems is Mercury's network of Mariposas (see *The World Book* for more information). Enormous orbital colonies constructed from captured asteroids, the Mariposas spread huge metal "wings" out toward the sun, capturing light and heat and then reflecting the energy into the center of the complex where it is collected in storage cells and later converted into microwave energy for transmission to other receptors many millions of miles from the sun. The Mariposas make it possible for people in the outer reaches of the sun's planetary system to use solar energy, even though the sun directly provides them only a small amount of light and an even smaller amount of heat.

Chemical Ignition

The other main type of power used on a large scale in the 25th Century is obtained by a modern version of an age-old process: Set fire to something in a controlled environment, then capture the heat energy and use it immediately or convert it into another form. Fueled by flammable gas or liquid, chemical reactors provide power for many arcologies and other large structures that do not have or cannot easily use solar collectors. The vast majority of small vehicles and structures also use this form of energy. Coal, petroleum products, and wood—the stuff that most engines and furnaces of the 20th Century depended on—are too rare, too inefficient, and too cumbersome to use for power in this day and age.

Nuclear Fusion

Most cruisers and larger ships in the 25th Century use nuclear fusion converters for interplanetary travel. These engines are greatly refined extensions of the primitive atomic power plants first proposed back in the 20th Century, and incorporate most of the same principles. Gas or liquid is passed into a first-stage chamber, where it is superheated by a standard fission reactor. The resulting plasma is then pumped through a second chamber and contained in a magnetic bottle, where it is bombarded by a series of electron guns. This part of the process, where the fusion of atomic nuclei occurs, releases a tremendous amount of energy. That energy is vented through adjustable magnetic fields to drive the ship.

Two-stage fusion engines are incredibly dangerous to use within a planetary gravity well, since the gravity of the larger body could destabilize the magnetic bottle. If the plasma does not stay within the magnetic field created by the bottle, or if the plasma-permeated field fluctuates and touches the chamber it is contained inside, the chamber would be quickly vaporized by the heat of the plasma, and within milliseconds thereafter the entire ship would do a convincing impression of a supernova.

For planetary operations, only the plasma stage of the drive is used, creating a miles-long contrail of blindingly bright gas. Once the vessel is free of a planet's gravity well, the engineer activates the fusion converter, kindling a minor star in the drive tubes and enabling the ship to be propelled through space.

Mass Drivers

The mass driver is the ultimate tribute to the power of magnetic force. The dominant feature of this device is the set of tracks that start at the control bunker/power house and extend out for as long as several miles before terminating in a slight upward curve. Spaced along the tracks are enormous, incredibly powerful electromagnets.

When a payload is placed at one end of the tracks and the mass driver is powered up, the cargo is infused with a magnetic charge from the electromagnets closest to it. As soon as the payload is sufficiently magnetized (1 to 5 minutes, depending on how receptive the substance is to magnetization), electric current is passed down the track, reducing the strength of the original electromagnet and simultaneously boosting the power of the next set of electromagnets in line. The payload is pulled along in the flux—a movable magnet being attracted to a stationary, stronger magnet that is a short distance away from it.

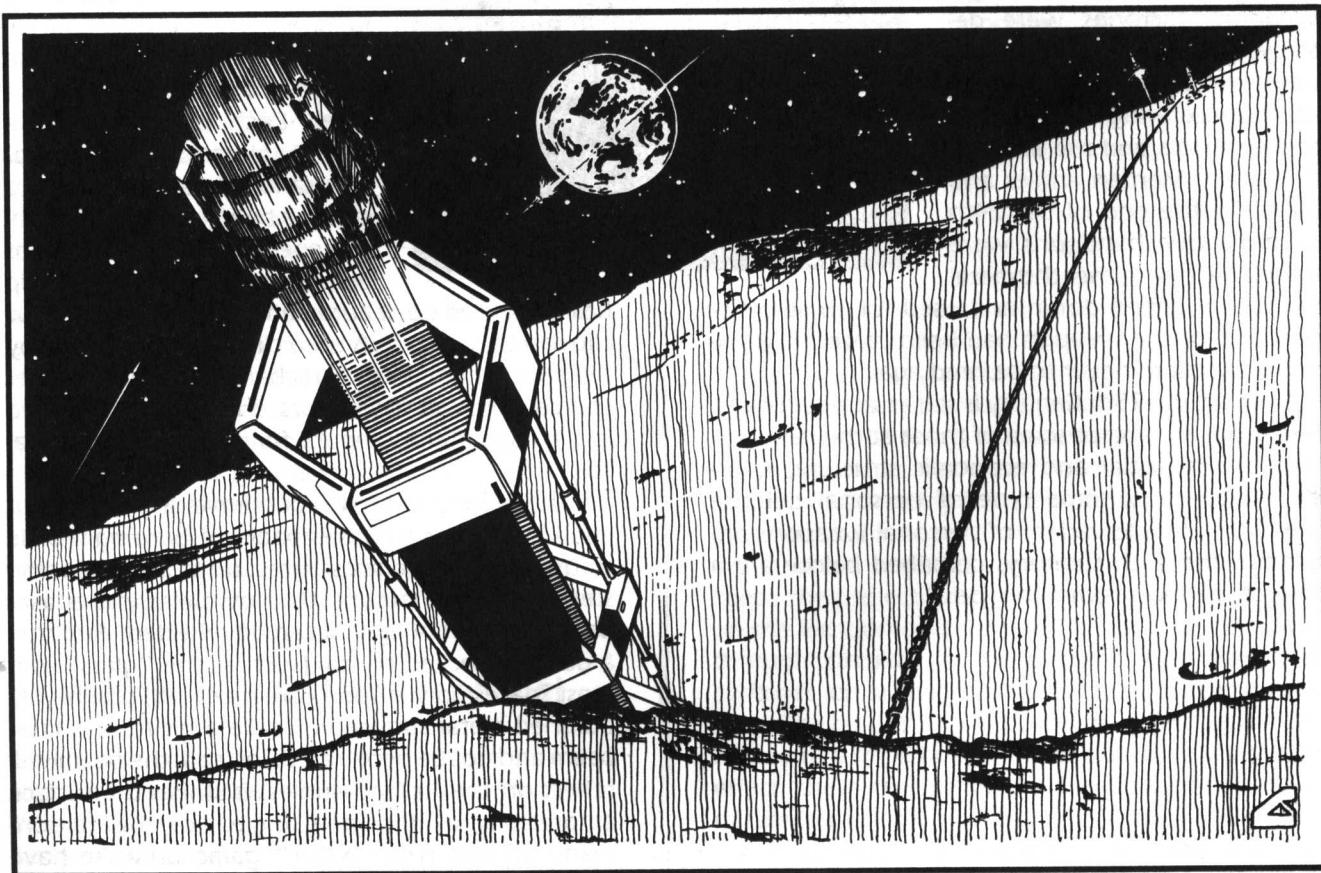
This process is repeated over and over, and the payload continues to pick up speed. By the time it gets to the other end of the tracks, its velocity may exceed 3 miles per second. If the exit velocity is

greater than the escape velocity of the body on which the mass driver is located, the projectile will be flung into space.

The mass driver's only limitation—an easy one to get around most of the time—is that the payload or cargo must be made of a substance that a magnetic field can affect. Boulders containing a lot of iron are ideal for use as simple projectiles, but almost anything can be transported by a mass driver if it is enclosed in a shell made of iron or steel or held together by bands of ferrous metal.

Mass drivers are located on Luna (large ones at Tranquility and Tycho, plus about a dozen other smaller ones in various spots), Earth (Antarctica and Africa), Mars (Tharsis), Mercury, and throughout the Asteroid Belt. The largest mass drivers are on Luna, and serve not only as major payload lifters for the Lunars, but also have proven their value as deadly weapons.

In the year 2275, during the earliest stages of RAM's revolution against the Earth-based System States Alliance, both sides wanted the Lunars to throw in with them and swing the balance of power. In response, the Lunars used their two largest mass drivers to forcefully drive home their policy of aggressive neutrality. Some time after a pitched



battle began between RAM forces and SSA defenders for control of a major Alliance base in Australia, the mass drivers at Tranquility and Tycho hammered the area with large rocks, annihilating the base and all of the combatants present and taking several bites out of the coastline between Sydney and Brisbane. The message was clear: The Lunars did not intend to take sides—and from that day on, no one has asked them to.

The largest crater caused by a natural meteorite strike on Earth is about $2\frac{1}{2}$ miles in diameter. The largest of the rocks flung from Luna were still at least one-eighth of a mile in diameter by the time they came to ground. Projectiles of this size created holes more than five miles wide and hundreds of feet deep, and each one hit with an impact roughly equal to that of a 5,000-megaton nuclear bomb.

Personal Weapons

Old-fashioned guns are relatively unknown in the 25th Century. In the collapse of Earth, most of the old-style weapons factories were destroyed or torn down. Most new weapons were products of a spacefaring age—lasers, rocket pistols and the like, designed for Martian armies and allies. By the end of the 24th Century, true handguns were extremely rare; either the metal had been melted down and used for some other purpose, or the weapon had been placed in a private collection, never to be fired again.

Even so, the 25th Century is still an armed society. Every citizen, except some of those at the very bottom of the social and economic structure, is assumed to carry some type of personal defense weapon. A wide variety of personal weapons are used in the 25th Century; described below are a few of the most common types.

Weapon stats

In addition to cost, size, and weight specifications that are given for all kinds of personal equipment, each of the descriptions of personal weapons in this book has a lot of other information that's important in the XXVc™ game universe.

Range is the maximum distance, in feet, over which the weapon can be used. For example, you can fire a laser pistol at a target as much as 800 feet away and still have a chance of hitting what you aim at. Divide the range figure in half to get the outermost limit of medium

Laser Pistol (and Laser Rifle)

Cost: 300cr (600cr)

Size: Muzzle 9" long (36" long)

Weight: 1 (5)

Range: 800 (3000)

Damage: 1d8 (1d12)

ROF: 3/2 (1)

Shots: 7 (14)

Capacitor Clip

Cost: 25cr (50cr)

Size: 3" x 2" x 1" (6" x 2" x 1")

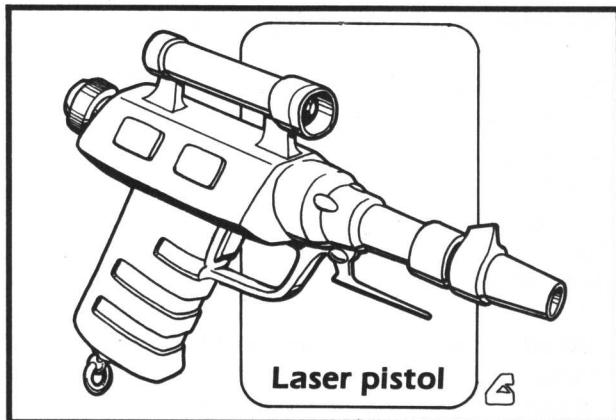
Weight: 4 oz. (8 oz.)

Lasers have been around since the 20th Century, but it was a long time before an effective weapon could be constructed based solely on the laser. The big problem wasn't making the beam—it was powering the thing. Lasers eat power like crazy. The 25th-Century answer is the sophisticated capacitor laser.

Capacitor lasers work like this: A clip in the handle of the weapon has a number of ceramic capacitors built into it (seven in a pistol, fourteen in a rifle). Each capacitor has a stored electrical charge of thousands of volts—enough to create a brief, intense bolt of laser energy. Each shot drains one capacitor. When the clip

has been used up, it automatically ejects and a new clip can be inserted. A used clip can be renewed by plugging them into a recharger or some other source of power for 4 hours. If it isn't fully charged (pulled out after $3\frac{1}{2}$ hours, for instance), it isn't usable.

A hand-held laser weapon emits a beam about $\frac{1}{8}$ " in diameter that is capable of burning a hole through most solid substances, up to and including steel and other hard metals. However, since a laser beam is a form of light, it can be reflected. A mirror, a densely packed crystal (such as the "glass" that most spaceship viewports are made of), or a highly polished metal surface will take a hit from a laser beam and not be penetrated; instead, the beam will reflect off the surface—unless it strikes the surface at precisely a 90-degree angle. For this reason, many objects in the XXVc™ game universe have



curved surfaces (the typical bubble-shaped space-suit helmet, for instance). The laser beam may indeed hit its target, but unless it hits just right so that it can penetrate, it won't do any damage.

Damage from a laser hit comes not so much from the penetration of the beam—it makes only a very small hole—but from the heat that's released into the area surrounding the place of penetration. When the beam hits a living body, the immediate area suffers a searing burn, as the water in the cells around the wound is instantly turned to superheated steam.

Capacitor lasers are tuneable—a special filter can be inserted into the laser aperture, giving the beam a desired color. This is particularly useful in firefights in the dark, as it helps identify friend from foe.

A laser rifle generates a stronger and hotter beam than a laser pistol, giving it greater damage potential and a much longer maximum range. However, a rifle can only be fired once per round, while a pistol can be used three times every two rounds. Because it's easier to carry and can get off more shots in a given period of time, the pistol is generally preferred for use in fast-moving combat.

Rocket Pistol (and Rocket Rifle)

Cost: 400cr (500cr)

Size: Muzzle 6" long (24" long)

Weight: 3 (6)

Range: 400 (2000)

Damage: 1d10 (2d8)

ROF: 2 (1)

Shots: 5 (10)

"Smart" Ammo Clips

Cost: 50cr (100cr)

Size: 5" x 2" x 1" (10" x 2" x 1")

Weight: 1 (2)

The rocket pistol fires a stubby, self-propelled bullet—a miniature rocket, in effect. There is no recoil, since the bullet's propulsion system is internal instead of external and it works on simple ignition instead of explosive force. The first versions of the rocket pistol were developed in the 20th Century, but its low accuracy and expensive ammunition kept it from being anything more than a curiosity at the time.

As mankind moved into space, however, the need for a no-recoil hand-held firearm became apparent. (If you fire an ordinary hand-held weapon when you're weightless, the force of the recoil will send your body cartwheeling in the opposite direction along your line of fire.) For this reason, research on the rocket pistol was revived, centering on the projectile itself rather than the firing mechanism. The 25th-Century version of the rocket pistol's ammunition contains several innovations. The projectile is popularly known as a "smart bullet," for reasons that are explained below.

The bullet is propelled by a tiny solid-fuel rocket that is ignited electronically (and can only be ignited when it's in the firing chamber of the weapon). An adjustable exhaust port permits the bullet to change its trajectory, veering from the original line of fire by as much as 20 degrees. A microscopic, integrated-circuit brain provides directional guidance; radar keeps the projectile on course, enabling it to track on the location of its target. The radar is locked on through circuitry in the trigger mechanism that switches on a millisecond before the weapon is fired. The tip of the bullet contains a detonator connected to a small but powerful explosive charge. In effect, the rocket pistol is a tiny surface-to-surface missile launcher.

The weapon is also capable of firing so-called

range, and in half again to find out where short range ends and medium range begins.

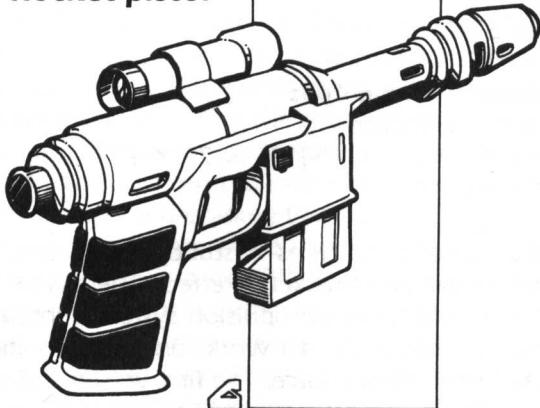
Damage is usually expressed as a dice roll that determines how many hit points of damage the target suffers when it is hit.

ROF (Rate of Fire) describes how often in one minute (one combat round) the weapon can be used.

Shots is the number of times the weapon can be used before its power supply or ammunition load is depleted.

All of this combat-related information is explained in full detail in the *Characters & Combat* book.

Rocket pistol



"stupid" ammunition, which is much less expensive than smart rounds because it does not contain the guidance system or the adjustable exhaust port. However, the shooter suffers a -2 penalty to his chance to hit with a "stupid" shell, because of its lack of an internal guidance system. "Stupid" ammo clips cost 20cr for the pistol and 40cr for the rifle; size and weight are the same as for a clip of smart shells.

The smart bullet is a good piece of technology, but it's not a genius. Its radar can be fooled (just as 20th-Century radar could be) by several means, including the individual ECM (electronic countermeasures) package that is a part of many of the modern styles of smart clothes (see below). A hand-held rocket weapon is difficult to use against a target that is partially concealed by cover, such as a man hiding behind a hedge or a rock outcropping. Unless you're very careful to aim your weapon at the target instead of the cover he's using, the radar will lock on to the hedge or the rock, and the target can easily dart or dive out of danger while the bullet impacts with the barrier.

As with the laser weapons described above, a hand-held rocket weapon can be either a pistol or a rifle. A rocket rifle has a longer range, a slightly larger projectile that is capable of doing more damage than a pistol bullet, and a greater capacity when fully loaded. However, it fires twice as slowly—only one shot per round compared to two shots per round (if desired) for the pistol.

A rocket pistol or rocket rifle can also be used for defensive purposes if it is loaded with a chaff shell or an aerosol round. See the section on "Armor and Protection" for descriptions of these projectiles.

Needle Gun (and Bolt Gun)

Cost: 200cr (250cr)

Size: Muzzle 18" long (18" long)

Weight (unloaded): 2 (2)

Range: 300 (400)

Damage: 1d3 (1d4)

ROF: 3 (2)

Shots: 20 (10)

Needle Ammo Clip (Bolt Ammo Clip)

Cost: 10cr (10cr)

Size: 4" x 3" x 1" (4" x 3" x 1")

Weight: 1 (2)

This weapon functions the same as a mass driver (see above), although on a much, much smaller scale. The barrel contains a series of electromagnets that accelerate the projectile (either a needle or a bolt; the same firing mechanism is used for both types of ammunition) to an extremely high speed in the blink of an eye.

Both types of ammunition are made of magnetized iron and come enclosed in a special clip. (You can't load a needle gun or a bolt gun with just any ordinary pieces of metal that might be lying around.) A needle is a lightweight, sharp-tipped sliver. A bolt is heavier, thicker, and less sharply pointed than a needle (although it is still tapered to provide streamlining when fired in an atmosphere environment); it does slightly more damage than a needle, on the average, because of its greater mass.

Both types of projectiles can be diverted from their original line of fire by the nearby presence of a magnetic field, which makes this weapon undesirable for use in an area containing electrical devices, such as the interior of a spaceship. In any such case, the user of the weapon suffers a penalty to its chance to hit, ranging from -1 to -5 (referee's judgment), depending on the strength of the magnetic field and the type of projectile. Needles, because they are less massive, are more susceptible to a magnetic field than bolts are.

The battery that powers the electromagnets in a needle/bolt gun will last for 60 shots. It can be recharged in 1 hour.

Heat Gun

Cost: 400cr

Size: Muzzle 6" long

Weight (unloaded): 2

Range: 60

Damage: 2d6

ROF: 1
Shots: 7

Plasma Tank Reload

Cost: 80cr
Size: 2" diameter cylinder, 5" long
Weight: 1

This weapon is powered by a canister holding a tiny tank of pressurized oxygen and a small container of highly combustible fuel. Firing is a sequential process; when the trigger is pressed, the proper amounts of oxygen and fuel are brought together, passed into a small chamber at the end of the muzzle, and then ignited by a spark. At the instant of ignition, a blast of compressed air causes the superheated plasma to jet forth from the gun.

The stream of flame is 1" in diameter after 15 feet, 2" after 30 feet, and 3" by the time it reaches 60 feet (maximum range), which occurs about two seconds after the weapon is fired. At that time, all the fuel is consumed and the flame dies out. The blast is hot enough to melt steel, but because of its short duration is not effective when used in this fashion.

A significant problem with the heat gun is that the flame does not instantly burn through any inflammable substance it contacts (the way a laser beam does). Instead, it spreads along the surface of the object and could actually jet back toward the operator of the weapon. For this reason, it's very dangerous to fire a heat gun in a small enclosed area. The high cost of fuel canisters also makes it a relatively unpopular weapon, from an economic standpoint. However, it is capable of dealing out a goodly amount of damage, and its effectiveness is not hampered by many of the factors that affect other types of weapons.

Microwave Gun

Cost: 350cr
Size: Muzzle 4" long
Weight: 2
Range: 400
Damage: 1d10
ROF: 2
Shots: 10

This weapon uses a tight beam of microwave radiation to burn the target. Although it has a shorter maximum range than a laser pistol, it is capable of doing more damage than that weapon. In close combat, under certain circumstances, the microwave gun is a brutally effective hand weapon.

Because microwave radiation can penetrate non-metallic substances, this weapon can strike a target located behind a barrier less than 6" thick made of (for instance) plastic, glass, or organic matter. (No attempt to hit a target is automatically successful, however; even if the target behind the barrier is stationary and the shooter's aim is true, there is always a chance that the microwave beam is dispersed or deflected as a result of its passage through the solid substance.)

The weapon's biggest drawback is that microwaves are always reflected by metal—including any kind of metal body armor and the metallized mesh of a smart uniform or a spacesuit. Of the various types of protection normally available in the XXVc™ game world, light body armor is the only one that microwaves can penetrate. Thus, the microwave gun is virtually useless against modern-day military or paramilitary soldiers, all of whom can be expected to have some kind of metallic protection.

After 10 shots, the transformer that powers the microwave generator inside the gun is depleted. In 10 minutes, it can be recharged enough to power one shot, and it can be charged back to full capacity in 1½ hours.

Sonic Stunner

Cost: 300cr (basic unit)
Size: 6" x 3" x 1"
Weight: 2
Range: 40
Damage: see below
ROF: 1
Shots: 14

The sonic stunner is a high-frequency sound projector, functionally and physically resembling the devices developed in the 20th Century for remote operation of electronic equipment. The basic unit emits a single sound—inaudible to the ears of a human or a gene-altered human (Martian, Venusian, Lunarian)—that is tuned to the resonating pitch of the human nervous system.

Contact with the emanation of a sonic stunner causes the victim's body to vibrate internally at such an intensity that—unless he makes a saving throw vs. paralyzation—he passes out from body shock. The sound waves are concentrated in the direction of a single target; others in the immediate area may suffer discomfort (noticeable, but having no effect on their actions), but are not required to make saving throws.

Gennies (Delphs, Spacers, etc.) are not affected by the basic form of the sonic stunner, but the basic unit can be equipped with modules designed to work when employed against other genotypes, for a cost of 100cr per module. The sonic stunner can only be tuned to one frequency at a time, however, and changing the setting requires 1 round.

The frequency of the damaging sound is outside the range of human hearing; however, as a safety measure, a low-volume, high-pitched harmonic hum is also projected, allowing the user—and anyone else within 20 feet—to know when the weapon is operational.

A sonic stunner is totally ineffective in a vacuum, since sound can't be transmitted without air or some other medium for it to travel through. In a thin atmosphere (such as on the surface of Mars), the target receives a +2 bonus on the saving throw attempt. Sound travels faster and more efficiently through denser mediums than it does through Earth atmosphere; in a high-pressure atmosphere such as on the surface of Venus, the target suffers a -2 saving throw penalty. When the stunner is used underwater against a target that is also submerged, the saving throw penalty is -4.

When it is depleted, the battery of a stunner can be recharged enough in 5 minutes to allow one "shot," or it can be fully recharged in 1 hour.

Desert Runner Crossbow

Cost: 100cr
Size: 12" wide "bow" mounted atop 18" long barrel/trigger mechanism
Weight (unloaded): 4
Range: 200
Damage: 1d4 or 1d8
ROF: 1
Shots: 10 per clip

Ammo Clip of Bolts (or Shells)

Cost: 5cr (10cr)
Size: 4" x 3" x 1" (4" x 3" x 1")
Weight: 2 (4)

Combining the low technology of a crossbow with the high technology of the 25th Century, this weapon can fire either streamlined metal projectiles (damage 1d4, as bolt pistol) or explosive shells (damage 1d8).

Unusual among the ranged weapons of the XXVc™ game universe because it has no electronic parts and doesn't rely on fuel, the crossbow's number of shots is limited only by the amount of ammu-

nition the shooter is carrying. This makes it an ideal weapon for use in the wilderness.

In fact, it first came into widespread use among the packs of Desert Runners (see the Characters & Combat book) that work on the desolate surface of Mars. The runners are especially proficient in the use of the crossbow, to the extent that the weapon is now popularly known as the "Desert Runner crossbow." A member of any other race or genotype has an automatic -4 penalty to hit when using the crossbow. This penalty can be decreased and eventually erased if the shooter uses the crossbow exclusively in combat, but most characters will not choose to employ this weapon if something else is available.

The bolts used by the crossbow are less expensive than the projectiles used in a bolt gun (see above) because they don't have to be magnetized and thus can be made of a wider range of materials. A clip of shells for the crossbow is less expensive than the "stupid" ammunition of a rocket pistol or rocket rifle because these shells are not self-propelled and pack a slightly smaller explosive punch.

Venusian Kryptx

Cost: see below
Size: 6' long, approx. 3" diameter; end caps approx. 6" diameter
Weight: 4
Range: 6' (shock), 400 (laser)
Damage: 2 to 12 (shock), 1d6 (laser)
ROF: 1
Shots: 10

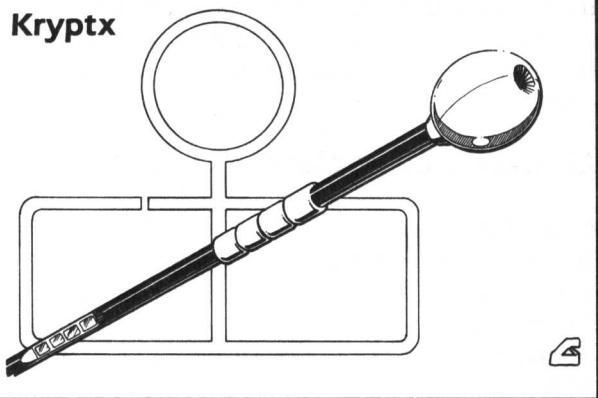
Replacement Power Pack

Cost: see below
Size: 3" diameter sphere
Weight: 1

Another specialty weapon like the Desert Runner crossbow (see above), the kryptx is used exclusively by the priests of the Ishtar Confederation on Venus. No cost figure is given, because a priest wouldn't even think of selling one, and anyone who tries to manufacture a forgery and use it or sell it would get himself in a *lot* of trouble with the Ishtarians.

The weapon is a six-foot-long staff, usually crafted of Venusian ebony or glassteel, capped at both ends by metal knobs. The kryptx's attacks are channeled through these end caps. A small keypad embedded in the center of the staff is used to control the weapon's effects. Only an Ishtarian priest knows which keys to press, and in which order to

Kryptx



press them, in order to make the staff function, and a priest will not willingly reveal this information even under threat of death. Anyone who tries to use the weapon without knowing the proper key codes will simply fail to make it work.

When used as a melee (hand-to-hand) weapon, the kryptx can deliver a dose of electricity through either end cap ranging from a light shock (2 points of damage) all the way to a potentially fatal jolt (12 points). The amount of damage desired is selected by the user of the staff, and remains at that fixed amount until it is changed. If the damage is set at 7 points (the middle of the range), the target must make a saving throw vs. stun to avoid being knocked unconscious. If the damage setting is lower or higher than 7 points, the target gets a bonus or a penalty to the saving throw attempt: a -5 penalty on a 12-point hit, a +3 bonus on a 4-point hit, and so forth.

For use in ranged combat, the staff contains a capacitor laser mounted in one of the end caps; it has only half the range of a laser pistol and does less damage, but is still an effective weapon.

The end cap opposite the laser is removable, enabling the user to recharge or replace the weapon's power pack. Recharging a power pack is done at the same rate as for a microwave gun (see above): one shot of power in 10 minutes, or a full recharge in 1½ hours.

Mono Knife (and Sword)

Cost: 200cr (2000cr)

Size: 6"-8" handle, 4"-6" blade (24" blade)

Weight: 1 (4)

Range (melee only): 3' (6')

Damage: 1d6 (1d10)

ROF: 1 (1)

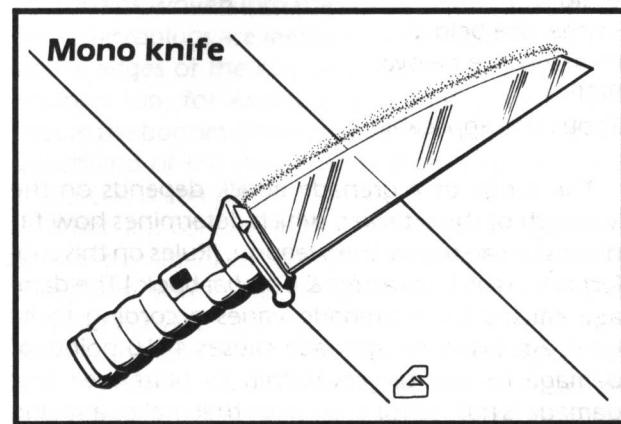
Shots: not applicable

Often mistakenly called a laser knife, a mono knife is made of a knife blade cut from a single piece of synthetic diamond. The blade's edge is a mere one molecule thick (monomolecular; hence the name), making it capable of cutting through almost anything. Mono knives are commonly carried by RAM nobility, although variants can be found all over the solar system.

The misnomer "laser knife" comes from a standard protective feature of the mono knife. In order to make the super-thin, nearly invisible edge stand out, a small, low-wattage laser is projected (from an aperture in the hilt) into the edge of the blade whenever the activation button on the handle is being pressed. Right along the edge, the laser is quite bright. As the light beam is refracted throughout the rest of the diamond crystal, the entire blade takes on a soft glow—not bright enough to use as a light source, but bright enough to be visible in darkness from 100 feet away. As an added safety feature, the mono blade automatically retracts into the handle if there is no hand gripping the activation button.

Much less common, but available to those with the money and the desire, is the mono sword. The blade of this weapon is about two feet in length, with a handle the same size as a knife. The blade is not retractable; instead, a synthetic diamond hilt guard (a separate piece from the blade) protects the wielder from accidents. The high cost of manufacturing an artificial diamond two feet long makes these blades extremely expensive.

When used as a tool, a mono blade can make a 3"-long cut through a 1" thickness of a moderately hard substance such as wood or plastic in 1 round. The laser beam is a heat source, but it is not large enough or hot enough to automatically set fire to something it touches; however, it will char or melt a substance it cuts through for a very short distance on either side of the cut. (This telltale evidence can



often help an observer to determine if a mono blade was used to cut through something.) The blade can also cut through a very hard substance such as glass or steel, but this is a more tedious process because the wielder must exert more pressure and move the blade along the line of the cut more slowly; on the average, a mono blade can make a 1'-long cut through $\frac{1}{8}$ -inch thick steel in one round.

The solar-cell battery that powers the laser in a mono blade is not inexhaustible, but it lasts a long time; a knife or sword that is used 20 times (rounds) per day will not run out of power for 60 days. The battery can be fully recharged by leaving the device in a source of sunlight or connecting it to a charging unit for 1 hour.

Heavy Weapons

Not necessarily hard to carry, these are weapons that are heavy in the damage department. They are also special because, unlike the personal weapons described above, these weapons can cause damage to any targets within an area.

Rules for grenades and other area-effect weapons are found in the Combat chapter of the *Characters & Combat* book. Below are the basic specifications for the four types of heavy weapons in the XXVc™ game.

Grenade

Cost: 50cr
Size: 4" diameter sphere
Weight: 1
Range: see below
Damage: see below
ROF: 1
Shots: not applicable

The range of a grenade attack depends on the Strength of the attacker, which determines how far he or she can throw the weapon. (Rules on this subject are in the *Characters & Combat* book.) The damage caused by a grenade varies according to its type. An explosive grenade causes 4d10 points of damage to any targets within its blast area (but damage is halved for any target that makes a saving

throw vs. explosion). Stun, gas, and dazzle grenades have specific effects against targets that miss their saving throws; again, see the *Characters & Combat* book for details.

Grenade Launcher

Cost: 500cr
Size: 5" diameter cylinder, 3' long
Weight: 3
Range: 200
Damage: as grenade
ROF: 1/2
Shots: not applicable

Not a weapon in itself, the grenade launcher is simply a device (operating by means of compressed air) that increases the maximum range of a grenade attack.

The closed end of the cylinder contains a compartment holding a small volume of compressed air—enough for one shot. After each shot, the pressure chamber must be pumped up again, requiring one round, during which the launcher cannot be used. This aspect of the launcher also means that it cannot be used in an airless environment, unless the shooter or a companion has a tank of compressed air from which the chamber can be repressurized. (This still takes one round.)

The role of ships

Obviously, a large part of the technology of the 25th Century revolves around rocket ships, without which there would be no such thing as interplanetary travel or civilizations on other worlds.

Player characters in the XXVc™ game universe will be spending a lot of time on or around ships; more than being "mere" objects of technology, ships are a vital part of the role-playing milieu. What they con-

Rocket Launcher

Cost: 1000cr
Size: 6" diameter cylinder, 6' long
Weight: 30
Range: 1000
Damage: 5d10
ROF: 1/2
Shots: not applicable

Rocket Launcher Ammo

Cost: 100cr
Size: 5" diameter cylinder, 6" long
Weight: 2

Essentially a very large rocket rifle, this launcher takes single-shot "smart" explosive ammunition capable of doing 5d10 points of damage to any target in its blast radius. After a shell is ignited in the firing chamber, the launcher will not work for one round until it cools down somewhat (which accounts for its slow rate of fire).

Plasma Thrower

Cost: 800cr
Size: 6" diameter cylinder, 6' long
Weight: 35
Range: 400
Damage: 4d10
ROF: 1/2
Shots: not applicable

Plasma Thrower Cartridge

Cost: 80cr
Size: 5" diameter cylinder,
10" long
Weight: 4

This launcher propels a canister of flammable jelly, tipped with a small detonator, that explodes on contact with its target (or whatever it happens to hit) and sprays flaming plasma throughout its area of effect. The device uses compressed air, just as a grenade launcher does, which means that it is subject to the same requirements and limitations (see above).

Armor & Protection

Historically, armor types have always evolved out of what types of weapons they must protect against. Armor of the 25th Century is no different. Against the energy-based and explosive weapons of the modern age, old-style Kevlar (the material used to make bulletproof vests in the 20th Century) and metal armors are often useless.

Instead, defenders have turned to more sophisticated types of defense. Articles of clothing are woven with plastic-wire filaments to absorb and disperse laser fire. Other "active defenses" include ECM fields and chaff shells. These can confuse a pursuing smart shell from a rocket pistol, making it

veer off harmlessly. Aerosol mists are also used to absorb laser-beam energies and to further stymie rocket rounds.

Smart Clothes

Cost: 1,000cr (full basic outfit)

Replacement pieces:

Tunic: 500cr
Pants: 300cr
Gloves: 100cr
Boots: 100cr

Size: 2' x 2' x 1' (full outfit, when stowed)

Weight: 30

Armor Class: 4

tain, what they can do, and what they cost are integral facts that form part of the thread of many XXVc™ game adventures.

For this reason, all of the technical information about ships that you'll find in the game literature is contained in the *Characters & Combat* book.

Much of the combat and military clothing of the 25th Century are what are called smart clothes. Smart clothes incorporate internal circuitry and microcomputers for climate control, communications and defense. All NEO uniforms, the garb of RAM security forces and combat troops, and most rocketjock coveralls are fully wired. Most high-ranking RAM execs, Mercurian nobles and top-echelon Lunarians have at least some smart wiring integrated into their garments. An outfit of smart clothes is designed as modular garments (pants, gloves, tunic, boots, etc.), so that if one section is damaged, it can be easily removed and replaced.

Woven into the fabric of the standard smart uniform are thousands of hair-thin conductive plastic fibers. These fibers are connected in turn to tiny microchips woven into the seams of each garment. Small microplugs are meshed into self-adhesive tabs at the edges of the clothing—when you put on a uniform top, for example, you simply match the tabs at the bottom of the jersey to the tabs along the waistband of the pants, press them together, and the circuit is complete.

When it is connected to a power pack contained within the smart uniform's utility belt (see below), integrated wiring has several uses; each filament can carry several impulses and perform several different functions at the same time. The wiring can be used to heat or cool the suit and the individual inside. The wiring can also be used to connect to vari-

ous clip-on attachments (see below) which can be hung on the clothing using self-adhesive fasteners. Monitors on the cuffs of the uniform tunic provide liquid-crystal readouts on the status of power packs, clothing and wearer temperature, heartbeat, respiration, and external conditions (such as poisons in the air, radiation, or extreme climatic conditions).

Many weapons in the XXVc™ game universe are either energy-based or use smart bullets. Integrated wiring provides protection from both types of weapons. The dense mesh is specially treated to absorb laser energy and disperse it throughout the clothing, turning a searing bolt into a slight increase in overall body heat. In addition, the tough wiring net instantly contracts in response to a burst of kinetic energy (the impact from a solid projectile, a knife slash, a blow from a fist), offering protection to the body underneath. With an ECM (electronic countermeasures) attachment used in conjunction with a utility belt and power pack, the integrated wiring can create a strong jamming field that confuses incoming smart bullets (see the section below on clip-on attachments).

Also, the composition of the mesh makes it resistant to penetration by all forms of atomic radiation (+3 saving throw bonus, if the radiation was encountered while the mesh was being worn). As with the protections against lasers and kinetic-energy weapons described above, this function of the mesh works without the wiring being connected to a power pack.

Spacesuit Backup

Cost: 200cr

Replacement pieces:

Coveralls: 75cr

Helmet: 75cr

Air recycler: 50cr

Size: 2' cube (when stowed)

Weight: 10

Armor Class: 4

While smart clothes cannot be worn as a long-term substitute for a spacesuit (described later in this

section), they are designed to carry most of the important elements for survival in a vacuum or a hostile environment.

As mentioned above, the mesh of the smart uniform provides radiation protection, heating and cooling, information readouts and ECM protection. In addition, a thin plastic coverall, designed to "plug into" the integrated wiring, can easily be pulled over the basic uniform; once in place, the microcircuits of the uniform activate the coverall's own integrated mesh of tiny "memory metal" wires. These wires contract all over the wearer's body, making the suit airtight and providing the necessary support to keep the body from exploding in an airless environment. In case of a rupture (such as would be caused by a weapon strike), the fabric of the coverall is instantly self-sealing; see the description of the spacesuit (below) for more information on this. A simple, light-duty helmet, specifically designed for emergency use, goes over the head and is connected to an air-recycling unit that mounts on the back. The base of the helmet forms an airtight seal with a flange around the neck opening of the coverall.

If they are within easy reach, the coveralls and the helmet can be put on and connected with the other circuitry of the smart uniform in 1 minute. This configuration provides the same protection as a spacesuit for 24 hours; after that, the efficiency of the air-recycling unit begins to drop, and 12 hours later the unit goes dead.

Utility Belt

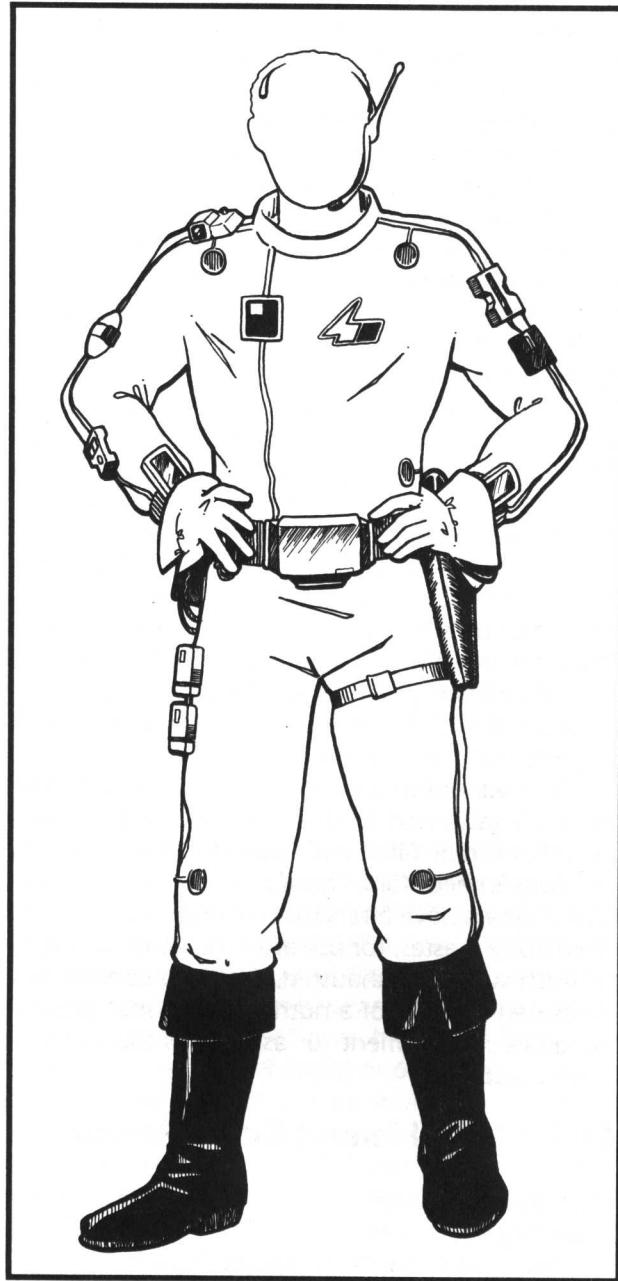
Cost: 200cr

Size: 4" wide, 20" to 40" long (adjustable)

Weight: 5

Armor Class: n/a

One of the most important parts of a fully equipped smart uniform, the utility belt is a designed as a large mesh of integrated wiring, linked to a sophisticated microcomputer and a power pack built into the belt buckle. The power pack is good for 24 hours when fully charged. Extra power packs, weapons and information sensors can be connected to the belt (or simply fastened to it for



A typical smart uniform

later use), while the microcomputer routes power and commands throughout the clothing.

Clip-on Attachments

These are various types of ECM devices, medical monitors, recorders, cameras, and electronic packages that can be hooked into a smart uniform. Most NEO combat suits have an "electronic" stripe running along the shoulder and leg seams. This stripe is made up of two self-adhesive strips with a circuitry

strip running up the middle. The attachment has matching circuit and self-adhesive strips on its back. (On other types and styles of smart clothes, the contact spots are located in different places, but they will always be in places that are easy for the wearer of the suit to reach.)

Each attachment contains a built-in microprocessor dedicated to performing the function of that device; thus, someone wearing a smart uniform without a utility belt (and without the computer that the belt would contain) can still get the benefit of any clip-on device that he installs. Depending on the design of the outfit, a smart uniform can accommodate from 4 to 10 clip-on attachments. Typical and most frequently used attachments include the following items.

Power Pack

Cost: 25cr
Size: 3" x 3" x 1"
Weight: 1
Armor Class: n/a

A clip-on power pack can operate for 12 hours. When the main power pack in the utility belt is depleted, a power pack installed as a clip-on attachment automatically kicks in. If no belt is worn, an auxiliary power pack can still control heating and cooling of the uniform through its own microprocessor.

ECM Package

Cost: 50cr
Size: 2" x 2" x 1/2"
Weight: 8 oz.
Armor Class: see below

When hooked to the smart uniform, this device makes it difficult for an attacker to get a radar lock-on with a rocket pistol and inhibits the performance of all types of smart projectiles: There is a 50% chance that any such attack will be misdirected (checked, if necessary, after the shooter rolls to see if his attack hits). Most ECM fields are programmed to tell the bullet to travel "straight up," perpendicular to the original path. Other ECM fields are designed to make the target radar-transparent, or to create ghost images—this tactic makes it difficult for radar-guided weapons to get a lock onto the target.

Stealth Unit

Cost: 25cr
Size: 2" x 2" x 1/2"
Weight: 8 oz.
Armor Class: n/a

This device makes the wearer "invisible" to sonic- or infrared-based alarm systems by masking any sound waves or heat waves coming off the wearer's body.

Security Pack

Cost: 35cr
Size: 3" x 2" x 1"
Weight: 1
Armor Class: n/a

This unit projects a 50-foot-radius electronic field around the wearer that is sensitive to sound and motion. It transmits a silent alarm (a tiny, pulsating dose of electrical current, harmless to the wearer) when any object man-sized or larger moves into the area of the field. The device can be instructed to "ignore" particular objects, such as companions.

Communications Pack

Cost: 50cr
Size: 6" x 2" x 1"
Weight: 1
Armor Class: n/a

Essential in all cases when a smart uniform is worn in an airless environment (assuming there's someone else to talk to) and certainly convenient the rest of the time, this is a unit consisting of a radio (transmitter and receiver), a speaker, and a microphone. Any of the components can be turned on or off as desired. Using part of the uniform's integrated circuitry as an antenna, signals can be broadcast to receivers up to 20 miles away.

Spacesuit

Cost: 200 to 500cr
Size: 2' cube, when stowed
Weight: 25
Armor Class: 6

Although smart clothes (see above) can be used as a type of spacesuit, most civilians can't afford a full outfit of smart clothing. Instead, they use regu-

lar spacesuits: fairly tight coveralls constructed of a polymer plastic-based fabric. The suit automatically hardens around the body on exposure to vacuum, while the joints remain flexible to allow movement.

The most important feature of any spacesuit is the self-sealing ability of the fabric—any hole, slice, or tear in the suit immediately closes, preventing the wearer from dying due to decompression in a vacuum. (The body still takes damage from any wound it may have suffered, but the constriction of the suit also helps to close the wound and keep things from getting any worse.)

The basic spacesuit includes the body covering plus a helmet and an air-recycling unit that operates for up to 12 hours (long enough for a worker to get through one shift on the job, plus a safety margin). The helmet has a built-in radio (battery life 12 hours) to allow communication in an airless environment. For an extra 100cr, the life of both of these components can be extended to 24 hours. A suit costing 400cr has a useful lifetime, before needing recharging, of 72 hours (3 days), and for the top-end price of 500cr a suit can be purchased that provides air and radio for up to 7 days.

Every variety of spacesuit also contains a small reservoir (attached to the back-mounted air recycler) that can be filled with enough water to satisfy the body's needs for 24 hours. The two most expensive versions have filters that distill drinkable water from body wastes, for use after the 24-hour supply of fresh water is exhausted, and also contain pre-measured "meals" of a nutrient paste that provide adequate nourishment for as long as the suit's air supply lasts.

Light (and Heavy) Body Armor

Cost: 250cr (1,500cr)
Replacement parts
Torso protector: 75cr (450cr)
Arm protector: 30cr (180cr)
Leg protector: 40cr (240cr)
Helmet: 35cr (210cr)
Size, full outfit: 3' cube, when stowed (3' cube)
Weight, full outfit: 15 (35)
Armor Class: 7 (2); also see below

Light body armor is made of shaped plates of high-density plastic; the heavy stuff is of the same material, but impregnated with beryllium crystals for greater protection and durability (at six times the cost).

Both types of armor are modular in construction, which gives the wearer complete freedom of move-

ment and makes it possible to replace parts of the outfit if the original gear is lost or damaged. The drawback to this arrangement—especially where the heavy gear is concerned—is that the wearer's Armor Class is often worsened if he isn't wearing a full set of armor.

The torso protector is a shaped cylinder, with hinges down one side, clamps on the opposite side, and holes where the arms protrude from it. Not having a torso protector causes the wearer's AC to worsen by 5, from 2 to 7 for heavy armor and from 7 to 10—the worst AC possible—for light armor. An AC of 10 is equivalent to having no protection; if you're wearing all the pieces of a light outfit except for the torso protector, you might as well not be wearing any armor at all—except in the circumstance described below.

Arm and leg protectors are of the same general construction as the torso protector, but with flexible fittings at the elbow and knee joints. If an outfit is missing one or two of these four items, the wearer's Armor Class is worsened by 1; if it is missing three or four pieces, the wearer's AC is worsened by 2.

The helmet protects the back, top, and sides of the head, but does not cover the face. The AC penalty for not having a helmet is 1.

A major exception to all of these specifications is the following: As long as someone is wearing a torso protector, his Armor Class can never be worse than 8 (for light armor) or 4 (for heavy armor), regardless of any other pieces that might be missing. Also, as long as a person is wearing at least a helmet and two other pieces of gear, his Armor Class can never be worse than 9 (light) or 6 (heavy).

Heavy body armor can be worn over a set of smart clothes or a spacesuit, giving the wearer the benefit of a better AC without sacrificing any of the advantages of the other gear. (Actually, the same goes for light armor—but because its AC is worse than that of a spacesuit or smart clothes, there's no reason to wear it on top of the other stuff.)

Battle Armor (with Fields)

Cost: 2,500cr (3,000cr)

Size: same as body; can't be compressed or stowed

Weight: 75 (80)

Armor Class: 0 (-2)

Battle armor is an actual "suit" of armor, not too different in basic appearance from the metal outfits that were worn by the knights of ancient Earth. It is made of the same substance as heavy body armor (see above), but is reinforced by a metallic exoskele-

ton. The wearer's freedom of movement is not hampered, even though his body is fully enclosed, because the mechanism of the exoskeleton contains electronic "enhancers" that boost the quickness of any movement of a muscle or joint, up to the level that the wearer could attain if he or she was not wearing the armor.

Sensors built into the armor are able to communicate with a uniform of smart clothes worn under the armor, so that the wearer can continue to make use of the uniform's features and abilities. Battle armor is airtight and self-sealing (see the description of the spacesuit for more details on this), and contains its own air-recycling system identical with that found in a spacesuit; thus, there is no need to wear a spacesuit and a suit of battle armor at the same time. (Actually, this is not even possible, since the helmet of a spacesuit will not fit inside the headgear of a suit of battle armor.)

It takes 10 minutes to put on or take off a suit of battle armor, and both operations require the assistance of a second person. As an option, the headgear can be left off (no penalty to AC) if the wearer is not worried about being exposed to a vacuum. The rest of the outfit is a one-piece construction (unlike the body armor described above), so that it isn't possible to wear only part of a suit.

Battle armor with fields is the best protection that money can buy in the 25th Century. In addition to all the benefits and features of regular body armor, this suit contains its own built-in defense mechanisms: an ECM field that provides excellent protection against smart bullets (75% chance that the shell will miss; otherwise, the shooter must hit AC - 2 to cause damage) and an aerosol mist sprayer that provides the wearer and anyone else within 25 feet protection against laser fire. (See the description of the aerosol mist shell later in this section.)

The battery that powers the "movement enhancers" inside a suit of battle armor will run the system for 24 hours on a full charge. If it goes dead, the wearer suffers a -4 penalty to Dexterity and is able to move at only half normal speed. Power for the ECM field is provided by a separate battery with a life of 12 hours (but the battery is only drained when the field is turned on). Either or both batteries can be recharged by being exposed to sunlight or connected to a power source for 1 hour. The aerosol mist sprayer contains enough liquid to create three fields; it can be refilled with water in just a couple of minutes. (Using the aerosol mist sprayer is a specific act that takes a full round in a combat situation; thus, a character cannot put up an aerosol shield and perform some other action in the same round.)

Chaff Shell

Cost: 50cr per pack of 5

Size: 2" long cylinder, 1/4" diameter per shell

Weight: 2 per pack of 5

ROF: 1

Armor Class: see below

A special type of ammunition that can be loaded into a rocket pistol or rocket rifle, a chaff shell is composed almost entirely of near-microscopic metal flakes. It is a self-propelled shell, but with a much smaller load of solid rocket fuel than a standard rocket bullet. The fuel is used up by the time the shell is 50 to 100 (40 + 1d6 × 10) feet from the shooter; at that instant, the shell explodes, releasing the chaff in a 25-foot-radius sphere.

The metal flakes remain suspended, in calm air or a vacuum, for 10 minutes. In a strong wind, the chaff will be dispersed in as little as 1 minute (referee's judgment). In a zero-gravity environment, the field disperses almost immediately; it is only effective during the remainder of the round in which the shell explodes.

During the time that a chaff field stays together, the metal particles provide complete protection from smart shells and radar beams that enter the cloud. The sensitive detonator on a smart shell (or any kind of "stupid" explosive shell, for that matter) will cause the shell to explode upon contact with the chaff field. The chaff is also radar-proof; any detection or guidance system based on radar will lock on to the chaff instead of a target that lies beyond the field.

Chaff shells can be loaded singly into a rocket pistol or rocket rifle, if only one shot is desired, or a clip containing up to five shells can be installed in the weapon. It takes 1 round to load a single shell or a clip (including the time needed, if any, to eject another clip of shells that may be inside the weapon).

A chaff field is transparent—the metal particles are too small to be seen by the unaided eye—but a target viewed through the field may appear to shimmer slightly, because light waves are slightly deflected by the particles of the field.

Any character or creature caught inside the field of a chaff shell when it goes off suffers 1d4 points of damage from the force of the detonation and must save vs. explosion or be blinded for 1d4 rounds (unless the eyes are protected by goggles or a helmet). The saving throw also applies to any creature that enters the chaff field without eye protection.

Aerosol Mist Shell (or Grenade)

Cost: 50cr per pack of 5 (50cr each)

Size: 2" long cylinder, 1/4" diameter per shell (3" diameter sphere)

Weight: 2 per pack of 5 (1)

ROF: 1 (1)

Armor Class: see below

Aerosol mist shells and grenades are designed to retard and disperse laser weapon fire. An aerosol shell is identical with a chaff shell (see above) in many respects, including the ways in which it is loaded and fired, the size of the field it creates, and how long the field remains effective.

To prepare an aerosol mist grenade for use, the thrower flips a safety switch (which can be re-engaged if the grenade is not released). If the safety is off, the grenade goes off one second after it is released. (If it's thrown while the safety is on, nothing happens and it can be retrieved.) The grenade releases a spray of mist that extends 100 feet in every direction (compared to the 25-foot-radius field created by an exploding aerosol shell); in all other respects, the protection afforded by the mist is the same.

The mist is composed of droplets of liquid that hang suspended in the area where they first appear. While the field lasts, it is a completely effective shield against any laser beam that is fired into it. The moisture bleeds heat away from the laser and breaks up the integrity of the light beam at the same time, dispersing the laser and rendering it harmless.

An aerosol mist field can be generated so that it surrounds a person or a group of comrades. However, those who are to be protected by the field must be careful not to be too close to the shell or grenade when it goes off; anyone within 10 feet of the detonation suffers 1d4 points of damage. And, of course, laser weapons belonging to anyone inside the field are useless for as long as the field lasts.

Transportation

Rocket Belt

Cost: 1,000cr

Size: 3' x 2' x 1'

Weight: 10

Spare Fuel Pellet

Cost: 100cr

Size: 6" long cylinder, 3" diameter

Weight: 1

The rocket belt is the ultimate in personal transportation. This device is a simple extension of the now-ancient Bell Lab jet pack developed in the mid-20th Century. A small, centrally mounted turbine burning a condensed solid fuel sends thrust to two pods mounted on either side of the pack. Fans and baffles in the tubing expel the heat of combustion behind the body, while the thrust is expelled through the pods and directed down and away from the body. A harness holds the rig in place.

Control of direction and thrust is achieved through manipulation of a hand-held control. (A rifle, a crossbow, or any other weapon requiring two hands to operate cannot be fired by someone using a rocket belt.) The belt is capable of lifting a 200-pound man at 20 feet per minute and holding him aloft for 30 minutes in Earth gravity (adjust for lighter or heavier weights, or different gravity). However, the device is more often used for jumping from place to place in flights not exceeding 2 minutes in length at a "cruising speed" of about 15 miles per hour (1,000 feet of horizontal travel per minute). Two extra fuel pellets can be stored on the harness of the pack for fast refueling (2 minutes to insert a new pellet, must be on the ground).

Because the fuel must be mixed with a small amount of oxygen in order to be ignited, a rocket belt will not work in outer space or any other airless environment. Individual transportation in outer space is provided by a variation of the rocket belt (see below) that works on gas propulsion.

Space Belt

Cost: 1,000cr

Size: 3' x 2' x 1'

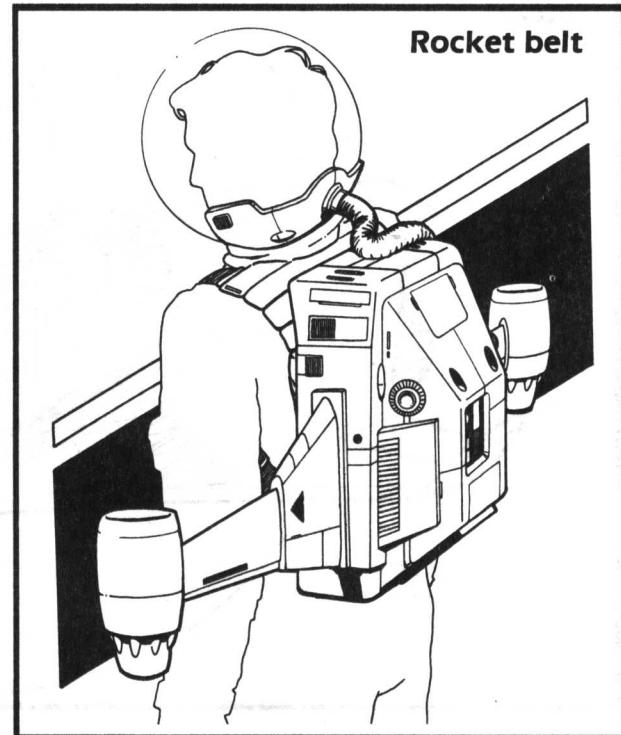
Weight: 8

Spare Gas Canister

Cost: 20cr

Size: 6" long cylinder, 3" in diameter

Weight: 1

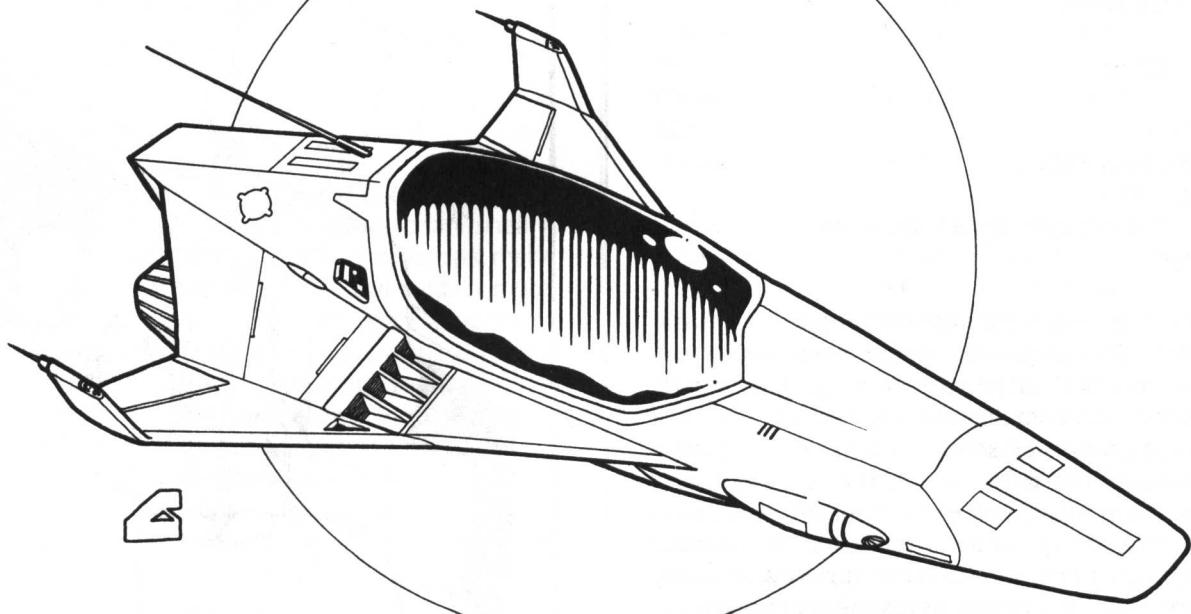


The space belt is essentially a rocket belt that has been modified so that it can be used in an airless environment. It propels the wearer by ejecting short bursts of compressed air. Each gas canister contains enough air for 30 bursts. The belt's nozzles, one on either side of the body, are controllable and can be pivoted through 360 degrees, so that an air burst can be sent in any direction without the wearer having to turn his body.

Because most airless environments (such as outer space) are also zero-gravity environments, the wearer of a space belt must be careful not to overuse the device; one burst of air will send a weightless body moving at a speed of 120 feet per round, and additional bursts will double the body's velocity (from 120 to 240 to 480, etc.). The only way to stop yourself, once your body has been set in motion by a blast from a space belt, is to fire another burst of air (or more than one, if you're moving really fast) in the opposite direction.

If the wearer of a space belt collides with a large solid object (a rock or a ship, for instance) while traveling at 200 feet per round or faster, he must save vs. falling or suffer 1d8 points of damage for each 200 feet per round of velocity: 1d8 for 240, 2d8 for 400, 3d8 for 600, and so on.

Jetcar



Jetcar (and Skimmer)

Cost: 35,000cr (20,000cr)
Size: 15' x 6' x 4' (10' x 6' x 4')
Weight: 2,000 (1,200)

Spare Fuel Canister

Cost: 200cr
Size: 1' long cylinder, 6" diameter
Weight: 20

The jetcar has not replaced ground vehicles by any means, but it is a fairly common mode of personal transportation in the 25th Century. The standard vehicle (described in the above specifications) can carry two people plus about 50 cubic feet of cargo, or a third person in place of the cargo.

A jetcar burns a liquefied version of rocket belt fuel; heat and thrust are vented through the underside and the rear of the vehicle, causing it to move up or forward (or both) in response to the driver's manipulation of the controls. Maximum vertical speed is 15 miles per hour (about 22 feet per second); the car can move as fast as 100 miles per hour parallel to the ground, while maintaining a constant altitude. The velocity figures are uniform, regardless of where the car is operated, since each car is engineered to work on the planet where it was manufactured.

A single fuel canister contains enough "juice" to

operate the car for 3 hours at an average forward speed of 50 miles per hour. Other canisters can be stowed in the cargo space, and the vehicle can be refueled while it is airborne.

A skimmer is a smaller, lower-powered version of a jetcar with a two-passenger capacity but no cargo space to speak of—enough to carry a bit of personal gear (weapons, etc.) and one or two extra canisters of fuel. The skimmer has a top speed of 50 miles per hour (cruising speed 30 mph), and can only climb to about two feet off the ground. Because it uses fuel more economically, a skimmer can travel for as much as 8 hours before needing to be refueled.

Dragonfly

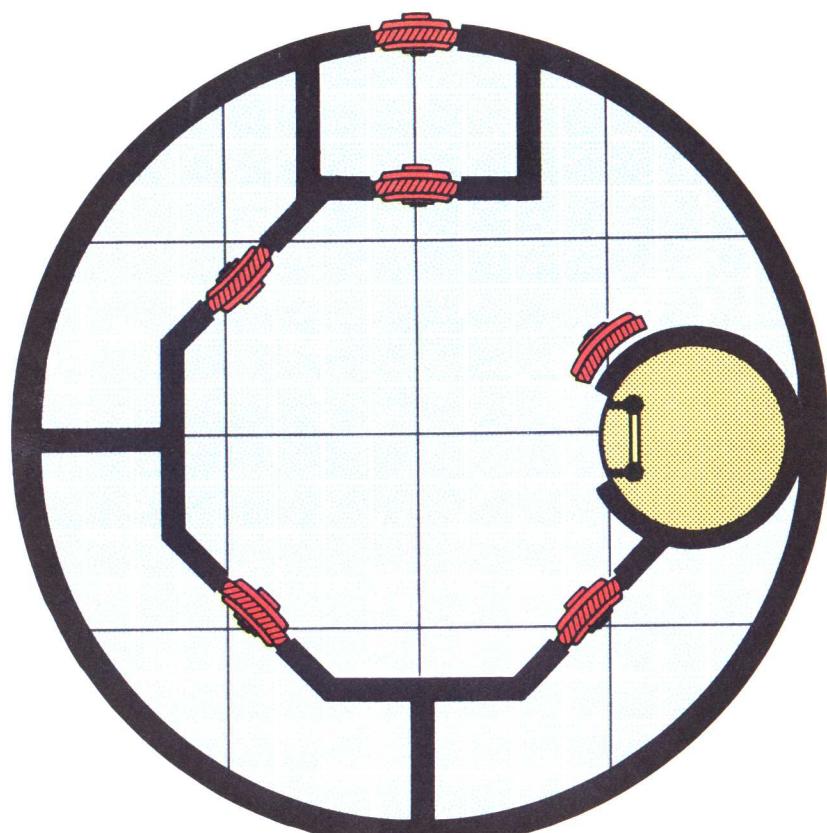
Cost: 15,000
Size: 15' x 8' x 6'
Weight: 1,000

The dragonfly is a very common, lightweight, one-man helicopter frequently used for patrols, deliveries and other tasks where high speed is not important. A dragonfly copter has a main rotor as well as a movable, enclosed fan for steering and attitude control. The vehicle is powered by an atomic battery, and has a flying time of about 20 hours at a speed of 20 mph. Because it relies on air for buoyancy, a dragonfly can't be used in any environment where the air pressure is less than Earth normal.

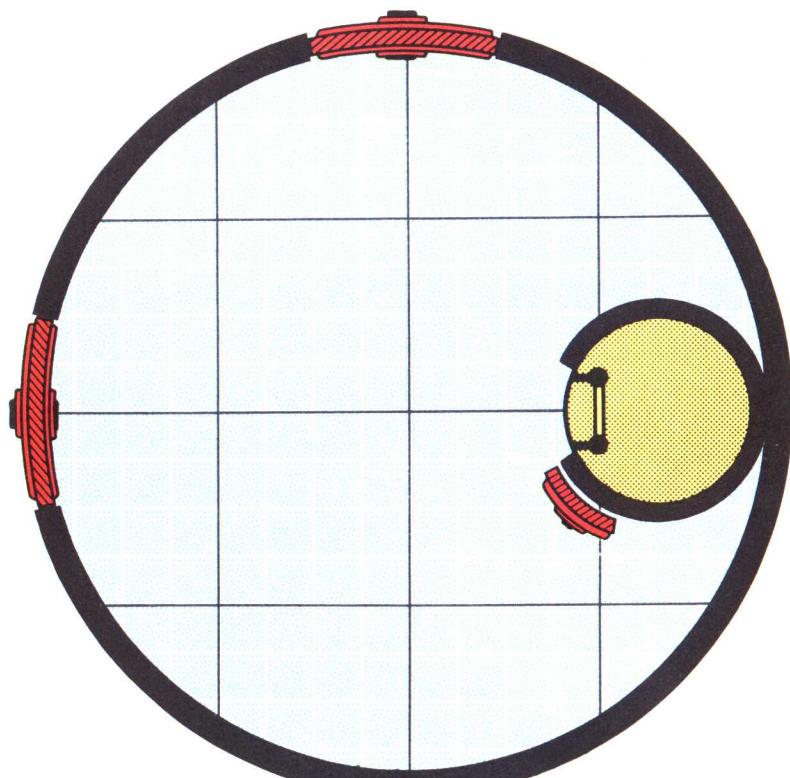


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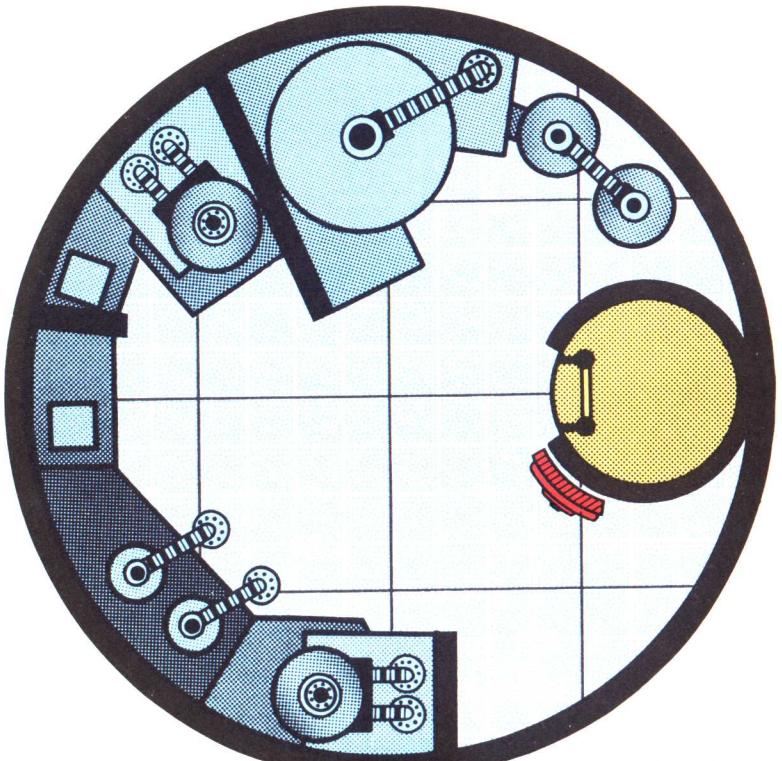


Airlock Deck

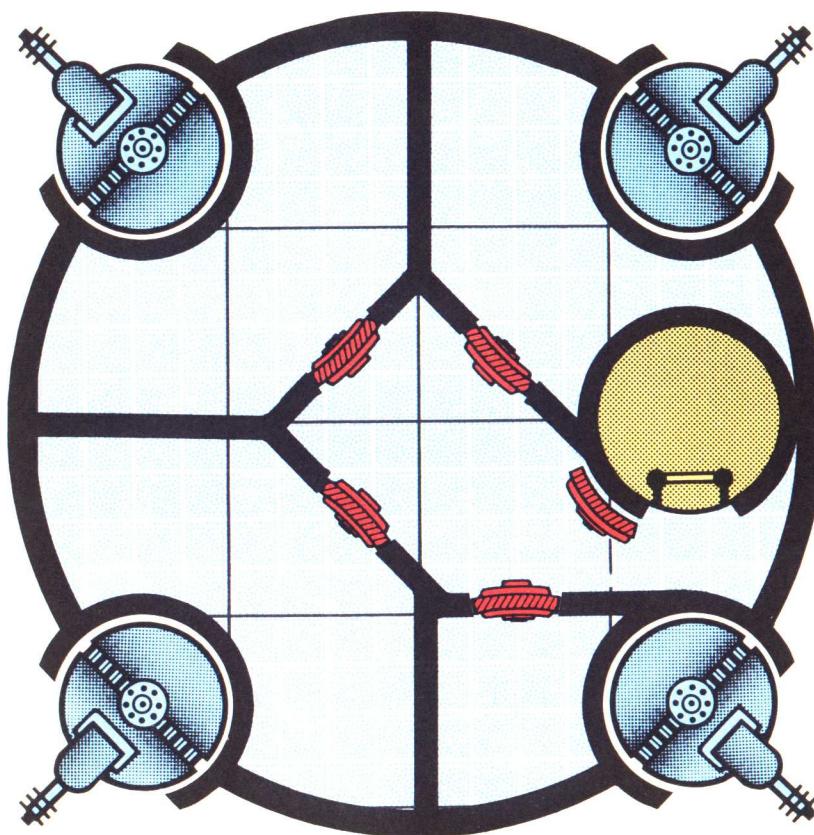


Cargo Deck

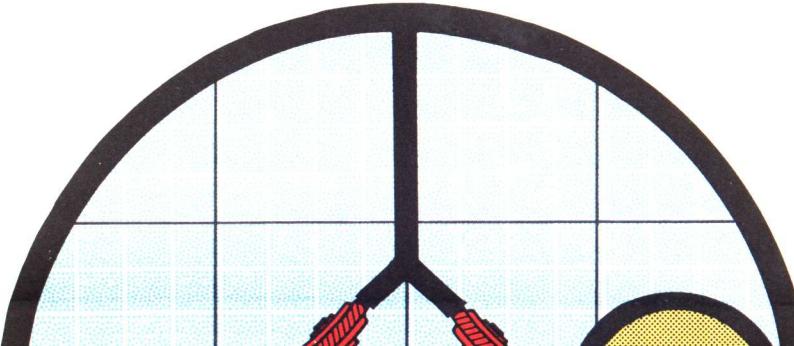


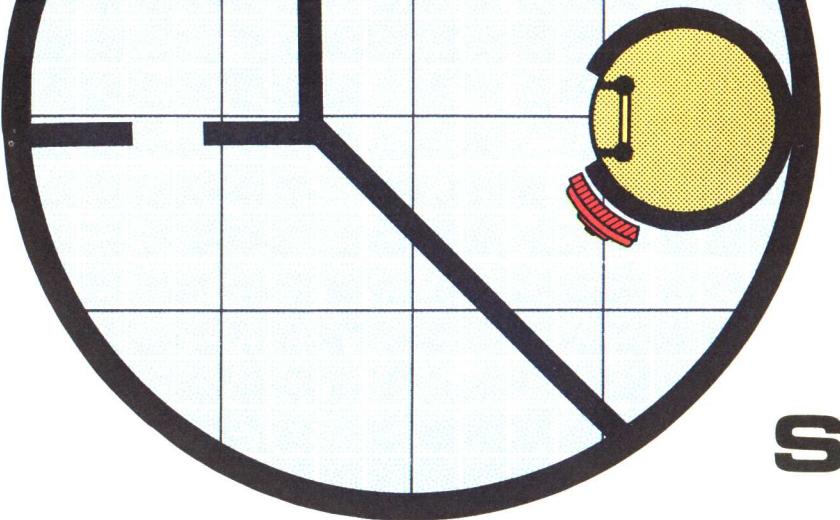


Rock/Rooster



Weapon Turrets

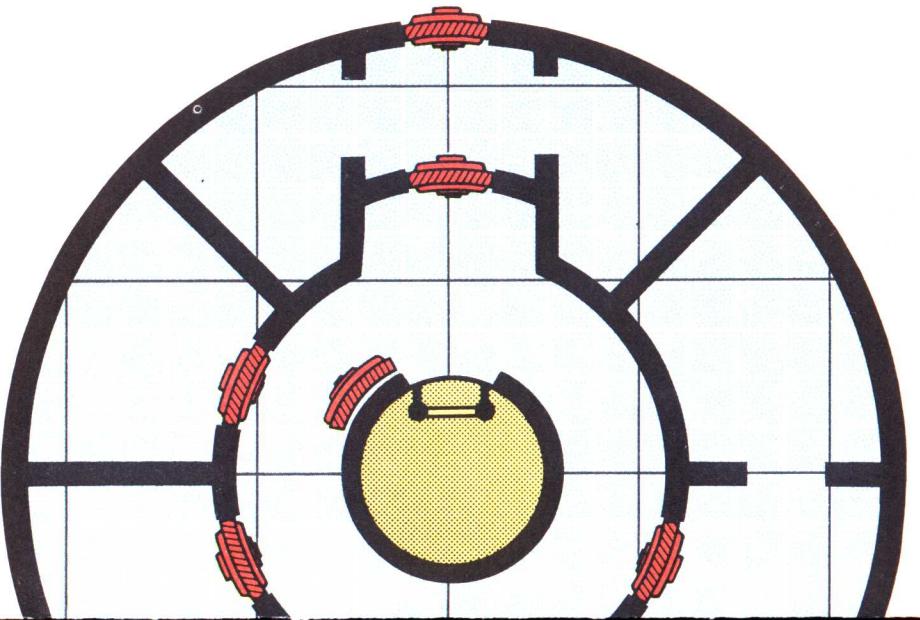




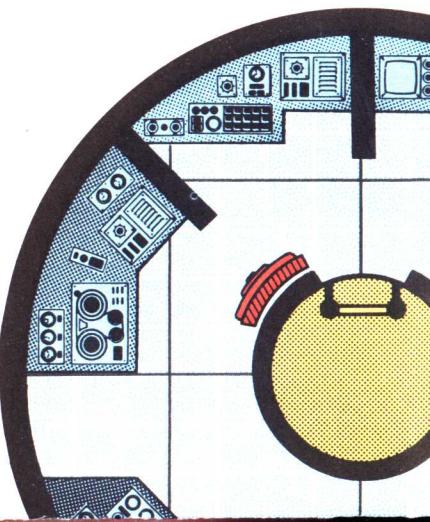
Cargo Deck

Small Cruiser **(20-200 tons)**

Lounge/Captain's Cabin



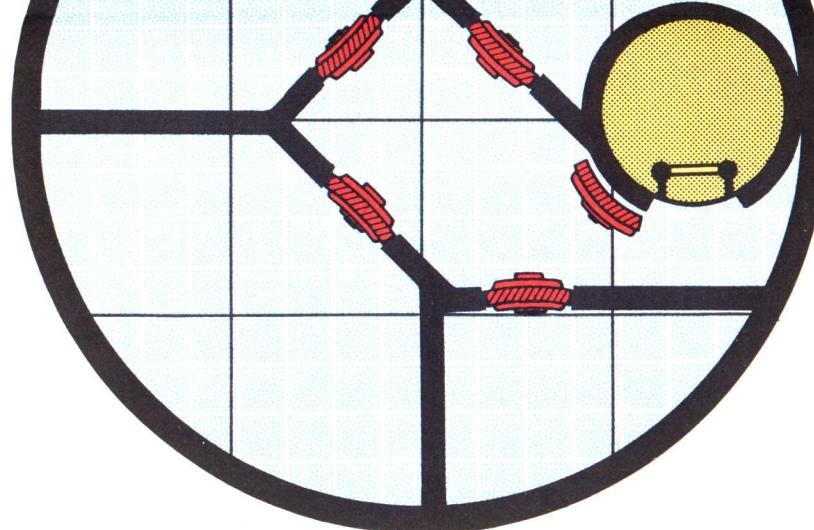
Contro



Power Deck/Reactor

Scale: 1 square [1 inch] = 10 feet

1 Deck



Crew Cabins

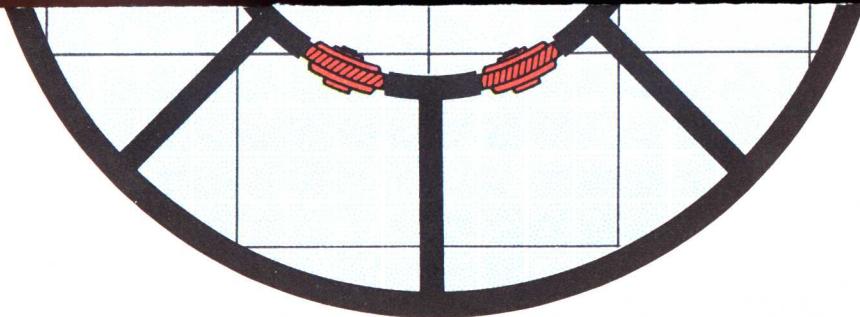
How to Use These Maps

Every type of spaceship in the XXVC™ game universe has a different function and a different exterior appearance from the other kinds, but beneath their skins, all ships have a lot in common. Shown here are cross-section maps of the compartments of two typical cruisers, but these same cross sections can be used to design any other ship type.

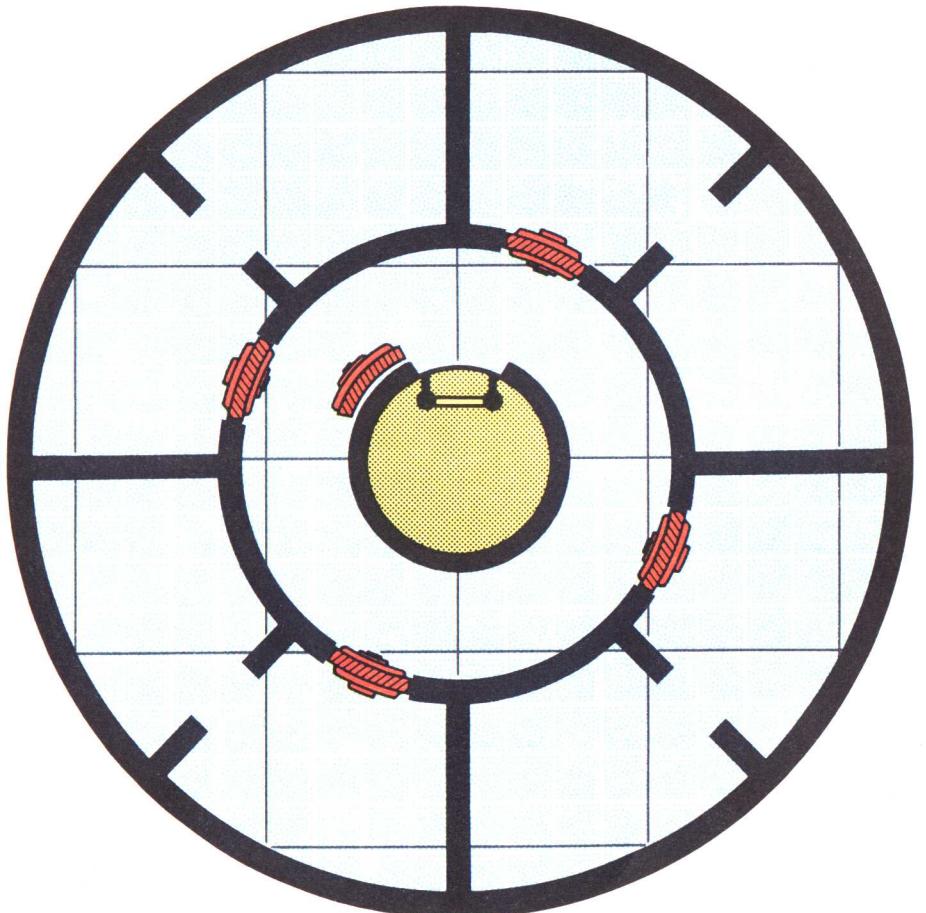
For instance, a big space liner would have all of the compartments that are found on a heavy cruiser, but it would contain several decks devoted to passenger and crew cabins, certainly more than one cargo deck, and possibly more than one airlock (so that passengers could get on and off in more than one place. Not being as heavily armed as a warship, a liner might have a weapon deck with only a few turrets (similar to that of a medium cruiser) instead of a deck bristling with guns.

At the other extreme, a fighter needs to make the best use of its limited space. Using the light cruiser deck plans as a basis, you could consolidate the airlock deck and the cargo deck into one area, and you could eliminate the lounge/main cabin deck. The result is a small ship with only five distinct compartments—the only decks that a fighter needs.

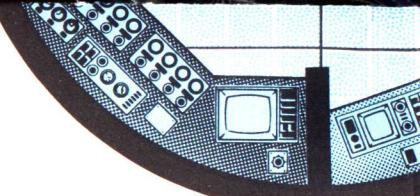
To some degree, you have freedom in how you can arrange the decks within a ship. The control deck is almost always at the front, and the power deck at the back, but in between, there can be a lot of variety. If your ship has more than one power deck, it



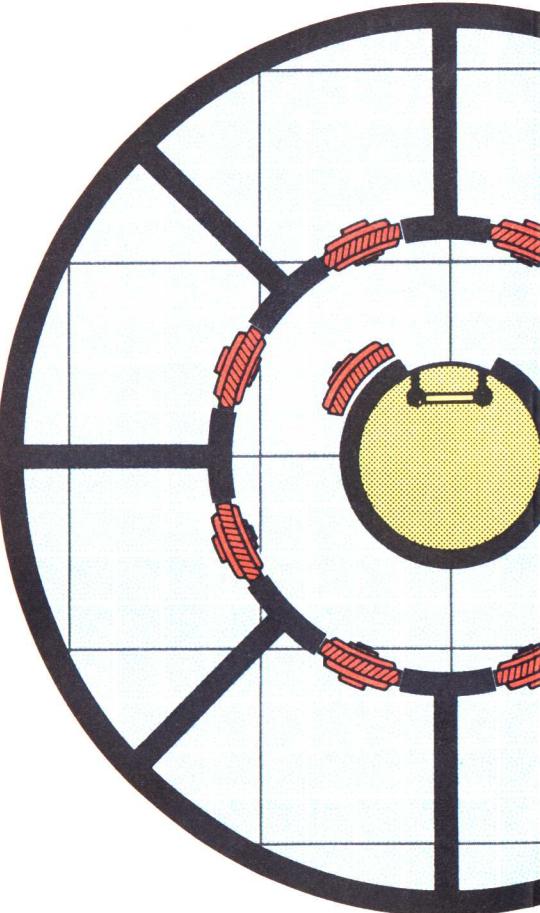
Airlock/Gantryway



Luxury Suites



Control Deck

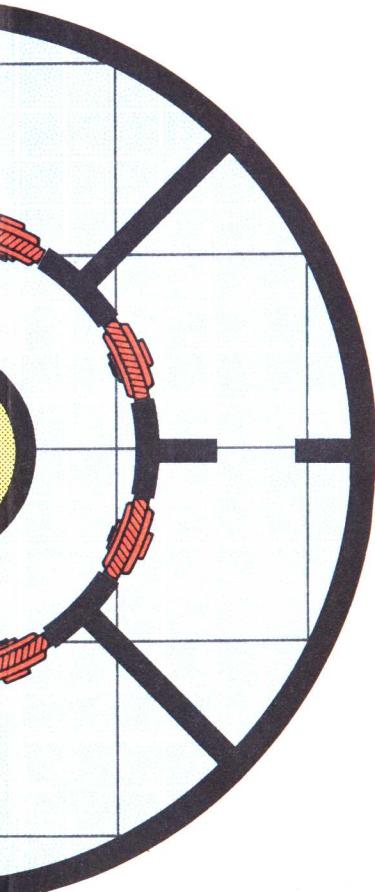


Passenger/Crew Quarters

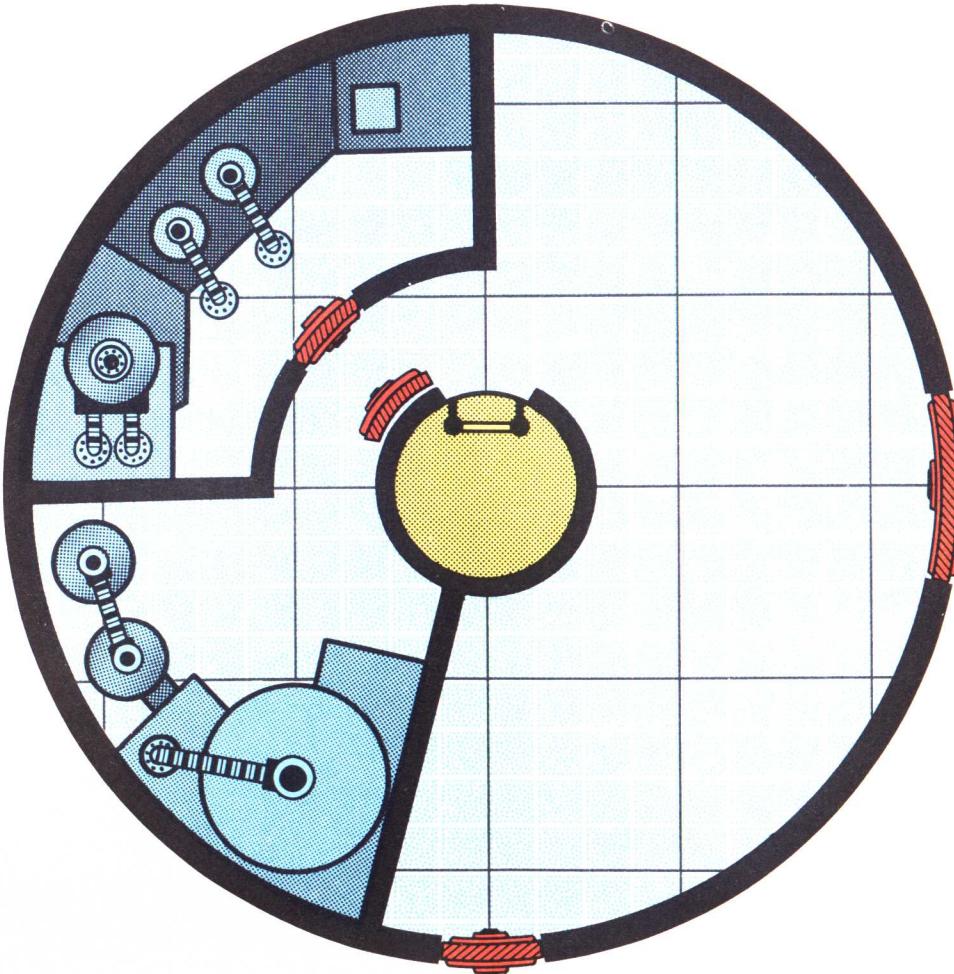
ween there can be a lot of variety. If your ship has more than one weapons deck, it might be a good idea to locate them at opposite ends of the ship instead of putting them adjacent to one another—but if you have a reason for stacking all of your weapons in one area, go right ahead.

The grid on these maps is scaled at 1 square = 10 feet, making these cross-section maps usable with 25mm miniature figures. If you don't have miniature figures, you can use any kind of small markers to represent characters in their locations around the ship.

eck



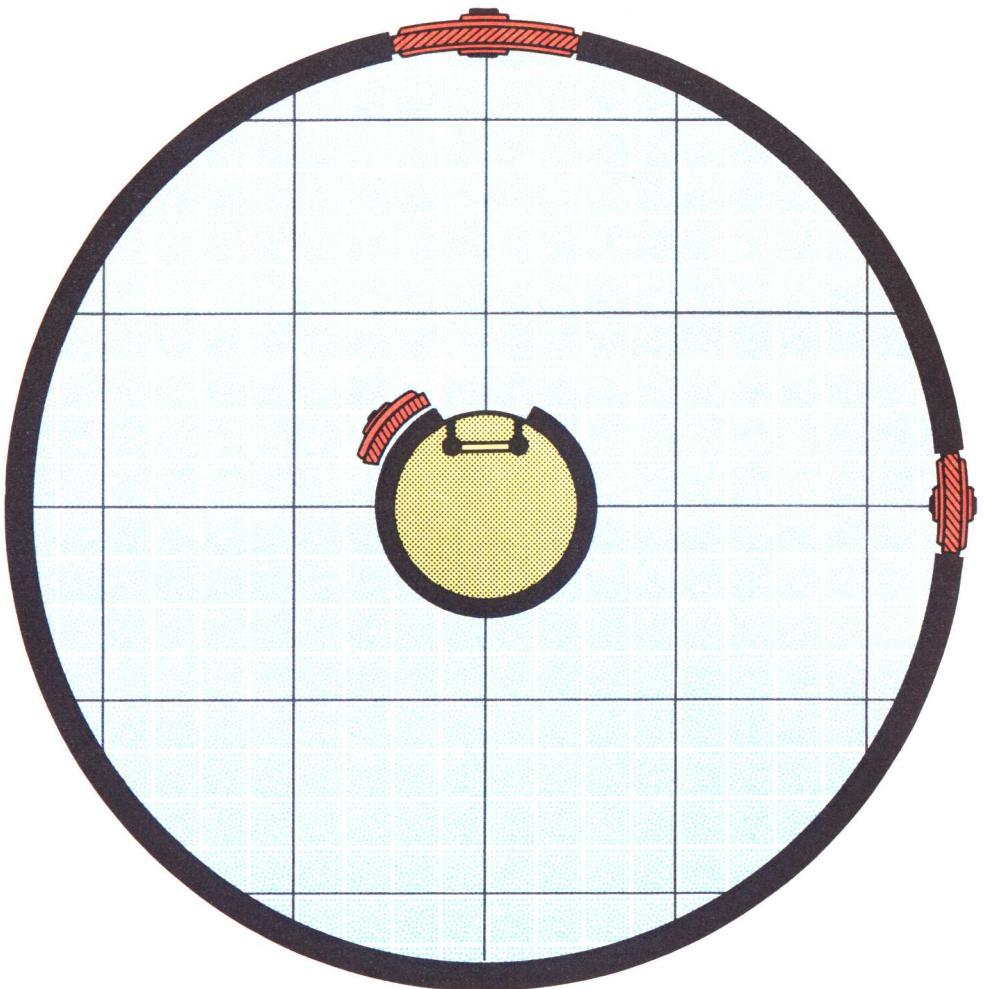
new Cabins



Power Deck / Reactor

Luxury Suites

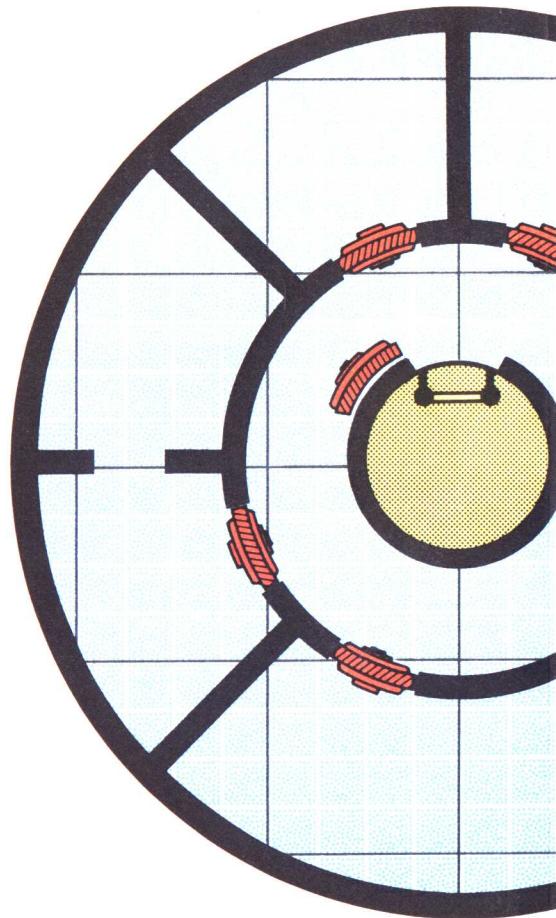
Passenger/Crew



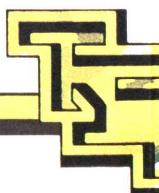
Cargo Deck

Medium Cruiser
[200-500 tons]

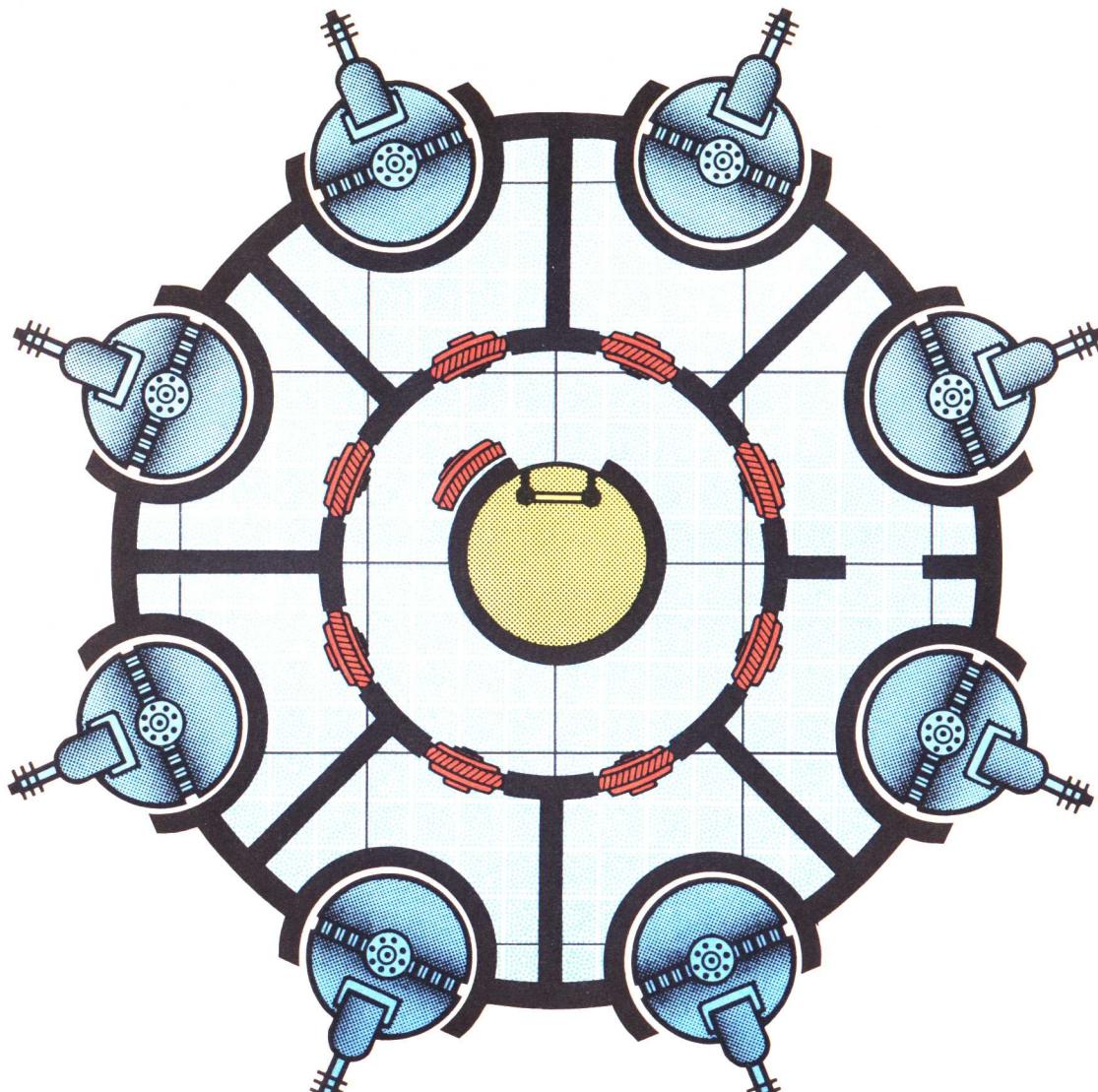
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Captain's Cabin
Purser's Office, A



Power Deck / Reactor

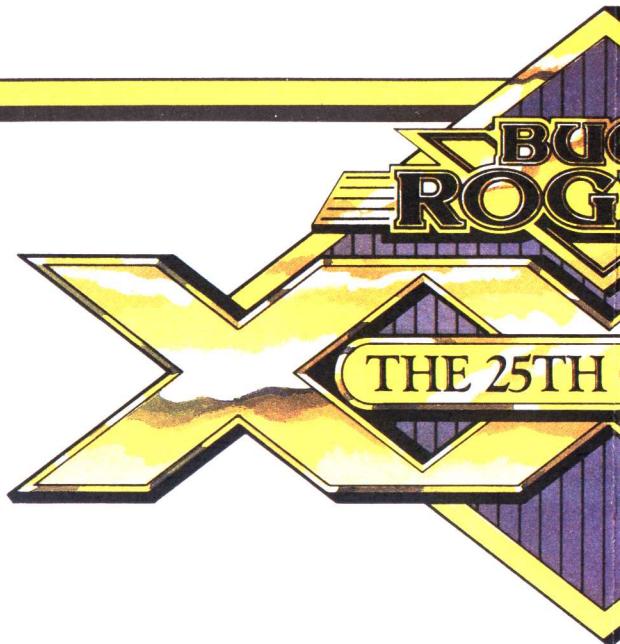


Weapon Turrets

...n, Sick Bay,
Arms Locker

Scale: 1 square [1 inch] = 10 feet





	Orbit (millions of miles)	Diameter (miles)	Period of revolu- tion (days)	Gravity (Earth = 100)	Escape velocity* (mph)	Population** (in the year 2456)
Mercury	36	3,024	88	33	9,500	20,000,000
Status: Settled; highly developed culture and orbital settlements						
Ports: Two Class A, at Hielo Orbital Station and Caloris						
Venus	67.3	7,520	225	90	23,000	90,000,000
Status: Partially terraformed; settled by four population groups						
Ports: One Class A, at New Elysium; two Class B, at Tellus Regio and Hestia						
Earth	93	7,900	365	100	25,000	3,000,000,000
Status: Home world of <i>Homo sapiens</i> ; devastated and presently quarantined						
Ports: Seven Class A, at Newyorg, Dallas, Canaveral, Paris, Moscorg, Buenos Aires, and Melbourne; nine Class B, at Los Angelorg, New London Org, Tomsk, Nairobi, Nanjing, Honshu, Manila, Denver, and Guyana; many Class C						
Mars	141.7	4,200	687	38	11,160	253,000,000
Status: Extensively terraformed; most powerful planet in system						
Ports: One Class A, in orbit above Pavonis; two Class B, at Coprates and Marineris; three Class C, at Pavonis, Utopia, and Hellas						
Vesta	219	310	1,320	—	500	7,000
Status: Settled asteroid; major RAM military base in Asteroid Belt						
Ports: One Class B (military), one Class C (civilian)						
Ceres	257	663	1,680	—	1,100	20,000
Status: Settled asteroid; "capital" of the Belter Anarchy						
Ports: One Class B						
Pallas	257	335	1,680	—	500	7,000
Status: Settled asteroid; socially isolated civilization, visitors not welcome						
Ports: One Class C						
Juno	248	145	1,680	—	400	6,000
Status: Settled asteroid; shipbuilding center, site of rocketjock academy						
Ports: One Class B						
Hygeia	293	254	1,860	—	500	9,000

This map sheet depicts the situation in the middle of the 25th Century—the year 2456, when

The four innermost planets and many of the outer planets are colonized by humans and other types of intelligent life. The outer planets, which is also heavily settled, cannot be shown in detail. Each planet has its own politics, its own economic system, and its own way of life.

How to Use the Map

The solar system display shows seven orbits. The orbits of the outer planets Ceres, Pallas, and Juno all use the same path around the sun. (The red dots on the orbits indicate the positions of the outer planets and asteroids as of January 1, 2456.)

To chart the movement of the planets and asteroids, use the chart on the game box. Each planet is identified on its orbit by a red dot. The numbers on the chart, which are reading "Ast" can be used to represent "an orbital location, such as a major orbital colony, in the outer solar system."

Every month (30 days), each planet moves one step along its orbit. The number of steps is indicated by the number of the arrowhead printed on the orbit. If you



The Solar System in the 25th Century

in the inner portion of the solar system in the when the saga of the XXVc™ game universe be-

the larger bodies in the Asteroid Belt have been genetically altered creatures. (Luna, Earth's moon, shown on a map of this scale.) Each world has its own cultural uniqueness. Important information on these worlds is summarized on the table at left.

ital paths and ten planetary bodies. (The asteroid belt, Earth, and Hygeia and Aurora also travel the same orbital paths show the positions of the plan-

asteroids, use the circular markers provided in marker by a two-letter abbreviation. The mark "anonymous" asteroids or some other significant the referee's XXVc game campaign.

one step along its orbital path, in the direction set up the markers to simulate planet locations later each of the bodies will be six spaces coun-

of the ruler marked "Communication" or the edge marked "Travel." Note that communication time is always the same for a certain distance (radio signals move constantly at the speed of light), while travel time in a ship depends on how quickly the ship is using its fuel supply.

At the scale of this map, 1 inch = 33 million miles— except for the diameter of the sun, which is greatly inflated. (At its true size, the sun would be barely visible.)

Other Important Locations

	Orbit (millions of miles)	Diameter (miles)	Period of revolu- tion (days)	Gravity (Earth = 100)	Escape velocity* (mph)	Population** (in the year 2456)
Luna	.25	2,160	28	16	5,350	172,000,000
Fortuna	227	135	1,364	—	500	5,000
Psyche	272	127	1,633	—	300	5,000

Status: Underground and domed settlements; gradually being terraformed
Ports: Five Class A, at Tycho, Aristoteles, Copernicus, Crisis, and Korolev; three Class B, at Gagarin, Plato, and Kepler; four Class C, at Archimedes, Clavius, Tranquility, and Keeler

Status: Settled asteroid; site of several privately owned factories
Ports: One Class C

Status: Settled asteroid; high quality mineral wealth

Hygeia

293

254

1,860

—

500

9,000

Status: Settled asteroid; Belter "bottles" constructed here

Ports: One Class B

Aurora

293

136

1,860

—

300

3,000

Status: Settled asteroid; solar system's biggest public casino

Ports: One Class B

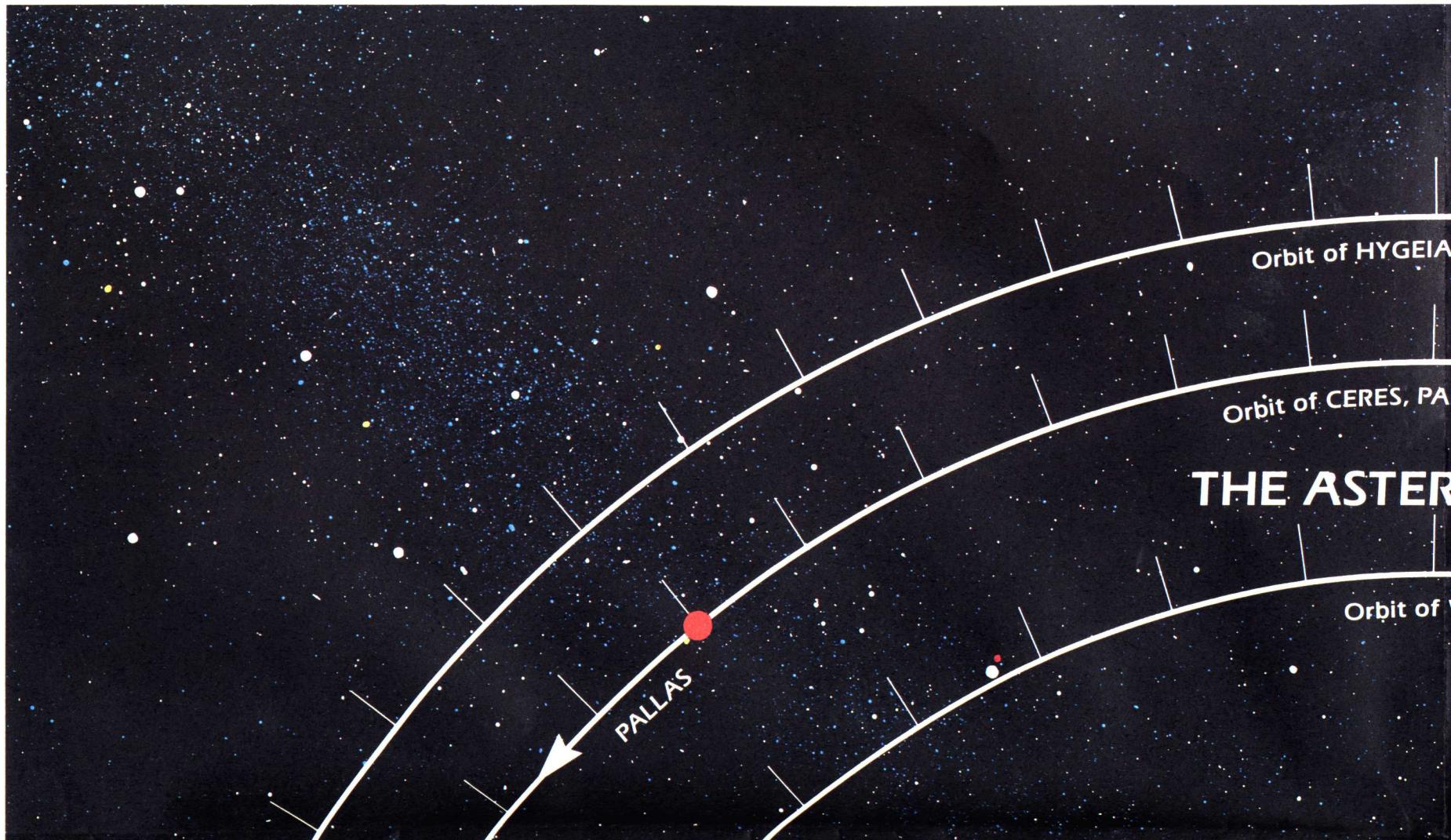
* = Figures less than 1,000 are rough estimates

** = Estimated; permanent residents only

— = Negligible (less than 1)

at the start of the year 2456, then six months later clockwise from its original location. By calculating the planets properly for any month and year does not scientifically accurate; the number of 30-day periods in the circuit of the sun does not correspond with the 30-day year (which are accurate figures). The "30-day system" does not deviate from real scientific knowledge does not

The transparent ruler in the game box is for measuring messages are traveling between planets. To find the distance from one planet to another, measure from the planet of



later each of the bodies will be six spaces calculating and counting spaces, you can position desired. Note that this movement system is not periods that it takes for a planet to make one circle periods of revolution given in the table at left "item" is designed for simplicity, and the fact that does not have a bad effect on game play.

or determining time delays when ships or radio find the current straight-line distance from one of origin to the destination, using either the edge

Psyche	272	127	1,633	—	300	5,000
---------------	-----	-----	-------	---	-----	-------

Status: Settled asteroid; high-quality shipbuilding facility

Ports: One Class B

Thule	400	100	2,400	—	250	100
--------------	-----	-----	-------	---	-----	-----

Status: Prison asteroid maintained by Belter Anarchy

Ports: One Class C

* = Figures less than 1,000 are rough estimates

** = Estimated; permanent residents only

— = Negligible (less than 1)



THE INNER

AUORRA

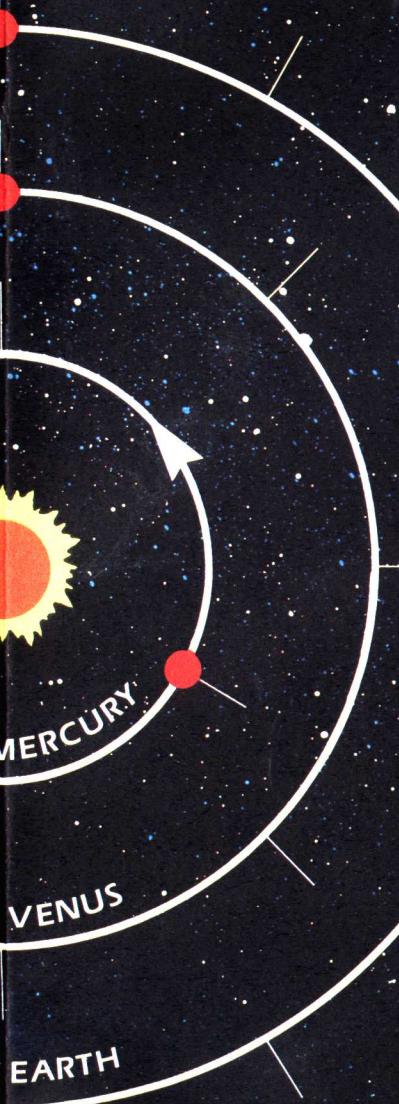
CERES

Orbit of

Orbit of

Orbit of

OUR WORLDS



JUNO

THE INNER

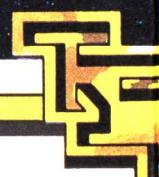
Orbit of

Orbit of

THE ASTER

Orbit of CERES, PA

Orbit of HYGEIA



WORLDS

of MARS

VESTA

ROID BELT

ALLAS, and JUNO

A and AURORA

HYGEIA

TM

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CK
GERS®

CENTURY

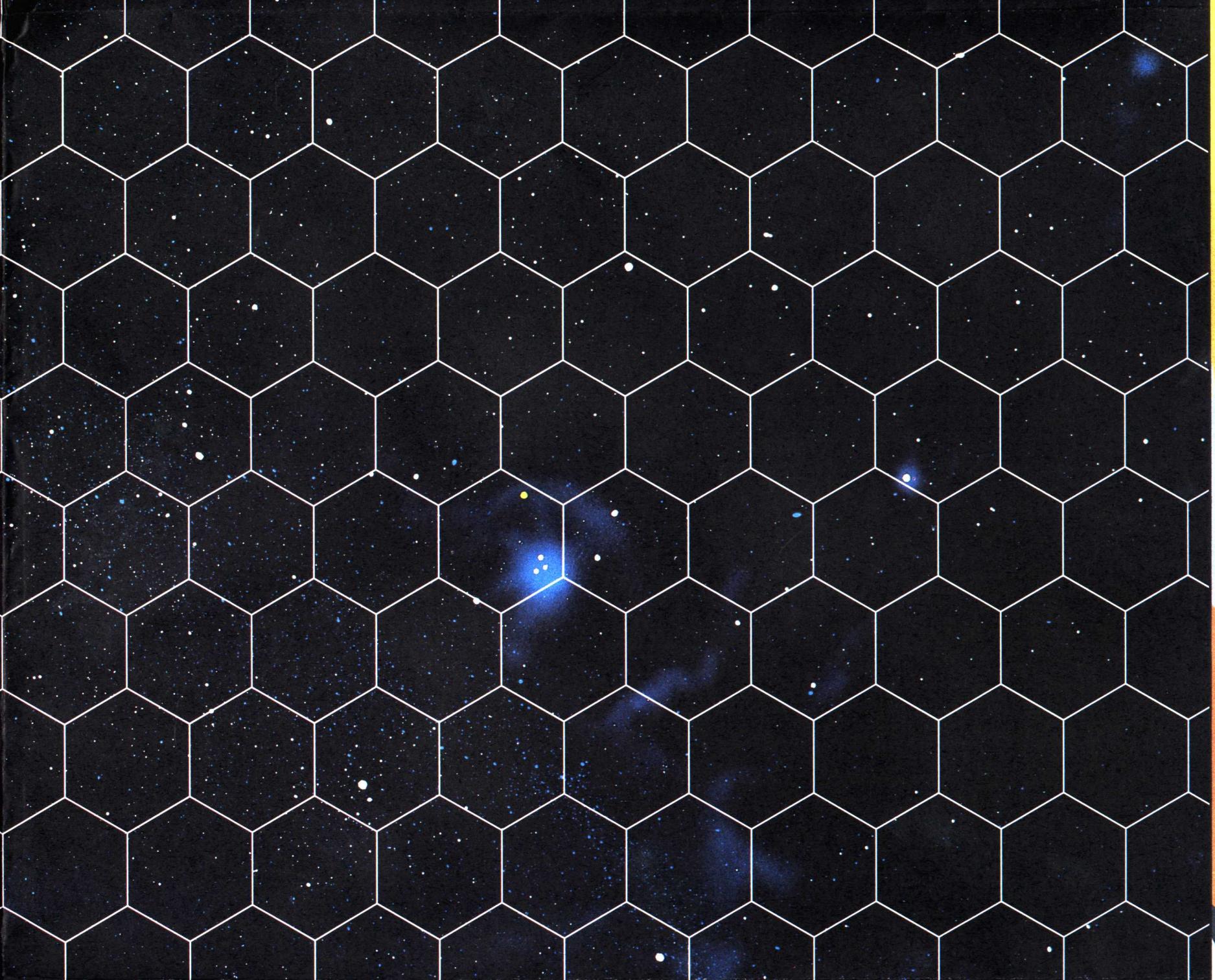
VC

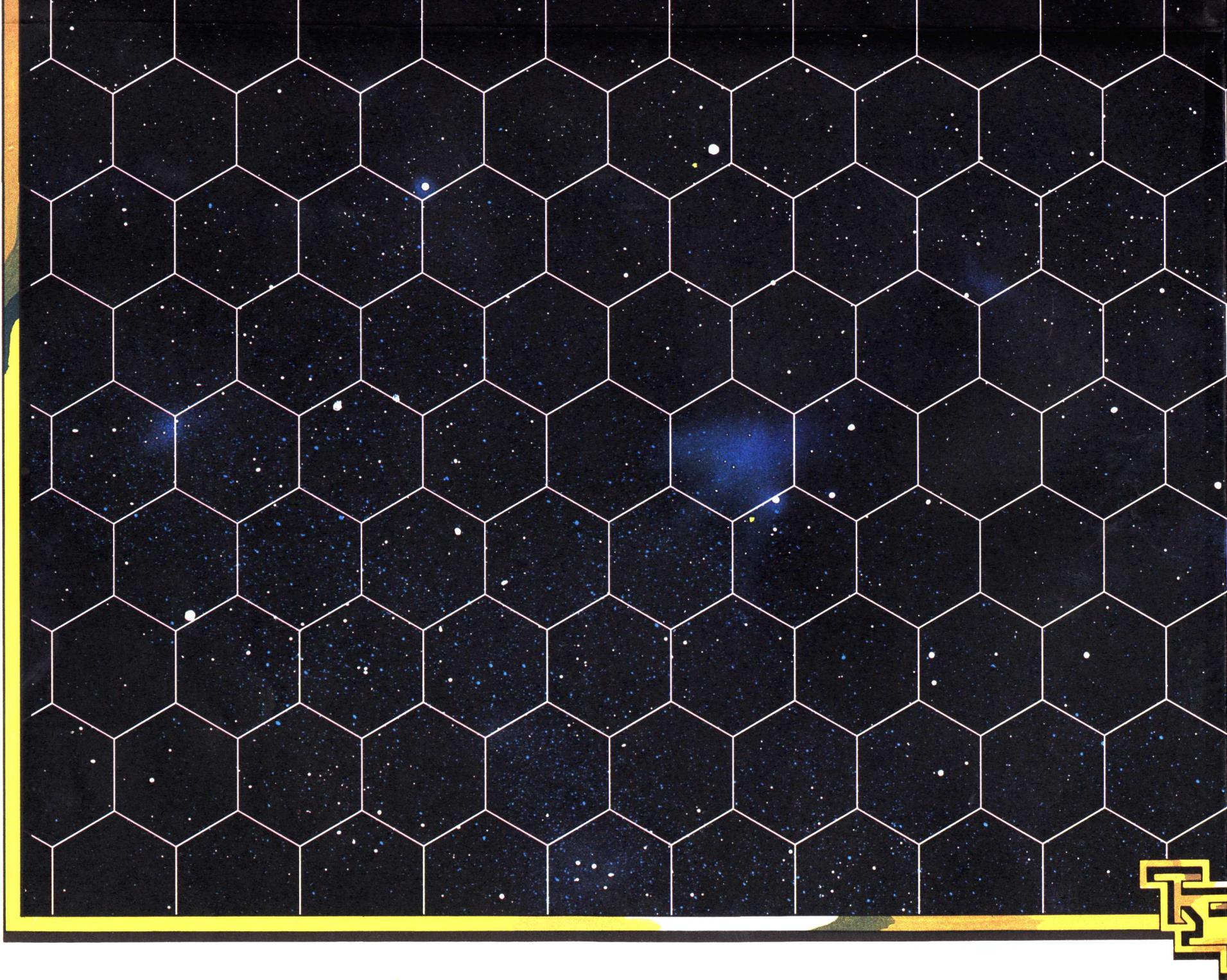














TM

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The Tycho Arcology Spaceport, popularly known by residents and visitors alike as "The Pride of Luna," is one of the oldest and busiest settlements on the moon. Careful planning and constant attention to high quality in its construction have made it as much of a masterpiece today as it was in the late 21st Century, when the first buildings and launch bays were created.

The entire complex is covered by a geodesic dome of thick, dark-tinted plastic that is impervious to meteorite strikes; small ones don't damage the surface, and large ones are blown to bits by an automated laser defense system before they can impact. In addition, each launch bay is sealed off from the surrounding area and has its own retractable dome, so that ships can land and take off without exposing the rest of the port to vacuum.

Many of the buildings and roadways of Tycho Spaceport are underground, beneath the surface of the crater of the same name located near Luna's south pole. All of the named and numbered locations have airtight seals across their entryways that would automatically close in an instant if the big dome was somehow breached. Access to the moon's surface is provided through an airlock on the outside wall of the monorail station.

Transportation within the spaceport is via monorail, jet-cars, small ground vehicles, and good old-fashioned feet; because all the buildings were constructed close together, it's possible to walk from one end of the port to the other in a matter of minutes.



How to

This map is not only an overhead view; it can represent any other typical Class 1 port. In a XXVc™ game campaign mission, the locations can be changed, and the (unidentified ones) can be used as

As noted in the text at left, many buildings are actually underground; the referee can decide which are on the surface and which are not. Some structures are underground (except the Extraction Building) and the small businesses known as Spacerto

The referee and players should note that here is "only" the spaceport—there is a lot more beyond the area of this map, including a 100,000 square feet and holding close



Use This Map

A view of Tycho, but can be used to A spaceport that player characters visit. Names of the identified locations of "generic buildings" (the or any purpose the referee desires.

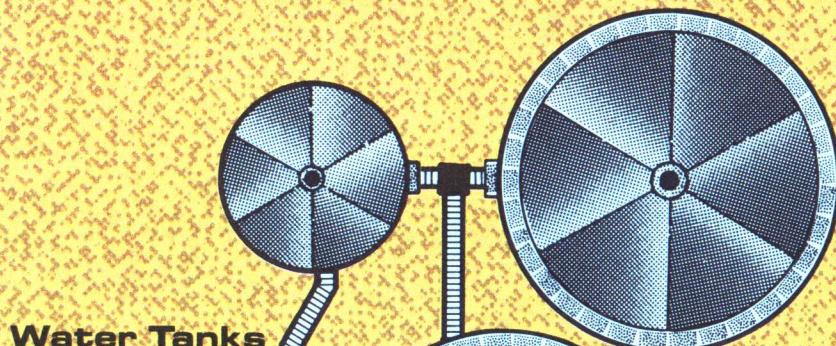
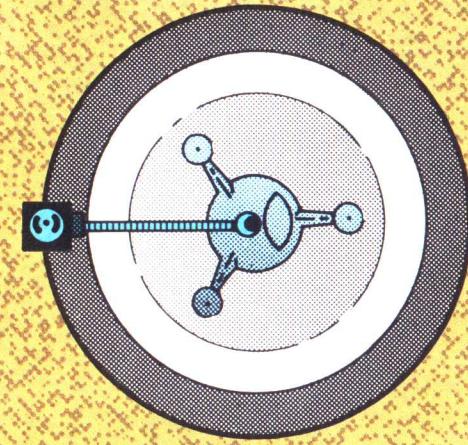
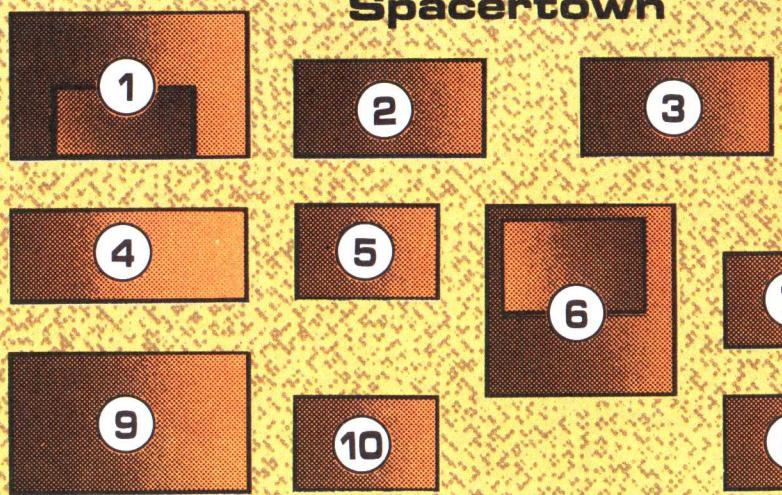
of the locations on this map are accessible free to decide which places are on As a general guideline, the larger except for the Tower and Port Adminis- places, such as the collection of n, are on the surface.

also be aware that what's shown the entire city of Tycho is spread out overing several hundred thousand a million people.

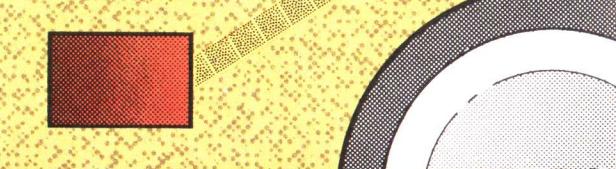
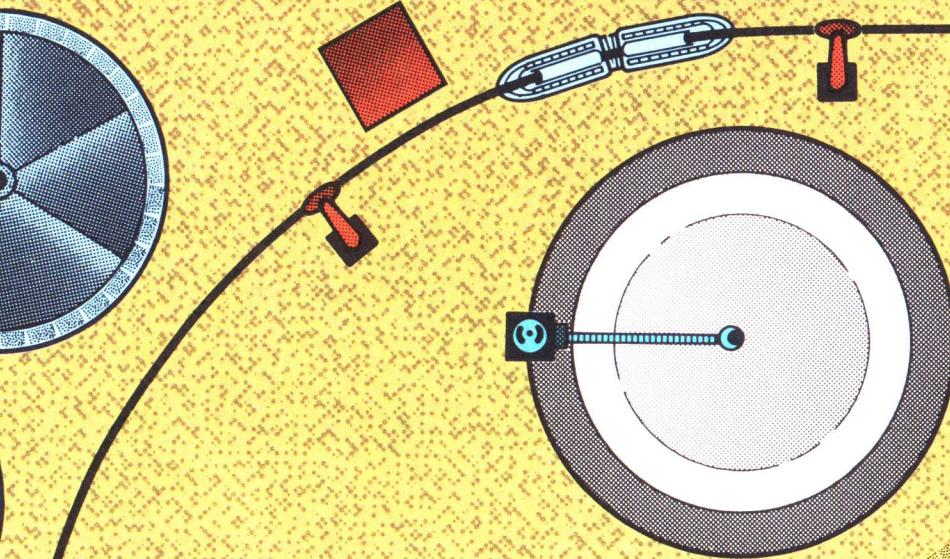
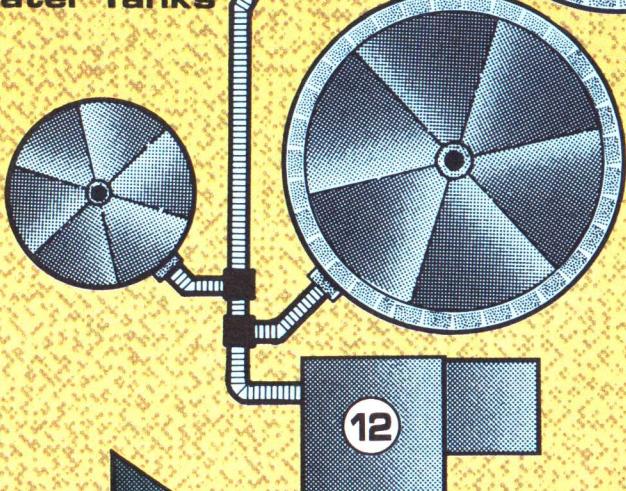
Key to Numbered Locations

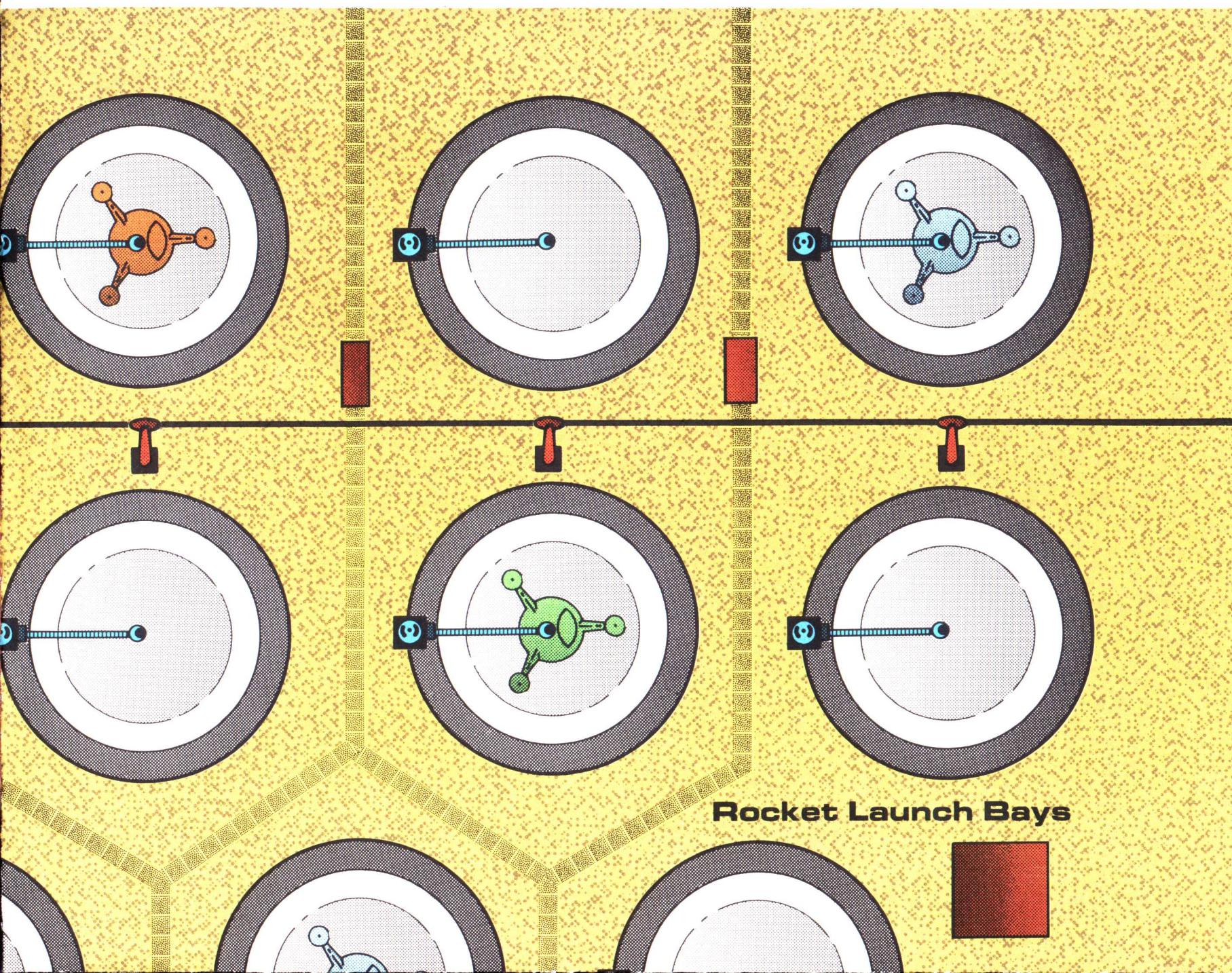
1. Spacer's Rest (hostel and retirement hall)
2. Free Fall Bar & Grill
3. Smuggler Petrov's (used salvage and contraband)
4. The Happy Landing (cheap hotel, somewhat dangerous)
5. Martian Dick's (favorite rocketjock hangout)
6. The Layover (cheap hotel, but clean and safe)
7. Far Horizon (restaurant/tavern)
8. Saylah's (popular "truck stop" diner)
9. The Hanged Man (tavern frequented by pirates)
10. Bertha's Mailbox (message center for spacemen)
11. Luna-Tychoport Library and Information Center
12. Air/water recycling plant pumphouses
13. First Church of Free Luna
14. Moran's (clothing store, specializing in space gear)
15. Designs of Luna (expensive indoor outfits)
16. Firste Luna Bank branch office
17. Elite Technology (personal weapons for sale)
18. Paralux Jetcars (new and used transportation)
19. Metaluna Computers (ship computer hardware and compdexes)
20. Club Tycho (expensive restaurant, members only)
21. Chez Luna (restaurant, not as fancy as its name)
22. The Chartshop (maps and navigational aids)
23. Warhead Inc. (personal & ship weapons of all types, mostly pre-owned)
24. Jacobie's Rocket Chandlery (tools, supplies, equipment, rocket belts, etc.)
25. Transluna Inc. Jetcar Rental
26. Astra Hotel (much less expensive than Hotel Luna)
27. Spaceman's Hiring Hall (employment agency)
28. Higgert Metals & Technology (hardware store; fence for pirate activity)
29. Jon Choy's Used Rockets (offices adjacent to hangars)
30. Coprates Lunar (moderately expensive hotel favored by RAM execs)

Spacertown

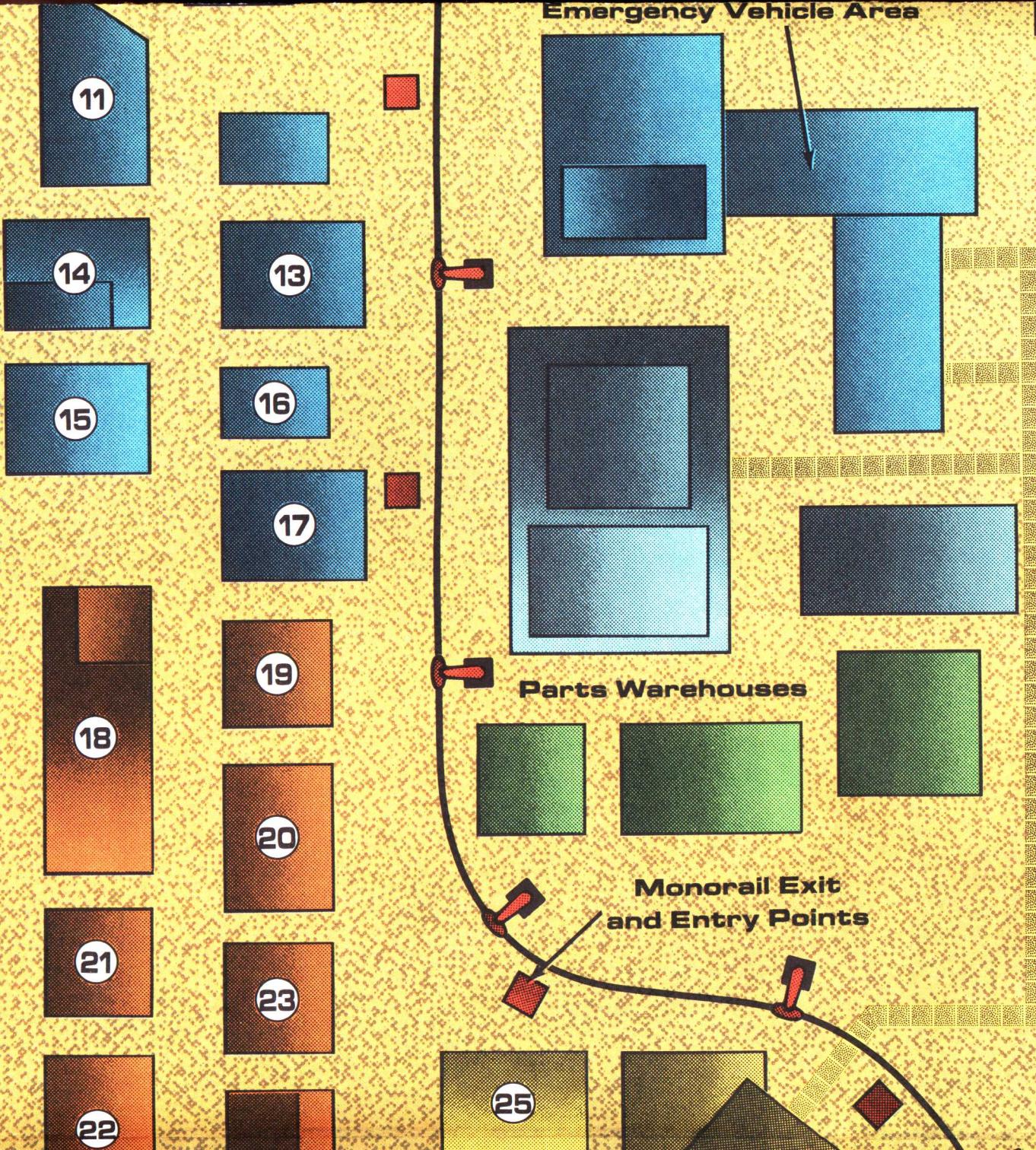
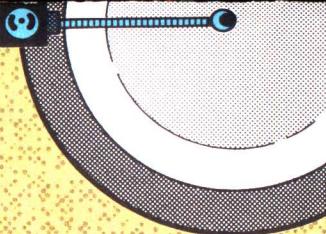


Water Tanks



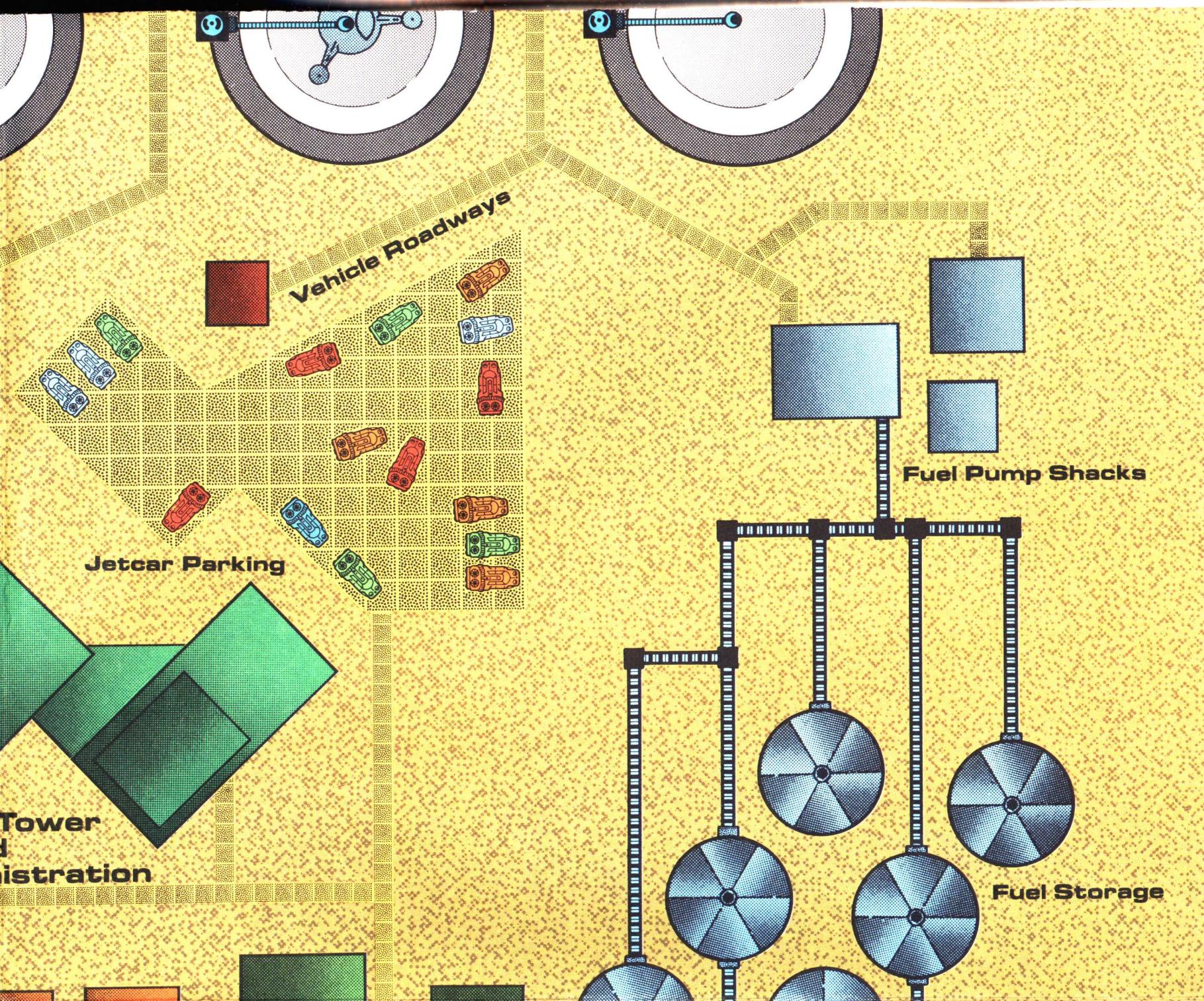


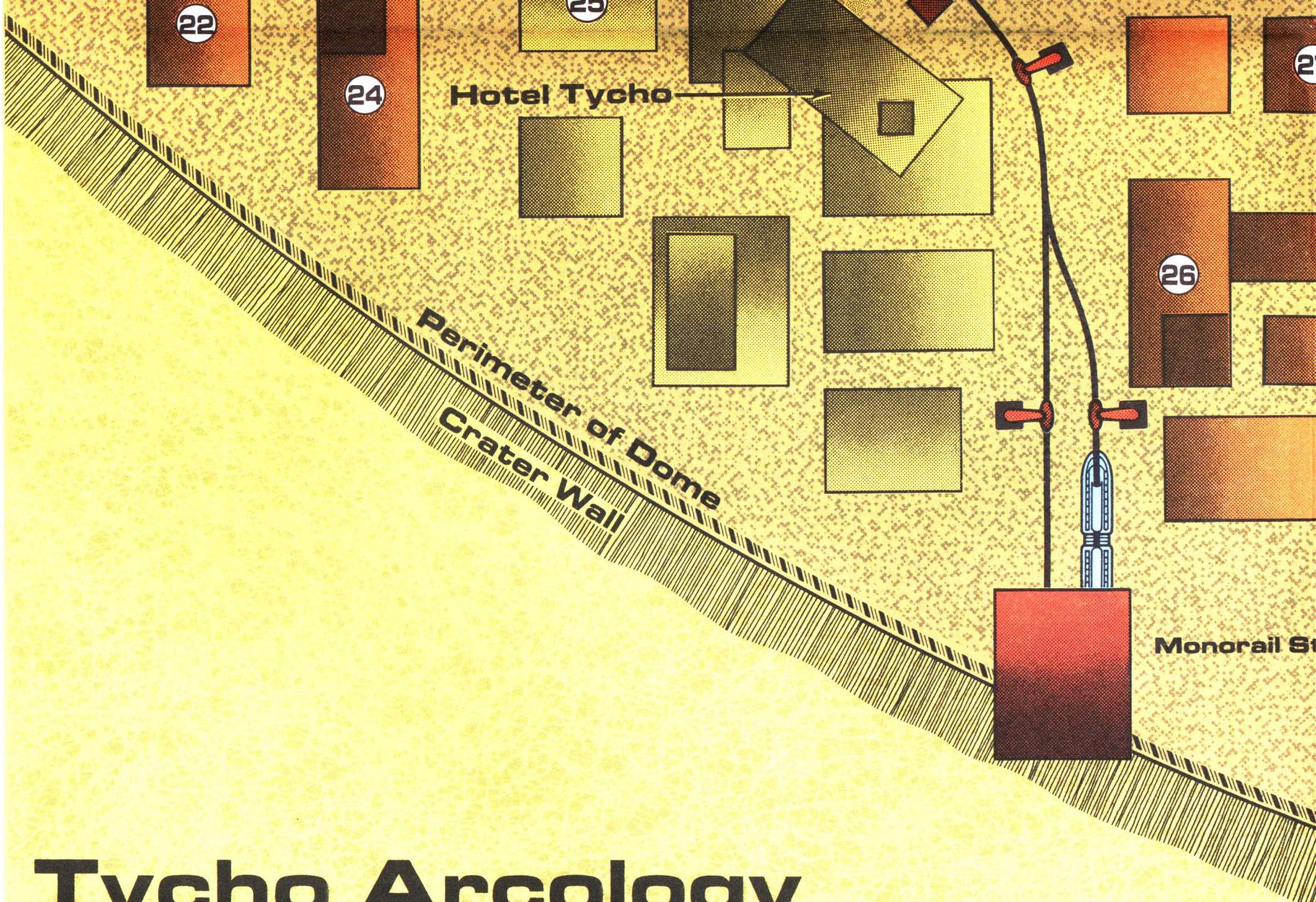
Emergency Vehicle Area



**Monorail Exit
and Entry Points**

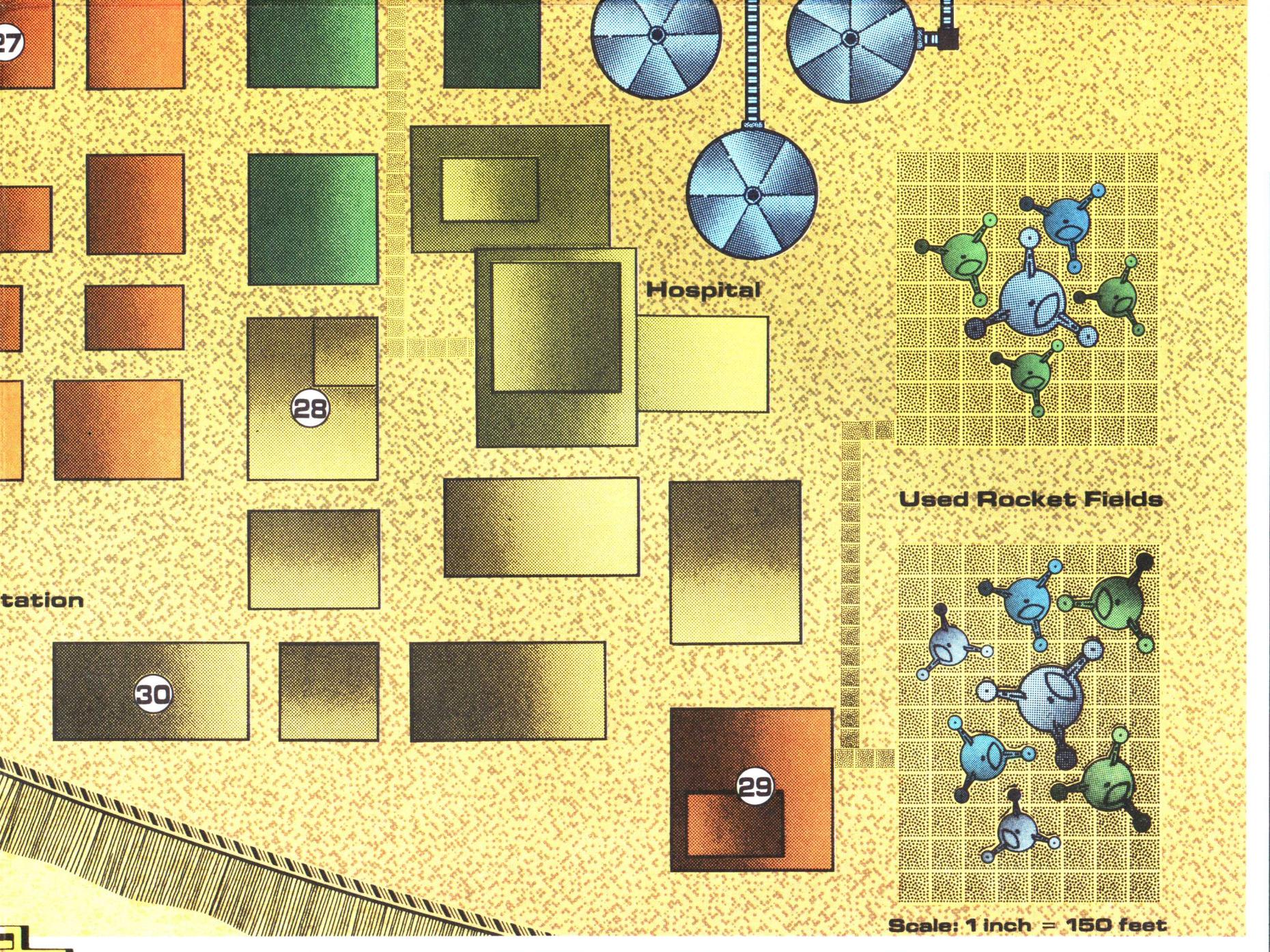
**Control Tower
and
Port Admin**





Tycho Arcology

Class A Spaceport



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The 25th Century comes alive!

Spitting pillars of flame, rocket ships break up the darkness and vastness of outer space . . .

The planets and satellites of the solar system are home to a multitude of colonists and privateers . . .

Genetically modified humans and even stranger artificial life forms inhabit the areas where normal men could not survive . . .

Mars, a dead planet mere centuries before, is now the center of power among the Inner Worlds . . .

And Earth, the ancestral home of Mankind, is a devastated world trying to recover from war and pollution to claim its rightful place in the tapestry of human civilization that now stretches from the blazing plains of Mercury to the barren, icy rocks circling Saturn.

Into this arena of intrigue and conflict is thrust a single individual with the power to tip the scales in favor of the planet where he was born. This man is Buck Rogers, born in the long-ago 20th Century but now very much alive and well in the 25th. Over all the centuries in between, two basic facts about humanity have not changed: The first is that Man's greatest enemy is Man himself, and the second is that one man CAN make a difference.

The XXVc™ Role-Playing Game describes the world of the 25th Century in vivid detail. Join the forces of the New Earth Organization and help Buck Rogers and his allies fight the tyranny of the Martians; team up with the other members of your group to buy a spaceship and go into business for yourselves, running blockades or carrying vital supplies and information; make a fortune (or lose

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All of these opportunities, and countless others, are open to players of the XXVc game. In the world of the 25th Century, the sky is NOT the limit—it's just the first small step on a long and exciting journey!

The game box includes everything a group of players needs to start an adventuring campaign:

- Characters & Combat, a 96-page book of rules
- The World Book, 64 pages of information about the places and people of the solar system
- The Technology Book, 32 pages of description about the equipment and weaponry of the 25th Century
- Four large full-color maps: The bustling spaceport at Tycho, on the moon
Interior diagrams of two ship types, scaled for use with 25mm miniature figures
A graphic display of the inner solar system
An outer-space hex grid, for conducting ship-vs.-ship combat
- A special see-through measuring device for moving ships between planets
- Twenty-four full color cards: Thirteen different kinds of spaceships
Seven major non-player characters of the XXVc game universe, including Buck Rogers
Maps of Mars, Venus, Earth, and Luna
- A sheet of die-cut ship counters and markers
- A foldout referee's screen with all the charts and tables needed during play, plus a set of dice.



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