TRAVELLER

Supplement 8:
Cybernetics

Man and Machine

TRAVELLER

CYBERNETICS

CREDITS

Classic Traveller

Marc Miller

Loren Wiseman, John Harshman, Frank Chadwick, Darryl Hany, Winston Hamilton, Tony Svajlenka, Scott Renner, Doug Poe, David MacDonald, Wayne Roth, Paul R. Banner.

Mongoose Traveller

AUTHORS
Pete Nash & Nick Robinson

EDITOR
Charlotte Law

LAYOUT
Kristal Wilson

INTERIOR ILLUSTRATIONS
Laura Laurain, Cristian St Pierre & James Gammel

PROOFREADING
Ted Chang

SPECIAL THANKS
Marc Miller, Will Chapman, Don McKinney and Robert Eaglestone

CONTENTS

Introduction 2

Character Generation 4

Before The Chrome 33

Cybernetic Limbs 41

Body Augmentations 50

Head Augmentations 56

Chrome, Chips and Plug-Ins 65

Weapons 72

Cyberspace 75

Patrons 85

Tables 95

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INTRODUCTION

The idea of melding man and machine is not a new one. What really caught the imagination was a television show from the 1970s, in which an astronaut was involved in a hideous accident and rebuilt with 'bionic' technology, and the 'cyberpunk' literary movement of the 1980s where the concepts of casual cybernetics and cyberspace were popular, central, themes. As with all such movements interest waned somewhat but the themes themselves still resonate and artificial augmentation of the human body continues to surface in Science Fiction.

In the case of cyberspace it is true to say that the development of the internet has outstripped, to some degree, the developments envisaged by those cyberpunk pioneers and even they could not have seen the sudden, massive, surge in the internet's popularity and how it would come to dominate electronic communications. The cyberpunk authors envisaged cyberspace as something available to a select few: large, shadowy, corporate networks, military installations and solitary, tech-savvy hackers; very soon, though, that notion of a limited elite was broken as the World Wide Web became a sudden reality and using the internet – communicating across cyberspace – became a daily matter, and an essential one, for millions. The term 'cyberspace' passed from the realms of SF literature and into the common psyche.

Cybernetic enhancements have been somewhat slower to catch-up. Mechanical prostheses and localised surgery, such as cornea grafts and laser surgery to correct sight defects, might have made significant developments in recent years but artificial limbs that are as good as, if not better than, the real thing and mind-linking to machines, are still at a very rudimentary stage: the idea that people will routinely walk around with data chips implanted in their skulls or have bionic arms and legs are as distant now as they were in the writings of the cyberpunk authors.

But *Traveller* is a game of Science Fiction adventure. The work of the cyberpunk authors has every right to exist in *Traveller* games as aliens, jump drives and plasma weapons. The chrome may be a little tarnished in terms of how cyberpunk concepts are viewed from a literary standpoint but there is no reason why they cannot be an enjoyable part of *Traveller* campaigns.

This is where *Traveller: Cybernetics* comes in. This book is designed to give Referees the tools for incorporating bionics, cyborgs and cyberpunks into their games – whether the intention is to recreate those cyberpunk stories of the 1980s, or Six Million Dollar super-spies from the 1970s. Everything you need is right here (aside from the *Traveller Core Rulebook*) to outfit your characters with cybernetic limbs, nerve enhancements, neural interfaces and everything else in between.

The book is really divided into two halves. The first and most extensive deals with cybernetic augmentations: limbs, organs, implants and so on. The second half provides rules for cyberspace, drawing its inspiration from many stories of lone hackers up against the faceless corporations armed with their cyberspace deck, some cunning software and a will to rip-off the Big Boys.

In terms of the cybernetics the aim has been to capture both a realistic feel but also include some more outrageous options one finds in science fiction and superhero comic books: *Judge Dredd* and *Strontium Dog* players and Referees will already be familiar with some of the more outlandish applications of cybernetics (‘*Mandroid*’, for instance). It will be likely that some of the augmentations described in this book simply will not fit with certain types of *Traveller* campaign but will fit with others. Choose what works for you and disregard what does not.

In terms of the cyberspace rules, the aim has been to replicate that 1980s cyberpunk feel. Again, this may be out of place with your own campaign and may even be seen as a little passé; but there is still a lot of enjoyment to be had from planning, preparing for and executing that daring cyber-heist that challenges the corporate monoliths and strikes a blow for the little people. Again, use these rules if they work for you, or disregard them if they do not.

Traveller: *Cybernetics* is therefore a toolkit for hardware, wetware and cyber crime. It takes its cues from Science Fiction stories rather than science reality and intends to aid adventurers, offer a little ‘chrome’ for characters and take *Traveller* into some areas that have only been briefly touched upon before in the game.

So, polish your mirrorshades, slot-in a skillsoft, boot up the cyberdeck and enjoy...

CHARACTER GENERATION

An individual with cybernetic parts can potentially be found in most, if not all, ***Traveller*** careers. This chapter concentrates on the roles in which those who have been enhanced with cybernetic parts excel. From shock troops to super spies there are numerous possibilities for such individuals within the different ***Traveller*** settings.

Basic Training: All of these careers are dependent on the character having some form of cybernetic implant at the start of their professions. As a result starting characters get both one of the cybernetic parts available to them at grade 1 and the skills listed in their Service Skills table at level 0.

For example, Steve Ford, a starting Agent in the Hero career, gains four skills at level 0 (Admin, Investigate, Gun Combat and Streetwise) plus either grade 1 Cybernetics (Limbs) or Cybernetic (Head). He chooses the former and gains Cybernetics Legs 1.

Cybernetics

All of these careers have the option for a character to gain additional cybernetic implants. Treat these as skills and choose from or roll on the relevant tables to find out exactly what additional cybernetic implant the character has received.

Specialities

- **Any:** The character may choose to take an implant from any cybernetic table available to their career, including from different specialisations.
- **Skillsoft:** The character receives a skillsoft implant allowing him to use a skill not normally available to him at a skill level of one. This may be increased to higher levels if Cybernetics (Skillsoft) is rolled again.
- **Location or Type:** Take the next grade of implant available on the relevant implant table. In the unlikely event that all of the implants on this table have been taken to their maximum then treat this as Cybernetics (any). Where there are multiple options within a table, a character can chose just one. For an Agent character, for example, a Cybernetics (Limb) result would allow him to choose an upgrade to his hand, arm or foot but not all three.

CAREERS

Career	Specialisation	Enlistment	Survival	Advancement
Agent		Int 6+		
	Deep Cover		Edu 7+	Int 7+
	Hero		End 7+	Str 7+
	Infiltration		Int 6+	Dex 8+
Army		End 5+		
	Shock Troops		Str 7+	End 7+
	Protected Forces		End 8+	Int 6+
	Intelligence		Int 7+	Edu 7+
Citizen		Edu 5+		
	Drone		Int 7+	Edu 7+
	Survivor		End 6+	Soc 8+
	Terraformer		End 8+	Int 6+
Cybernet		Int 6+		
	Corporate Jockey		Dex 7+	Int 7+
	Cyberhacker		Int 8+	Edu 6+
	Fixer		Soc 6+	Int 8+
Noble		Soc 10+		
	Fashionista		Soc 7+	Int 7+
	Fetishist		Edu 8+	Soc 6+
	Superior		Int 7+	Soc 7+
Psion				
	Booster	Psionic Str 6+	Int 7+	Edu 7+
	Psitech	Edu 8+	End 8+	Int 6+
	Psi-Hunter	Soc 10+	Int 8+	Edu 6+
Rogue		Str 7+		
	Brigand		End 8+	Str 6+
	Driver		Int 6+	Dex 8+
	Muscle		Str 6+	End 8+

AGENT

Your Cybernetic parts enable you to perform the roll of an agent in a superior manner.

Enlistment: Int 6+

Assignments:

- **Deep Cover:** You are equipped to take on long term roles as a sleeper agent.
- **Hero:** You were called upon to perform tasks beyond the capabilities of normal people.
- **Infiltration:** A specialist in sneaking past security and getting into places that your spy masters need information about.

Career Progress

	Deep Cover	Hero	Infiltration
Survival	Edu 7+	End 7+	Int 6+
Advancement	Int 7+	Str 7+	Dex 8+

Mustering-Out Benefits:

d6	Cash	Other Benefits
1	1,000	+1 Trust*, Contact*
2	2,000	+1 Int
3	5,000	+1 Trust*, Network (any)*
4	7,500	Law Enforcement Gear
5	10,000	Law Enforcement Gear, +1 Trust*
6	20,000	+1 Social
7	30,000	TAS Membership

Skills and Training

Roll	Personal Development	Service Skills	Advanced Education (Minimum Edu 8)
1	+1 Trust*	Investigate	Jack of all Trades
2	+1 Dex	Streetwise	Comms
3	+1 End	Deception	Computers
4	Gambler	Gun Combat (any)	Drive (any)
5	+1 Str	Cybernetics (limbs)	Life Science (cybernetics)
6	Carouse	Cybernetics (head)	Cybernetics (any)
Roll	**Specialist: Deep Cover**	**Specialist: Hero**	**Specialist: Infiltration**
1	Streetwise	Gun Combat (any)	Computers
2	Carouse	Athletics (any)	Stealth
3	Trade (any)	Tactics (military)	Investigate
4	Computers	Recon	Recon
5	Cybernetics (disguise)	Cybernetics (limbs)	Cybernetics (head)
6	Cybernetics (skillsoft)	Cybernetics (skillsoft)	Cybernetics (skillsoft)

*The rules for Trust, Contacts and Networks can be found in ***Book 5: Agent***. Alternatively you may substitute as many of these as you wish for Cybernetics (any).

MISHAPS

2d6	Mishap
2	Severely Injured. Roll twice on the Injury table and take the lower result.
3	An enemy power tries to kill you and your family or friends. Roll on the Injury table and lose one family member, Ally or Contact. Gain an Enemy.
4	You discover that you are being set up in order to fulfil some political agenda. Disgusted, you leave the service and disappear before you are handed to your enemies. Someone in the agency that employed you becomes an Enemy.
5	A civilian is endangered during a mission. You have a chance to act; if you do so, roll Athletics 8+. If you fail, roll on the Injury table and the civilian is killed. If you succeed, gain a Contact as you save the civilian.
6	You are betrayed by a friend. Lose one Ally or Contact, if you have no Allies or Contacts you gain an Enemy instead.
7	A mission goes wrong and you are held responsible for it. You may accept your fate and leave this career with an extra Benefit roll as compensation or you may argue. If you argue, roll Advocate 8+. If you succeed, you may stay in this career. If you fail leave this career.
8	One of your Allies begs you to leave the force. If you refuse, lose that Ally.
9	A shift in politics and a thaw in interstellar relations lead to your services no longer being required. You are dismissed from the service but gain an extra benefit roll this term.
10	An assassin targets you. Roll Gun Combat (any) 8+; if you fail, roll on the Injury table. Either way, you must leave this career.
11	You develop a dangerous addiction to some narcotic. Either leave the career to clean up or spend 1,000 credits per term paying for your addiction.
12	Injured. Roll on the Injury table.

Events

d66	Event
11	Disaster! Roll on the Mishaps table but you are not ejected from this career.
12	Your current assignment is extremely easy, giving you time to improve your skills. You may gain a rank in any skill you currently have at 0 or 1.
13	You are part of a major investigation into a spy ring extending off world. Gain any of Deception 1, Gun Combat (any) 1, Investigate 1 or a Network (any) 1. Then, roll 1d6. On a 1–2, the ring attempts to have you killed; roll on the Injury table. On a 3–4, gain the spy ring as an Enemy. On a 5–6, the ring is broken up; gain a +2 DM to your next Advancement Roll and gain an Enemy as one of the spies escapes.
14	The family of a scientist designing a secret weapon was kidnapped at a remote location and only you are in a position to save them and prevent the scientist from being forced to betray his people. Roll 1d6: 1. You find the kidnappers' hideout and try to rescue the scientist's family. Roll any combat skill 8+; succeed and they are rescued and the scientist becomes an Ally, fail and they are killed and you gain the scientist as an Enemy. 2. Discovering the kidnappers' base of operations you try to trick them into fleeing. Roll Deception 8+; if you succeed the family are freed and you gain a +4 DM to your next Advancement roll as your clever thinking impresses your superiors. Fail and the kidnappers flee with the family and you gain the gang as an Enemy. 3. You heroically attack the kidnappers, forcing them to flee the area as they panic. The family escapes but you are injured; as a reward you are fitted with a new cybernetic part to improve your capabilities. Gain Cybernetics (any). 4. You discover the scientist is the one behind the whole thing, using the kidnap as an excuse for his treachery should his actions be discovered. Gain a level in Investigate. 5. The scheme is a plot by regular criminals rather than an enemy state. You can chose to call in the authorities once the family is safe and gain a +2 DM to your next Advancement roll or force the criminals to cooperate with you in the future, gaining the gang as a Contact. 6. The scientist's wife, a long time sleeper agent, is behind the entire scheme. If you chose to reveal this to the scientist he does not go through with the handover of secrets and you gain him as a Contact. If you do not reveal this to him you can arrest him and his wife for their actions gaining a +4 DM to your next Advancement roll.
15	The current assignment is to watch over the staff of an alien diplomatic mission. Gain Diplomat 1, Investigate 1 or Language (any Alien) 1.
16	Life Event. Roll on the Life Events table.
21	You are saddled with a desk job. Gain Admin 1, Comms 1, Computers 1 or Gambler 1.
22	You become heavily embroiled in inter-departmental politics. Roll Deception 8+. Success indicates that you automatically succeed the next time you have to make an Advancement roll, failure indicates you automatically fail your next Advancement roll.
23	One of your senior officers backs you up when you are in trouble. Gain an Ally and +1 Trust*.
24	It is decided that you need further enhancement to fulfil your roll. Improve one of your existing cybernetic implants by one grade.
25	You are given advanced vehicle training. Gain one of Drive (any) 1, Flyer (any) 1, Navigation 1 or Seafarer (any) 1.
26	Life Event. Roll on the Life Events table.
31	You establish a network of contacts on the street. Gain Streetwise 1 and Network (street).
32	You are involved in tracking down a smuggling ring dealing with ancient alien technology. Roll Investigate 8+ or Deception 8+, success indicates that you capture the gang. If you roll Investigate you gain a +2 DM to your next Advancement roll, if you use Deception you gain a small alien artefact, its function to be agreed with your Referee.
33	In your next mission you are required to have some knowledge of a previously unknown skill. In order to be able to properly fill your role gain Cybernetics (skills) in a new skill.
34	A natural disaster strikes. Roll 1d6; on a 1, roll on the Injury table. Otherwise, gain Survival 1 or Medic 1.
35	Further cybernetic augmentation is seen as desirable. You gain a new cybernetic part at grade 1.
36	Life Event. Roll on the Life Events table.

d66	Event
41	Your new commanding officer is an incompetent idiot; if you follow his bad decisions, you suffer a –1 DM to your next Advancement roll. Alternatively, you can try to work around him by rolling Admin 8+. Succeed and you shine in a bad department; gain a +2 DM to your next Advancement roll. Fail and you suffer a –4 DM to your next Advancement roll.
42	You are involved in a ship based tour of duty, using a vessel owned and operated by your agency. As a result of having to fulfil a role onboard the ship, in addition to your other duties, you gain Astrogation 1, Engineer (any) 1 or Pilot (any) 1.
43	You learn something you should not have about a senior agent. If you keep quiet, gain Trust 1. If you report him, gain an Enemy and a +2 DM to your next Advancement roll.
44	You investigate the criminal underworld. Gain a level in Advocate, Forgery, Gambler or Streetwise.
45	The target of your next mission is someone you know. If you go through with the mission you gain a +2 DM on your next Advancement roll but lose an Ally or Contact. If you have no Allies or Contacts to lose gain an Enemy instead.
46	Life Event. Roll on the Life Events table.
51	Your diligence uncovers a hostile agent and you catch him in an act of espionage. Roll any combat skill 8+. If unsuccessful you must roll on the Injury table and gain an Enemy as he escapes. If successful you gain a +2 DM on your next Advancement roll and also may increase any combat skill by one level, as your close shave leads you to hone your skills.
52	You are given specialist weapons and tactics training. Gain either Gun Combat (any) 1, Heavy Weapons (any) 1, Recon 1 or Tactics (military) 1.
53	You are assigned to a world when civil war breaks out. You are forced to become involved on multiple occasions as street fighting comes close to destroying your station. Gain Gun Combat (any) 1, Melee (any) 1 or Tactics (military) 1.
54	An official asks you to perform an illegal and amoral act of violence against one of his court rivals. If you agree gain an Ally, if you refuse gain an Enemy.
55	You save the life of a fellow officer. Gain an Ally.
56	Life Event. Roll on the Life Events table.
61	You are given the task of investigating a corporation suspected of being a front for an enemy power. Roll 1d6. 1. The information leading to the investigation was false and there is nothing going on. You gain an extra Benefit roll. 2. The information was correct and the company is a front and the information you collect leads to the enemy's plot being foiled. You gain a +4 DM to your next Advancement roll. 3. The information was correct but your cover is blown. Gain a level in Investigate and an Enemy. 4. There is no evidence of anything illegal going on but you have the opportunity to fabricate some evidence. If you decide to do so gain a level in Deception, if not you gain a Contact within the corporation. 5. You discover the corporation is self-serving and is a criminal enterprise but has nothing to do with a foreign power. Gain a level in Investigate or Streetwise. 6. You are discovered carrying out your assignment and are given the opportunity to betray your employers and work for those behind the corporation. If you do so you gain an additional Benefit roll for this term and must leave this career, however you will be automatically accepted for a new, different career of your choice for your next term, if you should wish.
62	You are involved in a long counter insurgency against a terrorist organisation. Gain a level in Recon or any combat skill.
63	You are given advanced emergency training. Gain any one of Comms 1, Leadership 1, Mechanic 1 or Medic 1.
64	You uncover a terrorist plot attempt, preventing a major attack. Roll any combat skill 8+ or Comms 8+ to ensure the criminals are foiled. If you are successful you gain a +4 DM to your next Advancement roll. If you fail you must roll on the Injury table.
65	An augmentation is standard for your next mission. Gain Cybernetics (any).
66	You are decorated for heroism in the line of duty. You are automatically promoted.

Ranks and Benefits

Rank	Title	Skill or Benefit
0	Asset	
1	Operative	+1 Trust*
2	Field Agent	Streetwise
3	Special Agent	
4	Field Chief	Admin
5	Station Chief	+1 Trust*
6	Director	+1 Soc

*The rules for Trust, Contacts and Networks can be found in ***Book 5: Agent***. Alternatively you may substitute as many of these as you wish for Cybernetics (any).

CYBERNETICS

Limbs

Grade	Arms	Hand	Legs
1	Enhanced Strength +1	Hand Razors	Speed*1.5
2	Toolkit	Built-In Transceiver	Magnetic Grapple (Foot)
3	Enhanced Strength +2	Built-In Sensors Array	Speed*2
4	Integral Medikit	Grapple Array	Agility +2 Dex
5	Enhanced Strength +3	Palm Print Copier	Repulsor (Foot)
6	Drone Arm	Built-In Hand Computer	Speed*3

Head

Grade	Ears/Nose/Mouth	Eyes	Head
1	Breather Mask	Camera	Intelligence Boost +1
2	Hearing Level 2	General Information Chip	Eidetic Memory Chip
3	Artificial Gill	Peripheral Vision	Intelligence Boost +2
4	Hearing Level 3	Low Light Vision	Computer Integration
5	Particle Analysis	Telescopic/Microscopic Sight	Intelligence Boost +3

Disguise

Grade	Implant
1	Skin/Hair Tone Changer
2	Voice Simulator (Advanced)
3	Palm Print Duplicator
4	Retinal Pattern Duplicator
5	Facial Morphing
6	Light Diffusion Skin

Body

Grade	Implant
1	Stomach
2	Lungs
3	Cybernetic Vitals
4	Camouflage Skin
5	Vitals High End Upgrade +2 End
6	Chameleon Skin

ARMY

You are a member of the military.

Enlistment: End 5+

Assignments:

- **Shock Troops:** You are built to provide extra attacking power in assaults.
- **Protected Forces:** You are equipped to function on worlds with hostile environments without bulky additional equipment.
- **Military Intelligence:** It is you who provides information on the enemy, although your efforts are not universally appreciated by the troops on the ground.

Career Progress

	Shock Troops	Protected Forces	Military Intelligence
Survival	Str 7+	End 8+	Int 7+
Advancement	End 7+	Int 6+	Edu 7+

Mustering-Out Benefits:

Roll	Cash	Other Benefits
1	2,000	Cybernetics (any)
2	5,000	+1 Int
3	10,000	+1 Edu
4	10,000	Weapon
5	10,000	Armour
6	15,000	Cybernetics (skills)
7	20,000	+1 Soc

Skills and Training

Roll	Personal Development	Service Skills	Advanced Education (Minimum Edu 8)	Officer Skills (Commissioned Only)
1	+1 Str	Drive (any)	Comms	Tactics (Military)
2	+1 Dex	Athletics (any)	Explosives	Leadership
3	+1 End	Recon	Survival	Advocate
4	Melee (unarmed)	Gun Combat (any)	Mechanic	Diplomat
5	+1 Edu	Cybernetics (limbs)	Medic	Admin
6	Gambler	Cybernetics (weapon)	Cybernetics (any)	Cybernetics (any)
Roll	**Specialist: Shock Troops**	**Specialist: Protected Forces**	**Specialist: Military Intelligence**	
1	Cybernetics (weapon)	Survival	Investigate	
2	Gun Combat (any)	Gun Combat (any)	Comms	
3	Melee (any)	Heavy Weapons (any)	Tactics (Military)	
4	Heavy Weapons (any)	Comms	Sensors	
5	Cybernetics (body)	Cybernetics (body)	Cybernetics (head)	
6	Cybernetics (skillsoft)	Cybernetics (skillsoft)	Cybernetics (skillsoft)	

MISHAPS

2d6	Mishap
2	Severely Injured. Roll twice on the Injury table and take the lower result.
3	Due to budgetary constraints your unit is merged with another and you are now surplus to requirements.
4	Your unit is massacred in a disastrous campaign. You blame your superior commander, who goes on to be promoted. Meanwhile he purges those from his command who know of his shortcomings. You gain him as a Rival as he drums you out of service.
5	A mission goes wrong behind enemy lines. Increase Stealth or Survival by one level but you are ejected from the service.
6	You serve on a jungle world rich in infections and diseases. You fall ill and although you recover without any long term damage your entire unit has been disbanded and its men discharged due to the huge numbers of medically invalided troops.
7	You get in a furious argument with a superior whom you accuse of incompetence. After a short stint in the brig you find your discharge papers waiting for you.
8	Peace breaks out, leaving many troops surplus to requirements. You are one of those forced to leave their military lives behind.
9	You cover for a comrade's absence only to find that he has been caught committing an offence while you were protecting him. You are drummed out of the military as a result.
10	Acting against orders you save the lives of many innocent civilians but enable an infamous enemy leader to escape to continue the struggle elsewhere. You are discharged but gain 1d3 Contacts and an Enemy as a result of your actions.
11	You have a strong relationship with a supplier which is frowned upon by the top brass. As a result you are 'requested' to resign from the service but you gain the supplier as a Contact.
12	You are wounded in the line of duty. Roll on the Injury table.

Events

d66	Event
11	Disaster! Roll on the Mishaps table but you are not ejected from this career.
12	You are stationed on a world with an ongoing insurgency and spend the term being shifted from area-to-area in an attempt to stamp out new outbreaks of fighting. Roll 1d6: 1. You find yourself in charge of a small outpost when all your superiors are killed or incapacitated early on in an attack. Roll Tactics (military) 8+ or Leadership 8+. Succeed and your efforts lead to the enemy being driven off. Gain either a commission or a +4 DM to your next Advancement roll. If you fail roll on the Injury table. 2. You manage to wrangle your way out of front line duties and spend the time in a supporting role. Gain a level in one of Admin, Computers, Mechanic or Medic. 3. You find yourself assigned to an air cavalry unit. Gain one of Flyer (any) 1, Mechanic 1 or Navigation 1. 4. You are engaged in heavy fighting throughout the term Roll Gun Combat (any) 8+, Melee (any) 8+ or Recon 8+. If you succeed you can increase the skill used by one level. If you fail you are taken prisoner during one exchange and lose your Benefit for this term. 5. The insurgency succeeds and overthrows the government. Roll Advocate 8+, Recon 8+ or Stealth 8+ to avoid reprisals against ex-government supporters and troops. If you succeed gain a level in the skill used, if you fail roll on the Injury table. 6. There is a stalemate in the fighting, as neither side gains an advantage. Throw Gun Combat or Tactics (military) 8+ to avoid rolling on the Injury table.
13	A revolution backed by a hostile interstellar power overthrows a friendly government. Your unit is assigned to help your allies regain power, throw Tactics or Gun Combat (any 8+) to avoid having to roll on the Injury table. You gain both an Ally and an Enemy as a result of the fighting.
14	You are forced to lead members of your unit into action, turning the tide of battle. Gain a level in Leadership as your superiors start putting you in more responsible positions.
15	A starship deploying your unit misjumps and forces you onto a primitive planet. While waiting for rescue you are forced to deal with both locals and the hostile environment. Gain a level in Diplomat or Survival.
16	Life Event. Roll on the Life Events table.
21	You are off duty when you clash with members of a rival unit. Gain a Rival.
22	You are assigned to peacekeeping duties in a known hotspot. Gain one of Admin 1, Carouse 1, Deception 1 or Recon 1.
23	A major defeat leads to a major investment in upgraded cybernetics for the surviving troops. You may increase the grade of any cybernetics implant you already have by one.
24	You are assigned to deal with a counter insurgency that rapidly spirals out of control with tit-for-tat killings and atrocities. You gain 1d3 Enemies and 1d3 Allies.
25	You are invited to a regular gambling circle off base. Gain a level in Deception or Gambler. If you wish you may gamble up to three Benefits. Roll Gambler 8+, succeed and gain an additional Benefit for every one gambled, if you fail lose all three gambled benefits.
26	Life Event. Roll on the Life Events table.
31	Your unit is ambushed. Roll Athletics 8+ or any combat skill 8+ to escape. Fail and you are captured and forced out of your career as a result. If you succeed you gain Tactics (military) 1.
32	You see little action this term, being posted to a series of peaceful worlds with no military threats. Gain one of Carouse 1, Gambler 1 or Streetwise 1.
33	You are assigned to your unit's headquarters; gain one of Admin 1, Advocate 1, Deception 1 or Investigate 1.
34	You are given advanced training. Throw Education 8+ to increase one skill you already have by one level.
35	Your commanding officer takes an interest in your career. Gain either Tactics (military) 1 or a +4 DM to your next Advancement roll.
36	Life Event. Roll on the Life Events table.

d66	Event
41	You have the opportunity to call down a bombardment on enemy positions but to do so would inevitably result in civilian casualties. If you decide to call in the guns the results provide you with a +2 DM to your next Advancement roll but you lose –1 Soc as society as a whole feels disgust at the numbers of civilian losses.
42	You are assigned to Officer Training College and gain a commission. If you are already an officer you gain an automatic promotion instead.
43	You are assigned to a training base to teach new recruits. Roll any service skill 8+. Success indicates that you are able to pass on enough knowledge for some of your pupils to remember you. Gain 1d3 Contacts.
44	You are assigned to a mechanised unit. Gain one of Drive (any) 1, Heavy Weapons 1 or Mechanic 1.
45	Poor intelligence causes an operation to go bad. Roll Gun Combat (any) 8+ or Tactics (military) 8+ to get your troops out. If you succeed you gain a +2 DM to your next Advancement roll and a Contact from those you saved. Fail and you gain an Enemy who blames you for the deaths of his friends.
46	Life Event. Roll on the Life Events table.
51	A major programme of modernisation leads to more cybernetic parts being implanted in your unit. Gain Cybernetics (any).
52	Your unit is cut off by the enemy, surrounded and outnumbered. Holding out until relief arrives you gain a +2 DM to your next Advancement roll.
53	Your unit is called in to help with the aftermath of a natural disaster. Gain a level in Admin, Drive (any) or Leadership.
54	You train with the military of a race of alien allies. They are tough and do not pull their punches, even in training. Roll Leadership 8+ or Tactics (military) 8+. If you succeed you gain an alien Contact and one level in any skill. If you fail roll on the Injury table.
55	You are assigned to a team working alongside civilian members of the government in order to help provide military advice. Gain a level in Admin, Computes, Diplomat or Persuade.
56	Life Event. Roll on the Life Events table.
61	You become a poster boy for recruiting, gaining both admirers and detractors. Gain a level in Carouse, Diplomat, Persuade or Recruiting, as well as 1d3 Rivals and 1d3 Contacts.
62	A conflict between interstellar powers erupts and you are sent to the front lines. Roll 1d6: 1. Your military is crushed on all fronts and your unit is routed. Roll Gun Combat (any) or Tactics (military) to escape capture. Failure indicates you lose any Benefits from this term. 2. The army is defeated in the field but remains powerful enough to prevent an overwhelming enemy victory. Gain one level in Gun Combat (any), Persuade or Survival as you struggle back to the new front lines. 3. There is a stalemate in the fighting, as neither side gains an advantage. Throw Gun Combat or Tactics (military) 8+ to avoid rolling on the Injury table. 4. There is no major engagement as neither side is really ready for war. You settle down in a boring routine and try to learn new skills. Gain one of Admin 1, Athletics 1, Drive (any) 1 or Mechanic 1 as you fill your time. 5. The enemy are forced back and victory is celebrated. Gain a +4 DM to your next Advancement roll. 6. Total conquest. The enemy are crushed beneath the might of your forces and there is much looting. Gain an additional Benefit.
63	You foil an attempted crime on base, be it smuggling, theft or sabotage. You gain an Enemy but also a +2 DM to your next Advancement roll.
64	You are assigned to an anti-piracy task force dealing with troublesome raiders in a border subsector. Roll Survival 8+ or Zero-G 8+ if you fail roll on the Injury table. If you succeed you may gain one level in Gun combat (any), Tactics (military) or Zero-G.
65	You are assigned to an urbanised planet torn apart by war. Gain one of Persuade 1, Recon 1, Stealth 1 or Streetwise 1.
66	You display heroism in battle. You may gain a promotion or a commission automatically.

Ranks and Benefits

Rank	NCO	Skill or Benefit	Officer	Skill or Benefit
0	Private	Gun Combat (slug rifle or energy rifle) 1		
1	Specialist		Lieutenant	Leadership 1
2	Corporal		Captain	
3	Sergeant	Leadership 1	Major	Tactics (military) 1
4	Staff Sergeant		Colonel	
5	Master Sergeant		Major General	+1 Soc
6	Sergeant Major	+1 End	General	

CYBERNETICS

Limbs

Grade	Arms	Hand	Legs
1	Internal Medikit	Built-In Transceiver	Speed*1.5
2	Advanced Strength +2	Grapple Array	Agility +2 Dex
3	Limb Armour (Mesh)	Built-In Sensor Array	Limb Armour (Mesh)
4	Drone Arm	Built-In Hand Computer	Speed*2
5	Advanced Strength +3		Agility +3 Dex
6	Limb Armour (Cloth)		Limb Armour (Cloth)

Head

Grade	Ears/Nose/Mouth	Eyes	Head
1	Hearing Level 2	Anti-Flash	Intelligence Boost +1
2	Air Filtration	General Information Chip	Skull Strengthening
3	Breather Mask	Telescopic/Microscopic	Intelligence Boost +2
4	Hearing Level 3	Low Light Vision	Computer Integration
5	Artificial Gill	Combat Range Finder	Intelligence Boost +3
6	Extreme Atmosphere Life Support	Multi Spectrum Vision	

Body

Grade	Organ	Torso
1	Stomach	Subdermal Armour 1 point
2	Lungs	Camouflage Skin
3	Cybernetic Vitals	Subdermal Armour 3 points
4	Vitals upgrade +2 End	Chameleon Skin
5	Vitals Upgrade +3 End	Subdermal Armour 5 points
6		Light Diffusion Skin

Weapon

Grade	Close Combat	Rifleman	Heavy Weapons
1	Integral Blades	Integral Assault Rifle	Heavy Duty Arm
2	Integral Stunner	Integral Gauss Rifle	Pincer Attachment
3	Scythes	Integral Laser Carbine	Weapons Mount
4	Integral Snub Pistol	Integral Missile Launcher	Heavy Weapon Mount
5	Grasp Bomb		Tendril Array

CITIZEN

You are a civilian working a regular job.

Enlistment: Edu 5+

Assignments:

- **Drone:** You are an unremarkable part of a society with widespread use of cybernetic technology.
- **Survivor:** You survived a traumatic injury and now continue as best you can in civilian life.
- **Terraformer:** You are one of the first to start work on uninhabitable planets, either setting up facilities for colonists to live and work or helping to terraform the planet for more widespread habitation.

Career Progress

	Drone	Survivor	Terraformer
Survival	Int 7+	End 6+	End 8+
Advancement	Edu 7+	Soc 8+	Int 6+

Mustering-Out Benefits:

Roll	Cash	Other Benefits
1	2,000	Cybernetics (any)
2	5,000	+1 Int
3	10,000	+1 Edu
4	10,000	Weapon
5	10,000	Armour
6	15,000	Cybernetics (skillsoft)
7	20,000	+1 Soc

Skills and Training

Roll	Personal Development	Service Skills	Advanced Education (Minimum Edu 8)
1	+1 Str	Drive (any)	Computers
2	+1 End	Trade (any)	Language (any)
3	+1 Dex	Carouse	Medic
4	+1 Int	Streetwise	Advocate
5	Melee (unarmed)	Cybernetics (limbs)	Life Science (cybernetics)
6	Gambler	Cybernetics (head)	Cybernetics (any)
Roll	**Specialist: Drone**	**Specialist: Survivor**	**Specialist: Terraformer**
1	Admin	Survival	Engineer (any)
2	Computers	Athletics (any)	Mechanic
3	Broker	Recon	Survival
4	Leadership	Jack of all Trades	Jack of all Trades
5	Cybernetics (body)	Cybernetics (body)	Cybernetics (body)
6	Cybernetics (skillsoft)	Cybernetics (skillsoft)	Cybernetics (skillsoft)

MISHAPS

2d6	Mishap
2	Severely Injured. Roll twice on the Injury table and take the lower result.
3	Unsafe working practices cause the closure of your workplace and the financial ruin of your employers.
4	A new technological advance causes your role to become redundant, forcing you out of your occupation. Lose one Social Standing.
5	Your company collapses leaving you on the street. Not only is your career over but you lose 1d3 Benefits.
6	A vessel you are on misjumps. You are unable to easily make your way home and must start afresh on a new world. Gain Streetwise 1 or Survival 1.
7	Your superior decides that you are no longer required and gives you your papers, forcing you to move on.
8	It becomes clear that any future prospects that you thought you had are limited by a glass ceiling that you can never push through as you do not know the right people or do not 'fit in'. As a result you leave for pastures new.
9	You are accused of dishonesty. Although nothing is ever proven it is made very clear that it is in the best interests of your career if you move on. Lose one Social Standing.
10	A banking collapse, due to incompetence and greed, causes widespread economic distress and a change in government. As a result of huge cuts many people lose their jobs and you are one of them.
11	A large scale disaster affects the world upon which you live, forcing you to move on.
12	Injured. Roll on the Injury table.

Events

d66	Event
11	Disaster! Roll on the Mishaps table but you are not ejected from this career.
12	Political upheaval strikes your homeworld and you are caught up in the unrest. Gain either Advocate 1, Explosives 1, Persuade 1 or Streetwise 1. Throw whichever skill you chose 8+. Success indicates you were on the winning side and gain a +2 DM to your next Advancement roll. Failure indicates your side lost and you suffer a –2 DM on your next Survival roll.
13	You gain experience in a technical field as a computer operator or surveyor. Increase Comms, Computers, Engineer (any) or Sensors by one level.
14	You become a notable figure in your local place of worship or charitable institution. Gain either a Contact or +1 Soc.
15	War breaks out and you are amongst the civilian population who must do what they can to survive. Roll 1d6 1. You are drafted into a militia unit. Gain one of Gun Combat (any) 1, Medic 1, Melee (any) 1 or Tactics (military) 1. 2. As part of a hastily raised militia unit you are forced to defend your home. Roll Gun Combat (any) 8+ or Melee (any) 8+. If you fail you must roll on the Injury table and lose your Benefit roll for this term as your home is burnt to the ground. Success means that the enemy is driven off. 3. You are accused of being a spy for the opposing forces. You are forced to flee but gain an Enemy. 4. You are drafted into a support unit where you are expected to support the front line troops. Gain one of Drive (any) 1, Flyer (any) 1, Mechanic 1 or Medic 1. 5. You spend your time attempting to avoid the armies of both sides, both of whom prey upon the civilian population. Gain one of Deception 1, Persuade 1, Recon 1 or Stealth 1. 6. You join a charitable organisation helping out any in need of aid on both sides of the conflict, military or civilian alike. Gain 1d3 Contacts from those you are able to assist.
16	Life Event. Roll on the Life Events table.
21	Your hard work causes jealousy amongst your co-workers. Gain 1d3 Rivals.
22	You are sent on a training course to hone your skills. Increase any Service Skill by one level.
23	You become addicted to a recreational drug as a result of your desire to add spice to your humdrum existence. You either suffer a –1 loss to Endurance or lose your Benefit for this term before you finally kick the habit.
24	Your hobby involves guns or blowing things up. Gain one level of either Explosives or Gun Combat (any).
25	You become involved in an affair with someone who has had a very bad relationship. Although the affair does not last your former lover's ex fixates on you and you gain an Enemy.
26	Life Event. Roll on the Life Events table.
31	Your talent and resourcefulness is recognised by your superiors. Gain a +2 DM to your next Advancement roll.
32	A business opportunity comes your way. Roll any Service Skill 8+; if you succeed you gain a +1 DM to your Benefit roll for this term.
33	You are given advanced training in a specialised field. Throw Education 10+ to gain any one skill of your choice at level 1.
34	You become politically active, gaining both friends and enemies in the political sphere. Gain 1d3 Contacts and 1d3 Rivals.
35	Your business expands or your colony thrives. Gain a +1 DM to one Benefit roll.
36	Life Event. Roll on the Life Events table.

d66	Event
41	You gain an inheritance from a reclusive aunt. Gain an extra Benefit roll for this term.
42	You spend a lot of time maintaining and using heavy vehicles as part of your job. Increase Drive (any), Engineer (any), Flyer (any) or Mechanic by one level.
43	Some personal investments come through. Gain an additional Benefit for this term.
44	Your employer posts good results, paying you a sizable bonus. Gain an additional Cash Benefit.
45	You are attacked by an anti-cybernetics group. Roll Melee (any) 8+ or Stealth 8+ to escape injury. Succeed and the close shave makes you improve your ability to avoid such problems in the future and you can increase either skill by one. Fail and you must roll on the Injury table.
46	Life Event. Roll on the Life Events table.
51	You are forced to pick sides between two of your associates. An Ally or Contact becomes a Rival. If you have no Contacts or Allies you gain an Enemy.
52	A relative is revealed to be a notable criminal, causing you no end of grief. Lose one Social Standing but gain 1d3 Contacts as dubious figures want to get to know you better.
53	You consider yourself quite the outdoorsman in your spare time. Gain one of Animals (any), Gun Combat (any rifle), Recon or Survival.
54	You become a victim of a local criminal gang. If you help the police bring the criminals to justice you gain an Enemy and a Contact. If you do nothing you lose any Benefits for this term.
55	Your employers set up an office on an alien world and you are one of the staff selected to work there. Gain one of Carouse 1, Diplomat 1, Space Science (Xenology) 1 or Trade (any) 1.
56	Life Event. Roll on the Life Events table.
61	You become very serious about a new hobby and gain some expertise in it. Gain any skill of your choice to level 1.
62	You befriend a superior and gain a Contact. You also gain either Diplomat 1 or a +4 DM to your next Advancement roll.
63	You lead a very full social life and are very popular. Gain 1d3 Contacts.
64	You are involved in a major industrial accident. Roll 1d6: 1. You are badly injured but make a full recovery. Your employer pays for your complete rehabilitation and you gain a new cybernetic implant. Gain Cybernetics (any). 2. You save the life of one of your colleagues, dragging him to safety after an accident. Gain an Ally. 3. You are feted for your efforts to reduce the effects of the disaster. Gain an extra Benefit for this term as you are rewarded by your employer for your good work. 4. You are hailed as the hero of the hour by the public. Gain +1 Social Standing. 5. In the aftermath of the disaster you are one of those who are used as a scapegoat. Lose –1 Social Standing. 6. You are blamed by the family of one of the victims for the death of their loved one. Gain an Enemy.
65	You are interviewed for a news program as a witness to some event. You milk your 10 minutes of fame for all it is worth. Gain +1 Social Standing.
66	Your diligence and hard work are recognised. You are automatically promoted.

Ranks and Benefits

Rank	Drone / Survivor	Skill or Benefit	Terraformer	Skill or Benefit
0				
1	Worker		Gardener	Survival 1
2		Admin 1	Landscaper	
3	Supervisor			Navigation 1
4		Trade (any) 1	Designer	
5	Foreman	Cybernetics (any)		Cybernetics (any)
6			Worldbuilder	

CYBERNETICS

Limbs

Grade	Arms	Hand	Legs
1	Toolkit	Built-In Transceiver	Speed*1.5
2	Advanced Strength +1	Built-In Sensor Array	Agility +2 Dex
3	Advanced Strength +2	Built-In Hand Computer	Sure-Grip
4	Drone Arm		Speed*2
5	Advanced Strength +3		Agility +3 Dex

Head

Grade	Ears/Nose/Mouth	Eyes	Head
1	Breather Mask	General Information Chip	Intelligence Boost +1
2	Hearing Level 2	Peripheral Vision	Skull Strengthening
3	Hearing Level 3	Low Light Vision	Intelligence Boost +2
4	Particle Analysis	Telescopic/Microscopic Sight	Computer Integration
5			Intelligence Boost +3

Body

Grade	Body
1	Stomach
2	Lungs
3	Cybernetic Vitals
4	Vitals High End Upgrade +2 End

CYBENET

You are one of those determined to find out the hidden lies and conspiracies in the depths of cyberspace.

Enlistment: Int 6+

Assignments:

- **Corporate Jockey:** You work for a government or corporation, waging cyberwarfare upon your rivals and freelancers. You get paid for something you would do for free.
- **Cyberhacker:** You live for the thrills of cyberspace and hacking into systems that you are forbidden to enter.
- **Fixer:** You are the man who keeps cyberhackers on their toes, their link with the real world. If there is anything going down they need information about, you are the man to go to.

Career Progress

	Corporate Jockey	Cyberhacker	Fixer
Survival	Dex 7+	Int 8+	Soc 6+
Advancement	Int 7+	Edu 6+	Int 8+

Mustering-Out Benefits:

Roll	Cash	Other Benefits
1	None	Contact or 1 Ship Share
2	5,000	+1 Int
3	10,000	Jack of all Trades
4	10,000	Cybernetics (any)
5	25,000	Ally or 2 Ship Shares
6	50,000	+2 Edu
7	75,000	+1 Social

Skills and Training

Roll	Personal Development	Service Skills	Advanced Education (Minimum Edu 8)
1	+1 Int	Computers	Computers
2	+1 Edu	Admin	Broker
3	+1 End	Investigate	Investigate
4	+1 Dex	Streetwise	Life Science (cybernetics)
5	Cybernetics (chrome)	Cybernetics (chrome)	Cybernetics (head)
6	Melee (any)	Cybernetics (limbs)	Cybernetics (any)
Roll	**Specialist: Corporate Jockey**	**Specialist: Cyberhacker**	**Specialist: Fixer**
1	Computers	Computers	Streetwise
2	Investigate	Medic	Carouse
3	Streetwise	Streetwise	Advocate
4	Deception	Advocate	Deception
5	Cybernetics (head)	Cybernetics (head)	Cybernetics (limbs)
6	Cybernetics (skillsoft)	Cybernetics (skillsoft)	Cybernetics (skillsoft)

MISHAPS

2d6	Mishap
2	Severely Injured. Roll twice on the Injury table and take the lower result.
3	Someone downloads a major virus, which causes all major systems to be affected. This catastrophe is only halted a few months later, after a great deal of damage and many deaths. You hope it was not you who caused this and if it was you definitely hope no one finds out. You leave for pastures new.
4	You have apparently annoyed someone important. Well, this is the impression you get when a hired goon cuts off your index finger. Lose one Dexterity.
5	You manage to cause a major security alert when you are involved in an intrusion into a previously isolated military network. You become infamous when the story comes out but are spared jail since you only played a minor part in the affair. Lose one Social Standing.
6	You are shown up by a superior hacker, who manages to delete whole swathes of your personal data from a myriad of machines. Annoyingly this also includes one of your bank accounts. When mustering out from this career you can only take a maximum of two cash Benefits.
7	You become paranoid as you spend too long in cyberspace and lose track of reality. You go on the run; however it is not all in your mind. There really is someone out to get you. Gain an Enemy.
8	You become a pariah in the hacker community when you speak out in favour of new government legislation designed to keep organised crime from taking advantage of cyberspace. Gain 1d3 Enemies.
9	You come close to cyberspace addiction and are hospitalised by concerned relatives. You decide to leave the career for pastures new.
10	The starship you are travelling on misjumps, although it could not have been because you were messing about with its mainframe, surely. Gain either Animals (any) 1 or Survival 1 as you learn to live in a new environment until rescue arrives.
11	You come out second in a cyber dispute with a talented hacker. Gain a Rival.
12	You are wounded in the line of duty. Roll on the Injury table.

Events

d66	Events
11	Disaster! Roll on the Mishaps table but you are not ejected from this career.
12	Your activities help uncover a major conspiracy. Roll 1d6: 1. You uncover a conspiracy against the government but have to convince those in power of its existence. Roll Persuade 8+ or Computers 8+ to prove your story. Success means that you are feted as the hero of the day, gain +1 Social Standing. Failure means you are ridiculed as those behind the conspiracy cover their tracks. In either case you gain a powerful Enemy in those behind the plot. 2. The government is plotting against the people. You have to let everyone know. Or do you? If you decide to keep quiet a man in a very expensive suit comes round and calls you a clever boy and you gain an extra Benefit for this term. If you try to become a whistle blower roll Computers 8+ or Investigate 8+. Success means that you have stopped the plot and gain 1d3 Contacts in the media. Unfortunately you just made an extremely powerful Enemy willing to bide his time for revenge. 3. An enemy power is seeking to weaken your homeworld or nation. Roll Stealth 8+ or Streetwise 8+ to get the proof to those who need to know. Failure indicates you roll on the Injury table and the plotters escape detection. Succeed and the spy ring is captured and dealt with. In this case you gain an extra Benefit roll for the term. 4. A group of hackers is targeting you and your associates. Roll Computers 8+ or Investigate 8+. If you fail they rip you all off and you lose the Benefit roll for this term. If you succeed you foil their plans and gain a +4 DM to your next Advancement roll. 5. A major corporation is being targeted by an unscrupulous rival. Roll Admin 8+ or Persuade 8+. If you succeed the corporation manages to foil the plot and you gain a +1 DM to all your Benefit rolls for this career as they are extremely happy. If you fail the corporation collapses and is taken over by its rival for a knockdown price. 6. The military industrial complex is at it again, trying to stir up conflict so the bottom line can benefit. Unfortunately they are so powerful that no one believes you and you are forced to take extra special precautions to ensure you are not taken out of the picture. Gain a level in Streetwise.
13	You are taunted by a hacker in cyberspace, who brings your competence into doubt. Gain a Rival.
14	You decide you need more cyberware to go against the big boys. Gain Cybernetics (any).
15	You become a regular figure at trade shows and get to know many top people in the field. Gain 1d3 Contacts.
16	Life Event. Roll on the Life Events table.
21	You are given advanced training. Increase one skill you already have by one level.
22	You are recognised as being an up and coming talent in your field. Gain a +4 DM to your next Advancement roll.
23	You and your closest friends manage to find a loophole in the government's tax program. For some reason the tax demands you all receive are less than you would otherwise expect. Gain a +1 DM to one cash Benefit roll.
24	You spend far too much time in cyberspace and fail to look after yourself properly. Lose one point of Dexterity, Endurance, Social Standing or Strength.
25	You use cyberspace to improve your knowledge of the universe around you. Gain a level in Astrogation, Engineering (any), Language (any) or Science (any).
26	Life Event. Roll on the Life Events table.
31	After much nagging from friends and family you spend time getting out more and take up another hobby. Gain one of Athletics (any) 1, Carouse 1, Mechanic 1 or Remote Operations 1.
32	You are paid to share your expertise at a local community college. Gain an extra Benefit this term.
33	Your identity is discovered by the head of security at a corporation you helped target. Gain an Enemy.
34	An attempt is made on your life, you believe as a direct result of your activities. Roll Melee (any) 8+ or Streetwise 8+ to avoid rolling on the Injury table.

d66	Events
35	You are invited to a gambling club. Gain Gambler 1. You may gamble a number of your Benefits rolls. Roll Gambler 8+, if you fail you lose all of the Benefit rolls you waged. If you succeed you gain one extra Benefit roll for every two (round down) you put up as collateral.
36	Life Event. Roll on the Life Events table.
41	You are given advanced training in a specialist field. Increase any one of your existing skills by one level.
42	You have to move off world on an orbital station for this term. Gain one of Pilot (small craft) 1, Vacc Suit 1 or Zero-G 1.
43	You are struck down by an illness. Lose one Endurance.
44	You found a small, informal club of like minded individuals. Gain 1d3 Contacts.
45	The opportunity to blackmail another hacker arises. If you decide to do so roll Persuade 8+. Success gains you an extra Benefit roll for this term, failure gains you an Enemy.
46	Life Event. Roll on the Life Events table.
51	You befriend someone outside of your usual sphere of contacts. Gain an Ally.
52	You are made an offer to break the security codes of a corporation. If you turn down the offer you gain an Enemy. If you agree to make the attempt roll Computers 8+ or Investigate 8+, if you succeed you gain an extra Benefit roll. If you fail you lose your Benefit for this term as you are caught and fined for your activities.
53	You spend time learning new skills. Gain one level in Advocate, Gambler or Navigation.
54	A media led panic about viruses and other malicious software causes your skills to be much in demand. Gain a +1 DM to your Benefit roll for this term.
55	You are hired as a security officer on board a large commercial starship where you help protect it from hijackers and other threats. While there you learn a new skill. Gain one of Astrogation 1, Gun Combat (any) 1, Gunner (any) 1 or Pilot (any) 1.
56	Life Event. Roll on the Life Events table.
61	War breaks out and you are drafted in to help as your skills are needed in the cyberwarfare division of your nation's military. Roll 1d6: 1. You find you are well liked by your superior officer for some reason. Gain a Contact. 2. Finding you have more in common with enemy hackers you find yourself engaged in a friendly rivalry with them. Gain 1d3 Rivals. 3. Your headquarters is targeted by a special forces' raid. Although you escape injury the military decide you need to learn how to protect yourself. Gain a level in either Gun Combat (any) or Melee (any). 4. Once you are drafted you find yourself transferred into a unit where your skills are of no practical use whatsoever. Gain one of Admin 1, Drive (any) 1, Flyer (any) 1 or Mechanic 1. 5. Thanks to your unit's efforts the enemy's forces find themselves blinded electronically on the battlefield and they are easily overrun. Gain a +4 DM to your next Advancement roll. 6. You are given old and outdated equipment with which to fight your war. Gain one of Engineer (electronics) 1 or Jack of all Trades 1 as you try to come up with solutions to the problems this poses.
62	You take lessons in self defence after receiving a series of threats. Gain a level in one of Drive (any), Gun Combat (any), Melee (any) or Tactics (any).
63	You spend much of this term in the company of law enforcement agents, either as a technical adviser or as a person of interest. Gain either a level in Advocate or 1d3 Contacts.
64	In order to properly complete your tasks you decide to upgrade one of your existing systems. Upgrade one of your existing implants by one level.
65	Your use of Cyberspace improves your knowledge and mental faculties no end. Increase Education or Intelligence by one.
66	Your skills are recognised by your peers. You are automatically promoted.

Ranks and Benefits

Rank	Corporate Jockey	Skill or Benefit	Cyberhacker	Skill or Benefit	Fixer	Skill or Benefit
0						
1	Freelance Expert	Computers 1	Noob	Computers 1	Contact	Streetwise 1
2						
3	Team Leader	Admin 1		Streetwise 1	Fixer	Diplomat 1
4			Hacker			
5					Name	Broker 1
6	Head of Security	+1 Social	Ghost	Advocate 1		

CYBERNETICS

Limbs

Grade	Arms	Hand
1	Toolkit	Built-In Hand Computer
2	Advanced Strength +1	Built-In Transceiver
3	Advanced Strength +2	Built-In Sensor Array
4	Drone Arm	
5	Advanced Strength +3	

Head

Grade	Ears/Nose/Mouth/Eyes	Head
1	General Information Chip	Intelligence Boost +1
2	Hearing Level 2	Computer Integration
3	Camera	Intelligence Boost +2
4	Peripheral Vision	Eidetic Memory Chip
5		Intelligence Boost +3

Chrome

Grade	Implant
1	Computer Integrator
2	EMP Cybernetic Shielding
3	Mood Chip
4	Neural Communication Module

NOBLE

You are one of the elite, one of the movers and shakers.

Enlistment: Soc 10+

Assignments:

- **Fashionista:** You want to keep up with all the latest developments and these days it is all about cybernetics, darlings.
- **Fetishist:** There is something about machines that just… Ooh yeah. Ooh, baby!
- **Superior:** You rule because you are superior and you mark your superiority by using cybernetics.

Career Progress

	Fashionista	Fetishist	Superior
Survival	Soc 7+	Edu 8+	Int 7+
Advancement	Int 7+	Soc 6+	Soc 7+

Mustering-Out Benefits

Roll	Cash	Other Benefits
1	10,000	One Ship Share
2	10,000	Two Ship Shares
3	20,000	Blade
4	50,000	+1 Social
5	70,000	Cybernetics (any)
6	100,000	TAS Membership
7	150,000	Yacht

SKILLS AND TRAINING

Roll	Personal Development	Service Skills	Advanced Education (Minimum Edu 8)
1	+1 Str	Admin	Computers
2	+1 Dex	Comms	Medic
3	+1 Int	Drive (any)	Pilot (any)
4	+1 Edu	Melee (any)	Life Science (cybernetics)
5	Gambler	Cybernetics (head)	Language (any)
6	+1 Soc	Cybernetics (body)	Cybernetics (any)
Roll	**Specialist: Fashionista**	**Specialist: Fetishist**	**Specialist: Superior**
1	Carouse	Steward	Leadership
2	Gambler	Streetwise	Diplomat
3	Flyer (any)	Deception	Investigate
4	Language (any)	Jack of all Trades	Persuade
5	Cybernetics (style)	Cybernetics (limbs)	Cybernetics (weapon)
6	Cybernetics (skillsoft)	Cybernetics (skillsoft)	Cybernetics (skillsoft)

MISHAPS

2d6	Mishap
2	Severely Injured. Roll twice on the Injury table and take the lower result.
3	You are attacked by members of a rival faction. Roll Gun Combat (any) 8+ or Stealth 8+ to escape. If you fail roll on the Injury table.
4	Your family fortune is lost when they fall out of favour at court. You do not gain any Benefit for this term.
5	You unintentionally cause a grave insult to a visiting alien dignitary, almost causing a war to break out. Although this is averted your career is in ruins.
6	A scandal forces you out of your position, lose one Social Standing.
7	You are arrested when your faction loses out in a power struggle. You are placed in solitary confinement and lose one from a single statistic of your choice.
8	The stress of courtly intrigue causes your health to break down. Lose one Endurance.
9	You become entangled in an assassination plot and are framed, ending your career. Roll Advocate 8+ or Investigate 8+. If you succeed the guilty party is brought to justice and you gain a Contact in law enforcement. Fail and those responsible are still out there and are now gunning for you. Gain an Enemy.
10	You lose your position due to political manoeuvrings. Increase Advocate or Diplomat by one level and gain a Rival.
11	A disaster or war strikes. Roll Stealth 8+ or Deception 8+, if you fail you must roll once on the Injury table.
12	Injured. Roll on the Injury table.

Events

d66	Event
11	Disaster! Roll on the Mishaps table but you are not ejected from this career.
12	You gain an inheritance from a distant cousin. Gain an extra Benefit roll for this term.
13	A terrible natural disaster occurs and you are assigned to help lead the relief effort. Roll 1d6: 1. You are overwhelmed as your resources are insufficient for the task greeting you. You gain an Enemy from one of the many survivors who are let down by the relief effort. 2. You are forced to learn new skills as the scale of the disaster unfolds. Gain one of Admin 1, Drive (any) 1 or Medic 1. 3. The resources for the relief effort are insufficient. You can forfeit one Benefit to help fund extra resources. If you do so gain +1 Social Standing and 1d3 Allies. Your charity is an example for us all. 4. You are put in charge of getting the resources to those in need. You have the opportunity to siphon off some relief supplies to the black market. If you do so you gain an extra Benefit roll for this term but gain 1d3 Enemies. You, sir, are a cad. 5. The resources and aid is more than sufficient to provide the required level of relief. You are thanked for your assistance and gain 1d3 Contacts from various agencies or amongst those you help. 6. You discover the disaster is a result of mismanagement and not natural at all. If you make this public you gain one Social Standing as you are publicly revered for your honesty. However you suffer a –4 DM to your next Advancement roll as your superiors shake their heads at you naivety and lack of loyalty to them.
14	A Rival challenges you to a duel. Roll Gun Combat (any) 8+ or Melee (any) 8+. If you fail you lose the duel and then practice to improve your chances the next time, increase the skill used by one. If you succeed members of the court are impressed and you gain 1d3 Contacts. If you have no Rival prior to the duel you now gain one.
15	You find yourself spending time with members of the navy, who share many of your opinions. To further impress your friends you train hard gaining one of Astrogation 1, Engineer (any) 1, Gunner (any) 1 or Pilot (any) 1.
16	Life Event. Roll on the Life Events table.
21	You are hoodwinked in a game of chance by another noble who proves extremely adept at gambling. Despite your skill you are sure he cheats, causing you to lose your Benefit for this term.
22	You receive an inheritance from one of your many distant aunts. Gain a +1 DM to your next Benefit roll.
23	Cybernetics have become far more popular than before and you upgrade one existing system as prices come down.
24	A series of successful assignments causes you to flaunt your superiority at court. Gain a Rival and an Enemy.
25	You are assigned as a representative to a foreign court on another world. The opportunities presented here give you the chance to thrive, gain a +4 DM to your next Advancement roll.
26	Life Event. Roll on the Life Events table.
31	Your time as a ruler or playboy gives you a wide range of experiences. Gain one of Animals (riding) 1, Art (any) 1, Carouse 1 or Streetwise 1.
32	You manipulate and charm your way through high society. Gain a level in one of Carouse, Diplomat, Persuade or Steward. You also gain a Rival and an Ally.
33	You are called upon to watch over a rival faction and infiltrate its ranks, becoming a gentleman spy. Gain one of Deception 1 or Investigate 1.
34	Sometimes the most noble of society need to work alongside the dregs. You use the underworld to promote the goals of your faction. Gain one of Carouse 1, Gambler 1 or Streetwise 1
35	You might be the life and soul of the party but you are also quite indiscreet. Lose a Contact or an Ally as you reveal gossip that should really have stayed secret.
36	Life Event. Roll on the Life Events table.
41	You make an alliance with a powerful noble. You gain an Ally; in addition you receive a +4 DM to your next Advancement roll.
42	You embark on a series of meaningless affairs. Gain one level in Carouse, Deception or Persuade and gain an Enemy from either a love rival or a jilted lover.

d66	Event
43	The latest fashion at court costs a crippling amount. Either suffer a –1 DM to your Benefit roll this term (minimum roll of a 1) or lose one Social Standing.
44	Your family falls out of favour at court, forcing you to rely on your wits all the more. Gain a level in Carouse, Diplomat or Persuade.
45	Your arrogant attitude manages to rub a lot of important people up the wrong way. Suffer a –2 DM to your next Advancement roll.
46	Life Event. Roll on the Life Events table.
51	You spend your time slumming with the lower classes. Gain one of Carouse 1 or Streetwise 1.
52	You become deeply involved in the politics of your world. Gain one level in Admin, Advocate, Diplomat or Persuade. You also gain a Contact and a Rival.
53	An important noble publicly censures you. The news media runs with the story, adding to your notoriety. To defend your reputation roll Persuade 8+ or Diplomat 8+. If you fail this roll you find people agree with the original criticisms and you lose 1 Social Standing. Whether you succeed or not you learn some important lessons and increase your Diplomat skill by one level.
54	The entire court goes offworld on a safari expedition. While in the wilds you gain one of Animals (any) 1, Gun Combat (any rifle) 1 or Survival 1.
55	You wish to stand out all the more from the proles and decide that a new cybernetic device is just the thing. Gain Cybernetics (any).
56	Life Event. Roll on the Life Events table.
61	You uncover a plot to discredit a senior member of the nobility. If you warn him you gain an Ally. If you position yourself to take advantage of the situation gain 1 Social Standing and an Enemy.
62	You commit a terrible faux pas at a social gathering and find yourself ostracised for quite some time. Lose 1 Social Standing.
63	Never overestimate the embarrassment a private video recording can cause. Gain an Enemy as something that should have remained private reaches the public domain and you are blamed for its release.
64	You are chosen as part of a team to run the 'Festival of the World' to show the known universe how marvellous your planet is. Roll 1d6: 1. Disaster! Nothing goes right. Workers strike and everything is finished late. The budget is tight so everything is built to a shoddy standard. The bad publicity means hardly anybody turns up. And then it rains and it is found the roof leaks. Lose 1 Social Standing as being associated with this fiasco leads you to not being invited to any of the important parties. 2. Result! The team put together a marvellous event and everyone comes away impressed. Gain either 1 Social Standing or a +4 DM to your next Advancement roll. 3. You learn a lot from helping run such a huge event. Gain a level in Admin, Diplomat or Persuade. 4. The event is a huge financial success and you receive a nice bonus. Gain an extra Benefit roll for this term. 5. One of your fellow organisers becomes a close friend. Gain an Ally. 6. You forge a close relationship with one of the suppliers to the event. Gain a Contact.
65	You are put in charge of several industrial concerns owned by your family. You become known as quite the slave driver, the increased profits cause you to receive an extra Benefit this term. Unfortunately you also gain an Enemy from the ranks of those who suffered as a result of your casual indifference to their dreadful working conditions.
66	You are decorated for loyalty beyond the call of duty. You are automatically promoted.

Ranks and Benefits

Rank	Fashionista	Fetishist	Superior	Skill or Benefit
0				
1		Party Goer		
2	Bright Young Thing		Ruler	Carouse
3		Wild Thing		
4	Clotheshorse		Lord	Persuade
5		de Sade		
6	Designer		Overlord	+1 Social

CYBERNETICS

Limbs

Grade	Arms	Hand	Legs
1	Integral Medikit	Built-In Transceiver	Speed*1.5
2	Enhanced Strength +1	Built-In Sensors Array	Speed*2
3	Enhanced Strength +2	Built-In Hand Computer	Agility +2 Dex
4	Drone Arm		Repulsor (Foot)
5	Enhanced Strength +3		Speed*3
6			Speed*4

Head

Grade	Ears/Nose/Mouth	Eyes	Head
1	Breather Mask	General Information Chip	Intelligence Boost +1
2	Hearing Level 2	Peripheral Vision	Computer Integration
3	Artificial Gill	Low Light Vision	Intelligence Boost +2
4	Hearing Level 3	Telescopic/Microscopic Sight	Eidetic Memory Chip
5	Particle Analysis	Combat Range Finder	Intelligence Boost +3
6		Multi Spectrum Vision	

Style

Grade	Implant
1	Skin/Hair Tone Changer
2	Sunscreen
3	Nictating Membranes
4	Mood Chip
5	Stimulation/Entertainment Module
6	SexSTENT

Weapon

Grade	Weapon
1	Integral Blades
2	Integral Stunner
3	Scythes
4	Integral Snub Pistol

Body

Grade	Body
1	Stomach
2	Lungs
3	Cybernetic Vitals
4	Subdermal Armour 1 point
5	Cybernetic Vitals Enhanced +2 End
6	Subdermal Armour 3 points

PSION

You have either boosted the powers of your mind using cybernetic implants or you hunt down such degenerates.

Enlistment: (Booster) Psi Strength 6+ or (Psi Tech) Edu 8+ or (Psi Hunter) Soc 10+

Assignments:

- **Booster:** You have used your cybernetic implants to boost your natural powers of the mind.
- **Psi Tech:** You have little or no talent as a psion without your implants. These are what give you your edge.
- **Psi Hunter:** Psions are dangerous foes to hunt, fortunately your implants even up the score to a degree, allowing you to track down and eliminate the threat these degenerates pose.

Career Progress

	Booster	Psi Tech	Psi Hunter
Survival	Int 7+	End 8+	Int 8+
Advancement	Edu 7+	Int 6+	Edu 6+

Mustering-Out Benefits

Roll	Cash	Other Benefits
1	3,000	Contact
2	5,000	Ally
3	8,000	Weapon
4	15,000	Cybernetics (any)
5	20,000	Ship Share
6	30,000	+1 Social
7	50,000	2 Ship Shares

Skills and Training

Roll	Personal Development	Service Skills	Advanced Education (Minimum Edu 10)
1	+1 Str	Gun Combat (any)	Computers
2	+1 End	Survival	Engineer (electronics)
3	+1 Dex	Recon	Life Science (cybernetics)
4	+1 Edu	Stealth	Persuade
5	Gambler	Cybernetics (head)	Comms
6	Athletics (any)	Cybernetics (body)	Cybernetics (any)
Roll	**Specialist: Booster**	**Specialist: Psi Tech**	**Specialist: Psi Hunter**
1	Athletics (any)	Medic	Investigate
2	Streetwise	Engineer (electronics)	Deception
3	+1 Psi	Mechanic	Streetwise
4	Psi Talent (any already trained in)	Science (any)	Advocate
5	Cybernetics (psi)	Cybernetics (psi tech)	Cybernetics (limb)
6	Cybernetics (skillsoft)	Cybernetics (skillsoft)	Cybernetics (skillsoft)

MISHAPS

2d6	Mishap
2	Severely Injured. Roll twice on the Injury table and take the lower result.
3	You discover a conspiracy and now people are trying to kill you! Gain an Enemy.
4	Betrayed by a friend. One of your Contacts or Allies turns against you and becomes a Rival or an Enemy.
5	You are fined heavily, although you are not sure exactly why. You lose two Benefit rolls as a result.
6	Your activities have made you a wanted man. You are hunted by criminals, bounty hunters or the authorities. Gain an Enemy.
7	You are the target of fear and loathing amongst those you work alongside. Their attitudes force you from the career.
8	You are forced to use an organised crime network to achieve success and when this comes to light you are forced to leave this career. Gain a Contact.
9	You are accused of corruption. Gain a level in Advocate as you fight the legal system and remain free.
10	Your cover is blown and you discover the local population is hostile towards you when they know the truth. You flee for pastures new.
11	You are publicly blamed for a terrible crime, even though you are innocent. Lose 1 Social Standing and gain 1d3 Enemies.
12	Injured. Roll on the Injury table.

Events

d66	Event
11	Disaster! Roll on the Mishaps table but you are not ejected from this career.
12	Your powers and investigations make the news feeds. Gain 1 Social Standing or an extra Benefit for this term.
13	Life on the edge causes you to expand your abilities. Gain any one skill at level 1.
14	You show great diligence in your work. Gain a +4 DM to your next Advancement roll.
15	Open conflict breaks out when a secret cabal of psion criminals are revealed to be plotting various criminal activities on a world. You are caught in the chaotic aftermath as civil strife erupts. Roll 1d6: 1. You are mistaken for one of the criminals and find yourself hunted by a determined bounty hunter. Gain an Enemy. 2. You discover the cabal was actually trying to anonymously bring to the attention of the authorities a vast scandal involving a major corporation based on the world. If you try to reveal this conspiracy roll Persuade 8+, if you succeed you gain 1 Social Standing and an Enemy. If you fail you gain 1d3 Enemies. If you decide to keep quiet you find yourself in receipt of an unexpected gift from the corporation and gain an extra Benefit for this term. 3. The criminals (rightly or wrongly) come to believe you are one of their tormentors and attempt to assassinate you. Roll Recon 8+ or Gun Combat (any) 8+. If you fail you have to roll on the Injury table. 4. The entire situation has been manufactured to rid the planet of undesirables. You discover you have been labelled as one and are forced to flee, losing your Benefit roll for this term. 5. You are forced to join in the witch hunt to prevent becoming a target yourself. You gain a Contact and an Enemy as a result. 6. You become adept at avoiding attention from either side as the conflict takes a worse turn. Gain one of Deception 1, Persuade 1, Stealth 1 or Streetwise 1.
16	Life Event. Roll on the Life Events table.
21	A close call against a powerful enemy leads you to improve your chances in the future by getting a new cybernetic system. Gain Cybernetics (any).
22	You find yourself in a position to take personal advantage of a situation. Gain a +1 DM to your Benefit roll this term.
23	You have the opportunity to abuse a position of trust. If you do so gain an extra Benefit roll this term. If you do not betray those around you gain a +2 DM to your next Advancement roll.
24	You are forced to survive in an extremely unpleasant wilderness while engaging in a cat and mouse fight against your enemies. Gain one level in either Recon or Survival. You also gain an Enemy.
25	A superior believes you have promise and takes you under his wing. Gain a +1 DM to all future Advancement rolls in this career.
26	Life Event. Roll on the Life Events table.
31	You spend much of the term hunting down a psion and serial killer. Roll Gun Combat (any) 8+ or Stealth 8+ to bring the miscreant to justice. If you succeed gain one of Investigate 1, Stealth 1 or a new Psi Talent (if applicable). If you fail you gain the psychotic madman as an Enemy.
32	You are forced to kill someone in order to keep yourself from being exposed to your enemies. Gain one level in Melee (any) but also gain 1d3 Enemies, friends or relatives of your victim.
33	You spend the entire term on an alien world. Gain either Language 1 or Science (xenology) 1.
34	You are forced to conceal your identity and take on a new job under a false name. Gain Broker 1, Deception 1, Engineering (any) 1 or Trade (any) 1.

d66	Event
35	You become involved in a political movement to promote your cause or belief. Gain 1d3 Contacts and an Enemy.
36	Life Event. Roll on the Life Events table.
41	You are attacked by enemies. If you have no Enemy you gain one. Roll Stealth 8+ or Gun Combat (any) 8+ to avoid having to roll on the Injury table.
42	You are given an exceptionally difficult assignment. Roll any service skill 10+, if you succeed you are automatically promoted.
43	You spend time among a race of Psion aliens and manage to get an example of their technology. Gain Cybernetics (any).
44	You are forced to improvise when finding yourself on a backward world. Gain one of Jack of all Trades 1, Melee (unarmed combat) 1, Streetwise 1 or Survival 1.
45	You save the life of someone you know. An Enemy becomes a Rival, a Rival becomes a Contact or a Contact becomes an Ally. If you have no Enemies, Rivals or Contacts you gain a Contact instead.
46	Life Event. Roll on the Life Events table.
51	Sympathisers and friends rally to your cause. Gain an extra Benefit this term for their generosity.
52	You are given advanced training. Increase an existing skill by one level.
53	Fortune smiles on you as everything just seems to go your way. Choose either to get an extra Benefit or a +4 DM to your next Advancement roll.
54	You spend time at an education institution. Gain Science (any) 1.
55	You decide that you need to upgrade a cybernetic device. Upgrade an implant you already have.
56	Life Event. Roll on the Life Events table.
61	Life on the edge hones your skills. Increase any skill you already have by one.
62	You are forced into a position of command when your superiors are all incapacitated. Roll 1d6: 1. You excel during the crisis and learn from the experience. Gain Leadership 1. 2. You prove to be extremely capable in the new role but discover another has taken the kudos that is rightfully yours. Gain an Enemy. 3. The crisis escalates and you are forced into a fight for your life. Roll Gun Combat (any) 8+ or Melee (any) 8+ to avoid having to roll on the Injury table. 4. You show great promise. Gain a +4 DM to your next Advancement roll. 5. You fail to achieve the results expected of you but manage to pin the blame on incompetence elsewhere. Gain 1d3 Rivals. 6. Your incompetence is pathetic and you become a laughing stock amongst your peers. Lose 1 Social Standing.
63	You are tipped off about an enemy tracking you down. You can either leave the world on the advice of your new friend and informant, gaining a Contact, or you can ambush your foe and lose an Enemy if you roll Gun Combat (any) 8+.
64	You witness an accident while on a dangerous assignment. If you help out you gain an Ally but you blow your cover and you automatically fail your next Advancement roll.
65	You spend a lot of time this term improving your knowledge of psions and their powers. Gain a level in Science (psi).
66	You are heralded as one of the best in the business. You are automatically promoted.

RANKS AND BENEFITS

Rank	Booster/Psi Tech	Skill or Benefit	Psi Hunter	Skill or Benefit
0				
1		Deception 1	Torch Waver	
2	Pupil		Henchman	Investigate 1
3		Medic 1	Enquirer	
4	Technomagus		Witch Hunter	+1 Social
5		Cybernetics (Psi)	Inquisitor	
6	Master		Grand Inquisitor	Cybernetics (any)

CYBERNETICS

Limbs

Grade	Arms	Hand	Legs
1	Internal Medikit	Built-In Transceiver	Speed*1.5
2	Advanced Strength +2	Grapple Array	Agility +2 Dex
3	Limb Armour (Mesh)	Built-In Sensor Array	Limb Armour (Mesh)
4	Drone Arm	Built-In Hand Computer	Speed*2
5	Advanced Strength +3		Agility +3 Dex
6	Limb Armour (Cloth)		Limb Armour (Cloth)

Head

Grade	Ears/Nose/Mouth/Eyes	Head
1	Low Light Vision	Intelligence Boost +1
2	Hearing Level 2	Computer Integration
3	Peripheral Vision	Intelligence Boost +2
4	Hearing Level 3	Intelligence Boost +3

Psi

Grade	Implant
1	Psionic Strength Enhancement +1
2	Psionic Strength Enhancement +2
3	Psionic Strength Enhancement +3
4	Psionic Strength Enhancement +4

Psi Tech

Grade	Implant
1	Psionic Capacity Enhancement
2	Psionic Talent Skillsoft
3	Psionic Capacity Enhancement +1 Strength
4	Psionic Talent Skillsoft
5	Psionic Capacity Enhancement +2 Strength
6	Psionic Talent Skillsoft

Body

Grade	Torso
1	Subdermal Armour 1 point
2	Cybernetic Vitals
3	Subdermal Armour 3 points
4	Vitals upgrade +2 End
5	Subdermal Armour 5 points
6	Vitals Upgrade +3 End

ROGUE

Criminals in society are often among the first to see the possibilities of new technology, especially when it can help them commit their crimes successfully.

Enlistment: Str 7+

Assignments:

- **Brigand:** You preyed on those living on worlds with hostile environments, where your cybernetics gave you an edge.
- **Driver:** You have specialised in being the guy who ensures the gang gets away from the law after its latest daring crime.
- **Muscle:** You are a tough guy made all the scarier by your implants.

Career Progress

	Brigand	Driver	Muscle
Survival	End 8+	Int 6+	Str 7+
Advancement	Str 6+	Dex 8+	End 6+

Mustering-Out Benefits

Roll	Cash	Other Benefits
1	None	Ship Share
2	None	Weapon
3	5,000	+1 Int
4	10,000	Two Ship Shares
5	25,000	Cybernetics (skillsoft)
6	50,000	+1 Dex
7	100,000	Cybernetics (any)

SKILLS AND TRAINING

Roll	Personal Development	Service Skills	Advanced Education (Minimum Edu 10)
1	+1 Str	Gun Combat (any)	Advocate
2	+1 Dex	Streetwise	Admin
3	+1 End	Deception	Computers
4	Melee (unarmed)	Persuade	Remote Operations
5	+1 End	Cybernetics (head)	Life Science (cybernetics)
6	Gambler	Cybernetics (body)	Cybernetics (any)
Roll	**Specialist: Brigand**	**Specialist: Driver**	**Specialist: Muscle**
1	Survival	Mechanic	Melee (any)
2	Gun Combat (any)	Drive (any)	Gun Combat (any)
3	Stealth	Flyer (any)	Heavy Weapons (any)
4	Navigation	Sensors	Medic
5	Cybernetics (weapon)	Cybernetics (limb)	Cybernetics (weapon)
6	Cybernetics (skillsoft)	Cybernetics (skillsoft)	Cybernetics (skillsoft)

MISHAPS

2d6	Mishap
2	Severely Injured. Roll twice on the Injury table and taking the lower result.
3	A former associate turns informer and most of your friends are arrested. You avoid the fate by fleeing offworld, gain an Enemy.
4	There is a double cross and everyone points their finger at you. You flee but what did they expect?
5	Someone spreads a rumour that you are a snitch, making it impossible for you to continue in your line of work.
6	You become the victim of crime! You come home to find that you have been ripped off. Lose any Benefit from this term.
7	A gang war erupts and you end up on the losing side, forcing you to flee. Roll on the Injury table.
8	You are betrayed by another criminal. One Contact or Ally becomes an Enemy.
9	You steal from the wrong person. Roll Gun Combat (any) 8+ or Melee (any) 8+ to defeat the killers sent after you before you flee beyond the reach of your new Enemy.
10	After a job goes wrong you are forced to hide out in the wilderness. Roll Survival 8+ or lose 1 Endurance.
11	A change in government leads to a massive crackdown as draconian powers are given to the police. You flee your planet as it becomes clear that the new regime provides no opportunities for those in your line of 'work'.
12	Injured. Roll on the Injury table.

Events

d66	Event
11	Disaster! Roll on the Mishaps table but you are not ejected from this career.
12	A new government comes to power and cracks down on a variety of popular recreational drugs, making them illegal. This new era of prohibition opens the way for more opportunities for anyone involved in the underworld. Roll 1d6: 1. Extra profits lead to an ability to subvert more police officers and other government officials. Gain 1d3 Contacts. 2. The extra profits to be had cause greater friction and more violence in the underworld. Roll Gun Combat (any) 8+ or Melee (any) 8+. If you fail roll on the Injury table. If you succeed your gang gains a larger share of the market and you gain an extra Benefit. 3. The government expends vast amounts of resources in its attempts to enforce its new laws. Roll Persuade 8+ or Streetwise 8+. Failure indicates that you have to increase the amount of bribes you pay in order to remain in business, lose any Benefit from this term. Success leads you to be able to subvert another law enforcement officer, gain a Contact. 4. In order to survive the new criminal climate your gang joins with another. Gain an Ally. 5. The new profits to be had lead to greater criminal rivalries than ever before. Gain 1d3 Rivals and an Enemy. 6. The new profits to be made by involvement in the new markets for these drugs allow you to invest in another cybernetic implant. Gain Cybernetics (any).
13	You must prove your loyalty to your criminal associates by eliminating a friend suspected of being an informant. If you agree to do as they say lose a Contact or Ally. If you refuse you suffer a –1 DM to all your Benefit rolls for this career.
14	You are forced to go to ground until the heat dies down as you become one of your world's most wanted. Gain one of Persuade 1, Stealth 1, Streetwise 1 or Survival 1.
15	You are involved in the planning of a major heist. Gain one of Comms 1, Computers 1, Mechanic 1 or Sensors 1.
16	Life Event. Roll on the Life Events table.
21	A crime lord considers you his protégé. Gain a +4 DM to your next Advancement roll or Tactics (military) 1.
22	You are able to take a larger share of the profits than you are entitled to. If you decide to do this you gain a +1 DM to all future Benefit rolls, however there is a cumulative –1 DM to all future Survival rolls and you will gain an Enemy when you leave this career.
23	You are involved in a heist in which brand new cybernetic parts are stolen. Gain Cybernetics (any) as you take an implant for your own future use.
24	You build a small cadre of trusted associates. Gain 1d3 Contacts.
25	You befriend another criminal. Gain a Contact.
26	Life Event. Roll on the Life Events table.
31	An old con artist befriends you. You provide protection, he provides some training. Gain one of Deception 1, Forgery 1, Persuade 1 or Streetwise 1.
32	A 'job' has an unexpected payoff. Gain a +2 DM to one of your Benefit rolls but gain the victim as an Enemy.
33	A law enforcement agent wants for you to become an informant. If you accept you gain an extra Benefit roll for each term you remain an informant and the officer as a Contact. You can cease to be an informant at any time you wish or when you leave this career. During every term when you are acting as an informant roll 1d6. If you roll a 1 you are found out, you are unable to continue your role as an informant and have to roll on the Injury table.
34	A series of unfortunate events leads to you upsetting a rival criminal gang. Gain them as an Enemy.
35	A law enforcement officer makes it his mission to bring you and your associates to justice. Gain an Enemy.
36	Life Event. Roll on the Life Events table.

d66	Event
41	A fence you use becomes a friend and teaches you part of his trade. Gain one of Admin 1, Broker 1, Persuade 1 or a Contact.
42	There is a power struggle amongst your criminal group. You are forced to choose one side over the other. Gain an Enemy and an Ally.
43	There is an informant within your criminal circle. If you wish to uncover his identity roll Investigate 8+. Alternatively roll Deception 8+ to pin the blame on an Enemy or Rival. Succeed and the Enemy or Rival is eliminated. Fail and you gain another Enemy as your behaviour comes to light.
44	There is a street war with a rival gang and you take a full part in it. Roll Gun Combat (any) 8+ or Melee (any) 8+. If you succeed you gain a level in one of Gun Combat (any), Melee (any), Recon, Stealth or Tactics (military). If you fail you must roll on the Injury table.
45	The prospect of a very long prison sentence after being caught red handed forces you to become an informant. One Contact or Ally becomes an Enemy. If you have no Contacts or Allies you gain 1d3 Enemies instead.
46	Life Event. Roll on the Life Events table.
51	You have an opportunity to betray another criminal. If you decide to do so you gain a +4 DM to your next Advancement roll. If you decide against this course of action you gain an Ally instead.
52	You have to travel offworld in a mob owned ship. Gain one of Astrogation 1, Gunnery (any) 1, Engineer (any) 1 or Pilot (any) 1.
53	Your gang ends up controlling the city in which it operates in all but name. Gain one of Drive (any), Streetwise 1, +1 Soc or 1d3 Contacts.
54	You are given advanced training. Gain a level in any of your current skills.
55	You are harassed by a crusading law enforcement officer. Roll Advocate 8+ or Streetwise 8+. Success means you avoid any difficulties, failure indicates that the lawman makes life difficult for you and you have a –2 DM to your next Advancement roll.
56	Life Event. Roll on the Life Events table.
61	You get to prove crime can pay, no matter what society says. Gain an extra Benefit.
62	You join a gambling ring. Gain Gambler 1. You may wager any number of Benefit rolls. Roll Gambler 8+. If you fail lose all the wagered Benefit rolls. If you succeed gain half as many Benefit rolls as you wagered (round up).
63	Your criminal gang makes inroads on another world. Gain one of Engineer (any) 1, Pilot (any) 1, Zero-G 1 or 1d3 Ship Shares.
64	A powerful criminal organisation from out of your system decides to try to take over all criminal activity where you operate. Roll 1d6: 1. This new arrangement is mutually beneficial, gain an extra Benefit roll for this term. 2. The new gang skims from your share, gain a –1 DM to your Benefit roll this term (the roll can not be reduced to below 1) but gain a Contact. 3. A new alliance of local gangs is formed to protect their interests. Gain 1d3 Contacts. 4. A gang war breaks out as these invaders are resisted. Roll Gun Combat (any) 8+ or Melee (any) 8+. If you fail roll on the Injury table. Succeed and your allies win and split the rewards amongst the survivors, you gain an extra Benefit roll for this term. 5. An accommodation is reached. In return for extra training the new overlords are allowed to take a share. Gain one level in any skill you currently have. 6. The government is forced to crack down on all criminal activity in the wake of the attempted take over. Gain an Enemy as the police take a greater interest in your activities.
65	To get a job done you upgrade one of your existing cybernetic implants by one grade.
66	You are heralded as one of the best in the business. You are automatically promoted.

RANKS AND BENEFITS

Rank	Title	Skill or Benefit
0		
1	Bad Boy	Deception 1
2		
3	Crim	Gun Combat (any) 1
4		
5	Villain	Leadership 1
6	Gang Boss	

CYBERNETICS

Limbs

Grade	Arms	Hand	Legs
1	Toolkit	Built-In Transceiver	Speed*1.5
2	Internal Medikit	Grapple Array	Agility +2 Dex
3	Advanced Strength +2	Built-In Sensor Array	Limb Armour (Mesh)
4	Limb Armour (Mesh)	Built-In Hand Computer	Speed*2
5	Advanced Strength +3	Palm Print Duplicator	Agility +3 Dex
6	Limb Armour (Cloth)		Limb Armour (Cloth)

Head

Grade	Ears/Nose/Mouth	Eyes	Head
1	Hearing Level 2	Low Light Vision	Intelligence Boost +1
2	Voice Simulator (Advanced)	General Information Chip	Skull Strengthening
3	Air Filtration	Telescopic/Microscopic	Intelligence Boost +2
4	Breather Mask	Combat Range Finder	Facial Morphing
5	Hearing Level 3	Retinal Pattern Duplicator	Intelligence Boost +3
6	Extreme Atmosphere Life Support		

Weapon

Grade	Close Combat
1	Integral Blades
2	Integral Stunner
3	Scythes
4	Integral Snub Pistol
5	Head Weapon Mount

Body

Grade	Body
1	Cybernetic Vitals
2	Skin/Hair Tone Changer
3	Subdermal Armour 1 point
4	Vitals upgrade +2 End
5	Subdermal Armour 3 points
6	Vitals Upgrade +3 End

BEFORE THE CHROME

This chapter covers the basics of cybernetics: what they are, availability, functionality and so forth. Subsequent chapters delve into the detail of different cybernetic options.

CYBERNETICS DEFINED

The term cybernetics derives from the Greek *kybernētēs,* which means steersman, governor or pilot. It is a broad field of interdisciplinary study but essentially cybernetics aims to understand and define the functions and processes of systems that have goals and that participate in circular, causal chains that move from action to sensing to comparison with a desired goal and again to action. Studies in cybernetics provide a means for examining the design and function of any system, including social systems such as business management and organisational learning, including for the purpose of making them more efficient and effective.

That may be the definition in 21st Century scientific terms and, indeed, in *Traveller* that definition still holds important and true. However as far as this book, *Traveller: Cybernetics* is concerned, we are discussing the interface of organic and synthetic systems; man-machines, artificial limbs, cyberpunk enhancements and augmentation; cyborgs and bionics.

Traveller: Cybernetics, then, deals with the grafting of a synthetic limb or organ onto or into the human body. With this book *Traveller* Referees will be able to simulate Six Million Credit men, cyber-beings with hive minds and a need to assimilate all they encounter and everything in between.

WHY GO BIONIC?

There are a variety of reasons why an individual might have cybernetics fitted but generally the reason falls into one of three categories:

- **Elective** – Current trends or personal whim.
- **Medical** – A cybernetic replacement for a limb or organ is the best (or only) remedy for a medical condition, including prostheses for amputated limbs.
- **Military** – A specific military role, mission, duty or function requires some form of cybernetic enhancement.
- **Social** – The whole of society is based on cybernetic enhancement, often from birth and often for very alien reasons. Such societies may have lost all grasp on humanity, empathy and emotion and become more like hyper-complex machines than conventional societies. They are thus rare. Finding completely cybernetic societies below TL 13 is highly unlikely.

The base cost for cybernetic augmentation is always influenced by its reason. Elective cybernetics must always be undertaken as private commissions and the highest base cost. Medical replacements usually have a lower cost owing to medical insurance, government subsidy and so forth. Military augmentations are almost always carried out at military expense.

The reason for augmentation influences not just the cost but also the functionality of the cybernetic enhancement. The following table summarises what is achievable for each reason category.

Availability

Yes:	The desired functionality is always available without restriction.
No:	The desired functionality is not available through the standard, legal channels.
Sometimes:	The desired functionality may be available depending on the reason. Roll 10+ modified by Int and Soc to see if the desired functionality will be catered for.

Functionality

Like for Like:	TL 8 and above. The organ or limb is replaced with a cybernetic equivalent that offers the same functionality as the original with no enhancements.
Enhanced Functionality:	TL 10 and above. The cybernetic replacement offers certain advantages in terms of skills, characteristics or equipment superior to the original limb or organ.

CYBERNETIC REASONS/FUNCTIONALITY

Reason for Cybernetics	Like for Like	Enhanced Functionality	Weaponisation	Custom Appearance	Illegal Functionality
Elective	Yes	Yes	Sometimes	Yes	Yes
Medical	Yes	Sometimes	No	Sometimes	No
Military	Yes	Yes	Yes	Sometimes	Sometimes
Social	Yes	Yes	Yes	Yes	Yes

Weaponisation:	TL 11 and above. The cybernetic replacement can be fitted with weaponry. Available weaponry is dependent on the nature of the cybernetic replacement, Tech Level and so forth.
Custom Appearance:	TL 9 and above. The cybernetic replacement's appearance can be customised in some way: a polished chrome arm instead of synthetic skin, for example.
Illegal Functionality:	TL 10 and above. The cybernetic replacement can be equipped with functions or features deemed illegal. This is aside from Weaponisation.

CYBERNETIC INSTALLATION

The installation, recovery and 'learning' time (the time it requires to adapt to using the cybernetic augmentation) differs according to the cybernetics and Tech Level. The Installation table shows the amount of time, in weeks, installation, recovery and learning takes at TL 8. Every TL above 8 reduces the time by one week, to a *minimum* of two weeks.

TECH LEVEL

Cybernetics are available at Tech Level 8 and above. The sophistication available at each Tech Level is as follows.

TL	**Cybernetic Sophistication**	**Elective Available?**	**Medical Available?**	**Military Available?**
8	Cybernetics are rudimentary. Prostheses are mechanical in nature and tend to be obvious although battery powered motorised versions are available at significant cost. There are no enhancements available to an individual as a result of receiving cybernetics. Organ replacements are only just being researched and internal cybernetics are limited to pulmonary longevity (heart pacemakers). Organ transplantation is still the only method of replacing internal organs.	No	Yes	No
9	Powered cybernetics are available, although the power source is always battery-based and is not linked to a body's own electrical fields. Prostheses can be made life-like but are still limited in functionality and offer no significant enhancements beyond the cosmetic.	No	Yes	Yes
10	Advances in engineering and biomechanics enable cybernetics to couple with organic electrical systems meaning that batteries are required only for auxiliary purposes. Prostheses and other augmentations are as good as the original and offer enhancements in terms of functionality and design. Elective cybernetic enhancements become available but at great cost.	Sometimes; tends to be restricted to expensive private clinics and illegal surgeries.	Yes	Yes
11	As for TL 10. Development of Artificial Intelligence allows cybernetics to become self-controlling and diagnosing offering significant advances and enhancements. It becomes possible to replace large parts of an organic body with artificial replacements, at little or no detriment to survival. Elective cybernetics become more readily available and hence cheaper. Cybernetics at TL11 offer benefits to Characteristics and skills.	Yes	Yes	Yes
12	Cybernetics can be made to be completely indistinguishable from their organic counterparts. Elective cybernetic enhancements become commonplace. Many people have cybernetic enhancements such as Wafer Jacks installed as a matter of routine.	Yes	Yes	Yes
13+	Cybernetics now offer considerable advantages over their organic counterparts. Medical diagnosis of likely organ defects leads to the routine replacement of weak or suspect organs with either vat-grown or cybernetic replacements before the organ has a chance to fail. Nanotechnology allows for self-healing skin to be employed cosmetically. Cybernetic prostheses can, due to advanced engineering and biomechanics, be made overlarge without detriment to the existing body. Full brain transplants into cybernetic simulacrums are possible.	Yes	Yes	Yes

Installation, Recovery and Learning Time

Augmentation Type	Installation, Recovery and Learning Time
Single Arm	1d6+3 weeks
Both Arms	1d6+6 weeks
Single Leg	1d6+6 weeks
Both Legs	1d6+8 weeks
All Limbs	1d6+10 weeks
Sensory organ (eye, ear, nose)	1d6 weeks
Major internal organ (heart, lung, kidney and so on)	1d6+2 weeks
Minor internal organ	1d6+1 weeks

Installation Facilities

Installing cybernetics of any kind is not an off-the-shelf process. The machinery must be ordered and manufactured prior to surgery: this takes a number of weeks equal to the Installation, Recovery and Learning time, reduced, again, by one week for every TL above 8. At TL 12 it may be the case that off-the-shelf cybernetics are available without build time but this is for individual Referees to determine.

Surgery must be carried out at a facility equipped to do the work. The nature of the facility determines if there is any modifier to the Installation, Recovery and Learning time: apply this modifier to the time determined by the Installation, Recovery and Learning Time table.

At lower Tech Levels and at lower quality facilities there is always a risk, too. Any surgery to install cybernetics requires a Survival roll. The level of the roll is summarised in the Installation Facility table. If the roll is failed, the character must immediately roll on the Injury Table on page 37 of the *Traveller Core Rulebook*.

The character gains a +1 DM for every TL of the facility above TL 8.

Characters and Cybernetics

It is likely that most cybernetic augmentation is undertaken as part of game downtime and/or conducted by Non-Player Characters with little direct impact on usual game play.

However *Traveller* characters can design, manufacture and fit cybernetic augmentations given the right resources, equipment, facilities, time and expertise.

Designing and Building a Cybernetic Augmentation

This usually requires someone skilled in medicine – Medic 2 is the minimum level required – and someone skilled in the necessary electronics and engineering to turn the medically experienced character's ideas into a reality. At TLs 8 and 9 characters with Mechanic 2 or Engineer (Electronics) 2 suffice. Higher Tech Levels influence the skill requirements

Character Cybernetic Skills

TL	Medic Skill Level	Mechanic and/or Engineer
8–9	Medic 2	Mechanic 2 or Engineer (Electronics) 2
10–11	Medic 1	Mechanic 1 or Engineer (Electronics) 1
12–13	Medic 1	Engineer (Electronics) 1
14+	Medic 1	Engineer (Electronics) 1

Building a cybernetic unit obviously requires access to appropriate facilities and materials. Assuming that these are available, build times are as quoted in the Installation, Recovery and Learning Time table, modified by Tech Level (each TL above 8 reduces the build time by one week with a minimum build time of two weeks). Referees may increase the build time and apply negative DMs to the necessary skill rolls if characters lack the correct facilities and so forth, and/or rush to complete a job.

Cybernetics and Medical Treatment

Cybernetics are subject to the rules for interference with medical treatment as outlined on page 89 of the *Traveller Core Rulebook*.

All long term care or surgery Medic rolls treating a cybernetically augmented character suffer a negative DM equal to the difference in TL between the medical facility and the highest cybernetic

Installation Facility Table

Facility	Modifier to Installation, Recovery and Learning Time	Survival Roll
Teaching Hospital	0	End 5+
Provincial Hospital	+1 week	End 6+
Specialist Cybernetics Hospital/Clinic	–1 week	End 4+
Military Hospital	–1 week	End 4+
Good quality private clinic	0	End 5+
Medium quality private clinic	+1 week	End 6+
Poor quality/backstreet/illegal clinic	+1 week	End 7+

replacement or enhancement. For example a character with a TL13 cybernetic arm being treated in a TL10 hospital would impose a –3 DM to the surgeon's Medic skill roll.

Limits to Cybernetics

How far does one, or can one, go in replacing the organic body with cybernetic parts? In theory, and assuming the technology is there, one could replace up to 98% of the body with a cybernetic version, the remaining 2% being the brain mass. This is possible at TL13 and above.

Below that, there are limitations to the amount of cybernetic surgery one can undergo: this is not a limitation of the facility installing the cybernetics but the necessary medical and technical preparation and strain the remaining physical body can stand. This is dependent on Tech Level. The extent of cybernetic replacement is described as a percentage of body mass.

One Arm = 10%
One Leg = 20%
Lower Torso = 15%
Upper Torso = 15%
Head = 10% (brain represents 2%)

CYBERNETIC SURGERY LIMITATIONS

TL	Maximum Cybernetic % possible
8	60%
9	60%
10	70%
11	80%
12	90%
13+	98% (brain transplant to a cybernetic simulacrum)

Thus, at TL8 a candidate for cybernetics could replace both arms and legs but his body would not be able to sustain any further cybernetic modification.

These restrictions only apply to large-scale replacements; not small enhancements to minor, non-critical organs such as eyes or ears. Small augmentations do no contribute to the allowable percentage.

Example: The Six Million Credit Man

Colonel Steve Ford is a test pilot for a TL10 air force. A test mission goes wrong and he is critically injured; he is a man barely alive. But the air force has the technology… it has the capability…

Steve Ford loses both legs, his right arm and one of his eyes in the crash. TL10's capabilities in cybernetics and robotics means that up to 70% of Steve's body can be replaced. The eye poses little problem and does not contribute to the limit. Both legs account for 40% of the cybernetic limit and the arm 10% – it is therefore entirely possible to rebuild Steve with lifelike, self-powered prostheses that also augment his Characteristics, giving him enhanced strength, speed and eyesight. It takes a total of 48 weeks to complete the rebuild and rehabilitate Colonel Ford but the results are impressive. Seeing the possibilities of their MCr 6 investment, the government decides to co-opt Steve into their super secret intelligence network where his cybernetic enhancements will prove extremely useful to thwarting nefarious enemy states…

Powering Cybernetics

It is assumed that small implants within the body require no other power supply than the body's own electricity or are equipped with extremely reliable, long-lived, micro batteries that do not need to be replaced. Larger cybernetics, such as limbs, do need a reliable power source and at TL9 this means batteries or power cells stored within the limb itself that require either recharging or replacing at frequent intervals. The frequency of replacement, based on normal, everyday use, for a cybernetic limb battery, is once a month. Towards the end of the month the character will notice a deterioration in performance of the limb (although not enough to affect Characteristics or skill rolls) and this acts as a signal for changing the battery: only the most foolish will not have access to spares and changing the battery is not a surgical procedure although it will take 1d3+1 Combat Rounds to accomplish.

Rechargeable batteries are available and the user generally plugs into a mains recharger overnight to keep the limb at optimum power for daytime use. Rechargeable batteries need replacing once per year rather than once per month but are 10 times the cost of non-rechargeable batteries.

At TL10 batteries are used only for auxiliary purposes in cybernetic limbs. These are non-rechargeable and need replacing only once a year.

At TL 11 and above, the electronics of the limb are integrated with the body's own electricity and no additional power sources are required.

BATTERY COSTS (PER LIMB)

TL	Standard Cell (monthly replacement)	Rechargeable (annual replacement)	Auxiliary Cell (annual replacement)
8	Cr. 100	Cr. 1,000	Not Available
9	Cr. 50	Cr. 500	Not Available
10	Cr. 10	Cr. 100	Cr. 50
11+	Cr. 5	Cr. 50	Cr. 25

Cybernetic Servicing and Quality

Cybernetics between TL8 and TL10 require routine maintenance and servicing to ensure continued excellence of operation. At TLs 8 and 9 this is every six months; at TL10 once a year is sufficient. At TL11 and above cybernetics are usually of high enough quality to need maintenance only every five years or so – or so infrequently as to be inconsequential.

The servicing and maintenance of the cybernetic augmentation is always 15% of the item's final cost. An augmentation originating from a lower TL can be serviced and maintained by a higher Tech Level but not vice versa.

Cybernetic augmentations are normally built to high standards by reputable medical engineering or military science companies. However, quality can vary enormously depending on the nature of the campaign and this is where optional cybernetics quality may be an interesting adjunct to the campaign. Cybernetics quality but can be categorised as follows:

Grade A: Premium quality cybernetics costing anything up to 110% to 150% of the standard augmentation price. Chance to fail under normal usage is 1 on 2d6.

Grade B: Standard quality cybernetics costing the standard price listed. Chance to fail under normal usage is 2 or less on 2d6.

Grade C: Cheaply produced, sub-standard, used or surplus cybernetics that have not undergone regular servicing or have suffered very heavy use. Price is 75% of standard. Chance to fail under normal usage is 3 or less on 2d6.

Grade D: As for Grade C cybernetics but even more acutely rubbish – sold at 50% of standard. Chance to fail under normal usage is five or less on 2d6.

Whenever an augmentation is subjected to abnormal or above heavy use – and the Referee should determine the specific circumstances – the character should roll 2d6 and compare the result with the Chance to Fail indications for the equipment's grade. If the equipment has been serviced as previously described, then the Chance to Fail roll gains a +1 DM.

Unserviced cybernetics apply a –1 DM to the Chance to Fail check, which effectively raises the Chance to Fail by one.

Internal, major organ replacements, if they fail, are likely to contribute to damage, roll on the Injury Table from page 37 of the *Traveller Core Rulebook*, or death (failure of a cheap, cybernetic heart for example).

ENHANCEMENTS

Certain cybernetics offer enhancements to Characteristics or skills. Enhancements are not possible below TL11 and some are not possible until TL12. The Enhancement table summarises what the maximum increase possible is for physical Characteristic enhancements, Intelligence enhancements and skill enhancements at each Tech Level.

At TL11, therefore, it is not possible to obtain cybernetics that offer more than a +1 enhancement to Str, Dex or End. At TL14 one may obtain up to a +2 enhancement. Similarly one cannot obtain Int enhancements on any world that is below TL12 and +3 Int enhancements are available only at TL16 or higher.

CYBERNETICS AND SOCIETY

There has been a long fascination with cybernetically enhanced humans and popular fiction abounds with depictions of humans sporting outrageous biomechanical systems, integrated limb-weapons and all manner of chunks of metal and circuitry protruding from skin, bone, limbs and certain orifices. This generally suits popular fiction but, in reality, human societies (alien societies may well have different outlooks) often find mechanical augmentation – even in the form of simple prostheses – uncomfortable to accept. The natural course is to try to develop prostheses that are as lifelike as possible and, at TL9 and higher, this is possible but it is sometimes the case that Tech Level and functionality limit the degree to which a cybernetic device can be made to look and perform realistically.

This has certain social consequences. Society is often very sympathetic towards those with medical cybernetics because they have likely had no alternative. However, it is a fact of human life that those who are different for some reason are the subject of stares, hushed whispers, embarrassed silences and, sometimes, rude or aggressive taunting. This may or may not play a part in your *Traveller* campaign and, ultimately, individual Referees should decide if cybernetics are readily accepted by society and those who have them attract no undue attention; or if society is still uncomfortable with cybernetics – especially elective and highly visual, distinctive augmentations – no matter what its Tech Level.

ENHANCEMENT TABLE

TL	Physical Characteristic – Maximum Increase Possible	Intelligence Characteristic – Maximum Increase Possible	Skill Enhancement – Maximum Increase Possible
11	+1	—	+1
12	+2	+1	+1
13	+2	+1	+2
14	+2	+2	+2
15	+3	+2	+3
16+	+3	+3	+3

As an optional rule, *Traveller* Referees may wish to apply a negative DM to Social to reflect a society's discomfort with cybernetics. The DM is calculated as follows:

CYBERNETIC SOCIAL MODIFIERS

Circumstances	Social DM
TL 8–9	–2
TL 10–11	–1
TL 12+	0
Per 20% of body replaced by visible cybernetics	–1
Deliberate garish customisation	–1
Visible weaponry	–1
Oversized prostheses	–1

The DM applied to Social can also be applied to skills where social interaction (Broker, Carouse and so on) with others is essential. Conversely, in certain environments impressive cybernetics might act as a positive factor – Streetwise, for instance – so Referees should adjudicate the way the modifier works according to circumstances, local attitudes and other, personal factors. A –3 Social DM would not be applicable at a military reunion for cybernetic recipients, for example.

ALIEN CYBERNETICS

All the augmentations described in the subsequent chapters are couched in human/humanoid terms and can be applied to most bipedal, humanoid races without any need for further adaptation. Cybernetics for races that follow a different kind of bodily structure – Hivers, for instance – may require some tweaking to ensure a fit with the body type and Referees will need to look carefully at the augmentation to decide how this needs to be made. It may simply be a question of adjusting cost and Tech Level; but perhaps more telling is how a particular race will view cybernetics socially.

Some alien races and cultures may shun cybernetics altogether due to reasons of religion, pride, practicality or simply an inherent cultural revulsion at merging organics with technology. In other words, Referees should always consider cultural and social mores when considering cybernetics for an alien race and adjust the rules found in this book accordingly.

CYBERNETICS FOLLOWING TRAUMA

The most common and necessary reason for any character to gain a cybernetic replacement for a limb or other body part is trauma, sustained through accident or combat, where a limb, organ or other part of the body is so badly damaged that conventional medicine cannot save it.

In *Traveller* damage is abstracted across the physical Characteristics of Strength, Dexterity and Endurance. There is usually little need to determine precisely what area of the body has been damaged but, if you are using cybernetics actively in your *Traveller* games and need that level of detail to decide if a character would require a cybernetic replacement, the trauma rules presented here offer an optional addition to the way the extent of damage is figured for characters.

Unless a character has had *two* Characteristics reduced to zero, there is no need to check for trauma. The damage sustained may, indeed, be grievous but available medical help will be able to help the character recover and there will not be a general need for cybernetic replacements or prostheses.

If, though, a character has sustained enough damage to reduce two Characteristics to zero, and the damage exceeds the sum of the *two highest* Characteristics, then cybernetics may be necessary, at the referee's discretion.

For example, a character with Str 7, Dex 9 and End 8 is caught in a bomb-blast. He sustains 18 points of damage, reducing his Dex and End to zero and Str to six. As the damage exceeds the sum of Dex and End the Referee decides to check to see the extent of the damage.

Roll on the Trauma table to assess the damage extent.

TRAUMA

2d6	Trauma
2	Roll four times on the Damage Location table.
3–6	Roll three times on the Damage Location table.
7–10	Roll twice on the Damage Location table.
11–12	Roll once on the Damage Location table.

The Damage Location table determines the area(s) affected to such an extent that cybernetic augmentation is necessary.

DAMAGE LOCATION

2d6	Location
2	Head
3	Upper Torso
4	Upper Torso
5	Upper Torso
6	Lower Torso
7	Lower Torso
8	Lower Torso
9	Right Leg
10	Left Leg
11	Right Arm
12	Left Arm

The Damage Location indicates the body area affected. Roll on the table appropriate to that area for damage specifics.

HEAD

1d6	Head Locations
1	Brain
2	Eye: Roll 1d6 – 1–2 Both Eyes, 3–4 Right Eye, 5–6 Left Eye
3	Ear: Roll 1d6 – 1–2 Both Ears, 3–4 Right Ear, 5–6 Left Ear
4	Nose
5	Mouth/Jaw
6	Skull

UPPER TORSO

1d6	Upper Torso Locations
1	Heart
2	Lungs
3	Throat
4	Upper Spine
5	Shoulder
6	Rib Cage

LOWER TORSO

1d6	Lower Torso Locations
1	Genitals
2	Intestines
3	Liver and Kidneys
4	Lower Spine
5–6	Pelvis

LEG

1d6	Leg Locations
1	Entire Leg
2	Upper leg
3	Knee
4	Lower Leg
5	Ankle
6	Foot

ARM

1d6	Arm Locations
1	Entire Arm
2	Upper Arm
3	Elbow
4–5	Forearm
6	Hand

The specific area damaged can be considered to be amputated, crushed, maimed or otherwise damaged beyond medical repair. Of course, some discretion and common sense needs to be applied; a sword is more likely to sever an arm than a nine millimetre bullet and an explosion caused by a heavy weapon more likely to blow away both legs than a sword. Referees may choose what locations are affected rather than roll, or extrapolate multiple areas based on a single roll by the character.

Our bomb-damaged victim, for example, has suffered 18 points of damage and rolls 2d6 to determine the trauma extent. The roll is a 7, indicating two rolls on the Damage Location table. He rolls 9 for the first roll and 8 for the second; the bomb blast has severely damaged his right leg and lower torso. The Referee decides this is in keeping with the nature of the damage and tells the character to roll on the Leg and Lower Torso tables.

The 1d6 Leg roll is a 4 – the whole of the character's lower leg has been blown away. The roll for the Lower Torso is also a 4 – the character's lower spine has been shattered by the blast. The Referee decides that spinal damage in this area would render both legs useless. Our unfortunate blast victim is facing the replacement of both his legs and, possibly, his lower torso, with cybernetic limbs.

CYBERNETIC DISADVANTAGES

Augmenting the body with machinery does come with certain disadvantages. Some of these have been discussed already in this chapter but some disadvantages for Referees and players to consider are as follows:

EMP disruption

An EMP strike will disable all functional electronics unless such mechanisms are specifically shielded against an EMP blast. Even then, it is impossible to shield all electronics against certain types of EMP; thus, although EMP Shielding may be generally effective, Referees may rule that specific types of EMP producing weapons can overcome shielding. This means that EMPs remain a constant threat to all forms of cybernetics – even shielded augmentations – which may be a prime consideration in the extent to which cybernetics are used or deployed and their military and civilian applications.

Body Wear and Tear and Rejection

Users of prostheses are always subject to the possibility of infection arising from the rubbing and chaffing a piece of externalised equipment may cause, no matter the degree of medical expertise employed in fitting it, or the Tech Level of its installation.

As an optional rule Referees may call on a character that has external cybernetics to make an Endurance roll every 6 to 12 months. The target number for the roll depends on the mass percentage of cybernetic prosthetics that the character is carrying:

% of Cybernetic Mass	Endurance roll Target Number
5%–10%	6+
10%–20%	7+
20%–40%	8+
40%–60%	9+
60%–80%	10+

If the roll is successful, then the body has resisted chaffing and so on. If the Endurance roll fails, then the character suffers one point of damage to either Str or Dex, determined randomly or appropriate to the prosthetic(s). To reflect advanced Tech Level quality, one may also reduce the target number for the Endurance roll by one for every Tech Level above 10.

Characters who suffer injury suffer chaffing, soreness, fatigue and possibly infection if the damage is not treated. Damaged characters should seek medical help and a course of drugs or other care within 1d6 days of incurring the damage. If they do not, a further Endurance 8+ roll is needed; if this is failed then the character sustains a further point of damage to either Strength or Dexterity as infection sets-in. Thus must be treated medically.

Augmentations that are implanted in the body may also be rejected. This is only likely at Tech Levels below 10; at TL10 and above it is considered that the recuperation from surgery includes anti-rejection drugs and/or other measures to prevent against rejection.

To simulate possible rejection, characters should roll End every 6-12 months. The target number is 8+ although this can be increased by one for every additional implant, irrespective of its mass. If the roll fails, one point of damage is applied to *either* Str, Dex or End. If left untreated for 1d6 days, a further 1D3 points of damage is incurred and the augmentation starts to malfunction (or simply stops working). Referees will need to adjudicate the depth and degree of malfunction depending on the nature of the implant but if this involves replacement organs, characters may run the risk of sustained damage and possibly even fatal organ failure.

BIOTECHNOLOGY

The chapters devoted to various body augmentations focus on the mechanical and the electronic, as befits a book called '*Traveller: Cybernetics*'. However, what about biological augmentations be they replacement limbs, transplant organs or vat-grown prostheses? These have a very definite place in Science Fiction stories and offer certain advantages over mechanical augmentations:

- A biological replacement, at the right Tech Level, could be cloned from the recipient's own DNA or stem cells and thus run little or no risk of implantation or rejection by the body.
- Biological replacements are not prone to electronic interference or disablement such as via an EMP.
- A natural, organic replacement is not obtrusive and may be far more socially acceptable.
- Growing a biological replacement or enhancement may be more cost-effective at certain Tech Levels.
- Biologicals will not be subject to wear and tear on the body, as mechanical prostheses may be – see page 39 for information on Body Wear and Tear.

In each of the augmentation descriptions in the following chapters, there is a Biological Equivalent entry – both for the core augmentation and optional enhancements. If the Biological Equivalent entry is a 'Yes', then the cybernetic augmentation has a biological equivalent, which may be cloned, vat-grown or donated: recipients may, at the Referee's discretion, opt for a biological equivalent instead but with the following rule-of-thumb caveats:

- A biological equivalent will be available at one Tech Level *higher* than for the cybernetic version (for example, a biological equivalent for a TL8 arm prosthesis will be available at TL9).
- The Cost of the biological equivalent will be 25% higher than the cybernetic version – although Referees may ignore this increase in price if biological augmentations are more prevalent in a particular society, or are more socially acceptable. Indeed, the biological equivalent may even be *cheaper* than its mechanic counterpart – so treat the 25% modification as a reduction.
- Biological augments may be subject to the rules for rejection but not wear and tear, depending on the Tech Level of the surgery for installing the augmentation.

CYBERNETIC LIMBS

This chapter concerns limbs: hands, feet, arms and legs.

Cybernetic limbs traditionally enhance the Strength and Dexterity Characteristics. Strength is the easiest Characteristic to enhance whilst Dexterity can be enhanced at higher Tech Levels. Some limb designs, though, will offer enhancements to skills and other areas of performance: it is all a question of Tech Level and price.

ARM (BASIC)

TL:	*8*
Price:	*Cr. 100,000*
Mass:	*10%*
Enhancements:	*None*
Configurable:	*N*
Biotech Equivalent:	*Y*

This is the most basic form of cybernetic arm. It is a five-fingered, battery powered, life-like prosthesis that, even at TL8, is available in either a synthetic skin version that mimics the real thing, or a deliberately bare armature with exposed internal mechanics. The Basic Arm includes the Basic Hand assembly described on page 15, later.

ARM (ADVANCED)

TL:	*11*
Price:	*Cr. 500,000*
Mass:	*10%*
Enhancements:	*+1 Str*
Configurable:	*Y - 3*
Biotech Equivalent:	*Y*

The advanced version of the cybernetic arm, available at TL11 and greater, is both configurable and offers a Strength Characteristic enhancement. At TL11 this is +1 but can be increased at appropriate Tech Levels (see Enhancements table, page 37). The cost for enhanced Strength is:

TL 12 (+2 Strength) Cr. 1,000,000
TL 15 (+3 Strength) Cr. 5,000,000

It comes with the Basic Hand as standard. The arm also has the capacity for up to three configuration modifications, as follows:

ADVANCED HAND (CR. 75,000)

As per the Advanced Hand on page 45.

COMBAT HAND (CR. 200,000)

As per the Combat Hand on page 45.

HAND RAZORS (CR. 10,000)

One centimetre-long blades are concealed within the tip of each finger and thumb, emerging from beneath the nail. The blades are easily concealed by the nail and fingertip although weapon detection systems will detect the presence of metal. At triple the cost the blades can therefore be made of ceramics or some other sensor-neutral material that still carries an edge.

Hand Razors add +2 to Unarmed melee attack damage.

Biotech Equivalent: Hand Razors are available as a biotech equivalent with strengthened nails that slide out from beneath the main nail – or nails that simply extend with nerve impulses.

SCYTHES (CR. 20,000) – WEAPONISATION

This option is only available if the Combat Hand has been taken as one of the configurations.

The Scythe modification adds three half-metre long surgical steel claws to the arm. The claws can be configured to emerge between the knuckles of the fingers or the back of the hand, in front of the wrist. When in use the wrist of the hand becomes locked into place by the extension of the scythe blades and the hand cannot be used for any other actions. The blades work together as a unit and provide the equivalent of a Cutlass (*Traveller Core Rulebook*, page 98). Melee (large blade) is needed to use the scythes effectively although this skill is not conferred as part of the training given after fitting. The scythes extend and retract through nerve control.

Biotech Equivalent: Scythes are available as a biotech equivalent. Instead of metal the scythes are formed from strengthened and sharpened keratin, not unlike the claws of a bear or big cat.

INTEGRATED ASSAULT RIFLE (CR. 500,000) – WEAPONISATION

This option is only available if the Combat Hand has been taken as one of the configurations.

The cybernetic arm is equipped with a modified assault rifle, the rifle mechanism contained in the forearm with the muzzle projecting from the hand as described in the Snub Pistol option for the Combat Hand on page 45. The assault rifle functions as per its description on page 99 of the *Traveller Core Rulebook*.

The weapon carries a standard 30 round clip that is fitted into a specially loading cavity at the top of the arm where it connects with the shoulder. The cavity is usually masked by synthetic skin. The weapon is activated by nerve impulse and the user is trained in this as part of the rehabilitation time after fitting. However it requires Gun Combat (slug rifle) to use the weapon effectively.

Military versions of the combat arm with this configuration are sometimes deliberately left without a synthetic skin covering to allow for ease of maintenance of the weapon.

This configuration is not compatible with other configurations based on rifle or rifle-like modifications.

Biotech Equivalent: There is no biotech equivalent.

INTEGRATED GAUSS RIFLE (CR. 750,000) – WEAPONISATION

Very similar to the Integrated Assault Rifle option but only available at TL12 or above and using a Gauss Rifle as the weapon option.

This configuration is not compatible with other configurations based on rifle or rifle-like modifications.

Biotech Equivalent: There is no biotech equivalent.

INTEGRATED LASER CARBINE (CR. 1,000,000) – WEAPONISATION

Very similar to the Integrated Assault Rifle option but only available at TL12 or above and using a Laser Carbine as the weapon option.

This configuration is not compatible with other configurations based on rifle or rifle-like modifications.

Biotech Equivalent: There is no biotech equivalent.

INTEGRATED MICRO-MISSILE LAUNCHER (CR. 1,500,000) – WEAPONISATION

The forearm contains a pop-up micro-missile launcher activated by nerve impulse. The unit contains a battery of six micro-missiles with HE warheads. Replacement missiles cost Cr. 1,000 apiece. Each missile functions as a TL8 rocket (see *Traveller Core Rulebook* page 101) with the missiles held in a magazine directly below the launch mechanism.

For an additional Cr. 500,000 the array can be configured to fire the missiles through the palm of the hand rather than by a pop-up unit. The micro-missile array requires the Heavy Weapons (launchers) skill to use effectively.

Biotech Equivalent: There is no biotech equivalent.

GRAPPLING ARRAY (CR. 25,000)

This option is only available if the Advanced Hand has been taken as one of the configurations.

The arm unit contains 100 metres of spooled high tensile wire capable of supporting the weight of the arm's owner and an additional 100 kilograms of weight. Using nerve impulse the entire hand is fired using a small explosive charge built into the wrist and has a 100 metre range. The hand maintains sensitivity despite being disconnected from the arm, using the wire as an extension of the standard sensory mechanisms.

The hand can aim accurately using Gun Combat (slug pistols) as the skill. If used as a remote weapon in this way, the hand strikes a target for 2d6 points of damage.

In this way the hand can be used at considerable extension from its owner, since it retains full sensitivity and mobility. It can also be used as a grappling array from ascending or descending heights of up to 100 metres. The grappling array retracts the line through nerve impulses at a speed of three metres per Combat Round.

Biotech Equivalent: There is no biotech equivalent.

INTEGRAL MEDIKIT (CR. 20,000)

The arm includes a full TL11 medikit as per the Medikit found on page 89 of the *Traveller Core Rulebook*. The Medikit can be accessed via a recess panel on the forearm but also includes an auto-medicate mode that is linked to the nervous system via a nerve integration array. This function automatically dispenses a series of drugs carried in the arm's medical reservoirs that are introduced either by overt instruction or automatically in response to the body's current state of repair (which the medikit monitors). The arm can carry up to four doses each of four separate drugs in its reservoirs selected from:

- Anti-rad
- Combat
- Fast
- Medicinal
- Medicinal Slow
- Metabolic Accelerator
- Panacea
- Stim

The medikit array is designed to act as a Medic 0 dispensary. Drugs cost extra and are charged at the standard prices from the *Traveller Core Rulebook* pages 93 and 94.

Biotech Equivalent: There is no biotech equivalent.

DRONE ARM (PERSONAL DRONE CR. 25,000; PROBE DRONE CR. 40,000)

The forearm acts as a hangar bay for either a modified TL11 Personal Drone or Probe Drone (*Traveller Core Rulebook* page 95). The drone has a modified configuration to allow it to fit comfortably into the arm's recess. The arm comes equipped with the appropriate drone.

Biotech Equivalent: There is no biotech equivalent.

TOOLKIT (CR. 1,000)

The forearm contains an easily accessed recess that holds a variety of tools. The tools can be used conventionally or, at an additional cost of Cr. 1,000, can be customised to fit onto one or more fingers of the cybernetic hand assembly (the fingers detach and the tools are attached in their place). The standard toolkit contains:

- Powered screwdrivers with interchangeable bits.
- Drill, with interchangeable bits.
- Saw, with a variety of blades for most common materials.
- Multimeter.
- Files, of different grades.
- Hi-speed polisher, with sanding and polishing heads.

Biotech Equivalent: There is no biotech equivalent.

ARM (HEAVY DUTY)

TL:	***12***
Price:	***Cr. 1,500,000***
Mass:	***13%***
Enhancements:	***+1Str. –1 Dex***
Configurable:	***Y – 2***
Biotech Equivalent:	***Y***

The heavy duty arm is an oversized cybernetic prosthetic that is generally one and a half to two times the size of a standard sized cybernetic arm. The arm is used as a platform for heavy industrial equipment/tools or weapons and it is capable of mounting items that would be too heavy for a standard cybernetic prosthesis. The nature of the arm means it is usually only available through military cybernetics facilities or those where heavy industry has been sanctioned to allow cybernetics of this size and nature. Some black clinics can also obtain the heavy duty arm but usually at an inflated cost.

The size of the arm means that the chest and shoulders of the recipient also require reinforcement through additional implants; this accounts for the additional mass required by the arm.

The arm cannot be disguised with synthetic skin: it is always left as a bare, functional unit.

The unit is generally not equipped with a hand as it is designed primarily as a mount for other equipment. The arm does confer +1 Strength at TL12 and higher Tech Levels can increase the arm's Strength enhancement at the costs given. However the bulk of the unit means that Dexterity is compromised. Anyone having the Heavy Duty Arm fitted suffers a –1 Dexterity DM.

TL 14 (+2 Strength) Cr. 1,000,000
TL 15 (+3 Strength) Cr. 5,000,000

The biotech equivalent of the Heavy Duty Arm is an oversized organic prosthesis rippling with muscle and sinew. It comes equipped with a hand as standard but has limited configuration options.

The arm is configurable with the following options.

WEAPONS MOUNT (WEAPONS COST IS EXTRA, DEPENDENT ON WEAPON TYPE)

The arm is configured to mount up to 10 kilograms of assorted weaponry. No more than three weapons at a time can be mounted. Neural impulses control the firing of the weaponry, allowing for either combined or individual fire. The drawback is that all weapons must be aimed at the same target as multidirectional aiming is impossible – although moving the arm through an arc obviously increases the damage capacity across multiple targets. Ammunition is stored in specially designed magazines stored in the upper arm. Heat sinks across the unit dissipate heat build-up from the body.

The Weapons Mount is incompatible with the Heavy Equipment Mount.

Biotech Equivalent: There is no biotech equivalent.

HEAVY EQUIPMENT MOUNT (TOOL COST IS EXTRA, DEPENDENT ON TOOL TYPE)

The heavy equipment mount allows 10 kilograms of different heavy machine tools (drills, pumps, winches and so forth) to be added to the arm and controlled by neural impulse. Separate tools can function simultaneously.

The Heavy Equipment Mount is incompatible with the Weapons Mount.

Biotech Equivalent: There is no biotech equivalent.

PINCER ATTACHMENT (CR. 20,000)

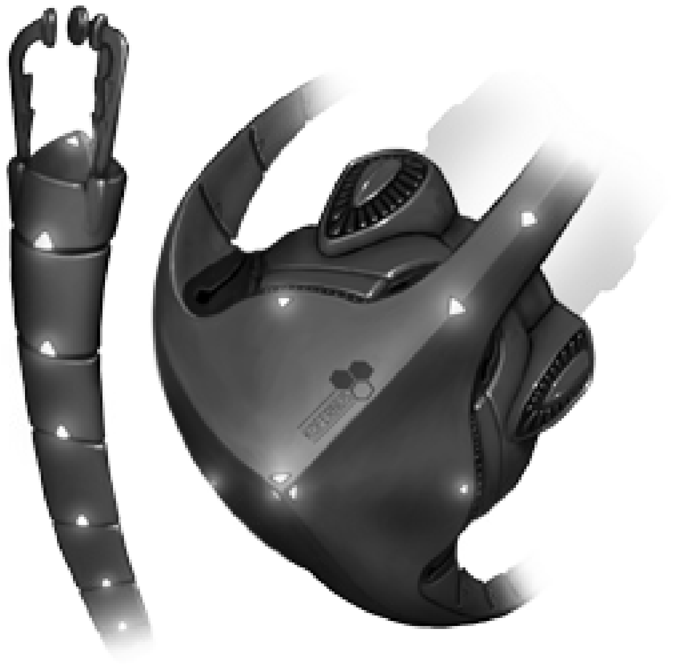
Whilst the heavy duty arm is not equipped with a hand the unit does have the option for a pincer attachment to be fitted in addition to either weapons or tools. The pincer is a heavy duty, double-faced servo-assisted wrench that can be used for grasping, twisting and cutting. The unit is fitted with a 360 degree lateral twist motor that allows the pincer to spin continuously and at up to 300 RPM with variable speed and torque controlled through neural impulse feedback.

Biotech Equivalent: The biotech Heavy Duty Arm can be produced to have a pincer-like appendage rather than a hand. The pincer resembles a large lobster claw although both arms of the pincer are of equal size.

TENDRIL ARRAY (CR. 30,000)

The tendril array is an exotic addition to the heavy duty arm. Three metre-long, fully articulated tentacles protrude from a globe-like central boss and can be controlled individually or in tandem for fine manipulation. Excellent for hard-to-reach places or probing into areas with a complicated internal configuration.

Biotech Equivalent: The biotech tendril array is the organic version of the cybernetic tentacle array. It is a disturbing cluster of fleshy tendrils that replace the fingers and protrude from a central palm. They work like fingers but have far longer reach and total flexibility.



HAND (BASIC)

TL:	*8*
Price:	*Cr. 25,000*
Mass:	*3%*
Enhancements:	*None*
Configurable:	*N*
Biotech Equivalent:	*Y*

This is the most basic form of cybernetic hand. It is a five-fingered, battery powered, life-like prosthesis that, even at TL8, is available in either a synthetic skin version that mimics the real thing, or a metallic finished hand that resembles a gauntlet. Whatever the finish the basic hand simply replicates the function of a real hand although it lacks the precise dexterity of the real thing and cannot be used for fine manipulation tasks.

The basic hand carries no fingerprints at TLs 8 and 9. At TL10 and above it is standard procedure for the synthetic skin covering the prosthesis to include a unique fingerprint array based on the original hand (if available) or a computer-generated fingerprint model.

At TL9 the basic hand contains nerve stimulators that transmit feeling and sensation to the brain.

At TL10 and above the basic hand is capable of the full range of organic hand dexterity, making it every bit as good as the real thing.

Biotech Equivalent: The biotech equivalent functions as a TL10 cybernetic hand.

HAND (ADVANCED)

TL:	*11*
Price:	*Cr. 75,000*
Mass:	*3%*
Enhancements:	*+1 Dex*
Configurable:	*Y – 1*
Biotech Equivalent:	*Y*

At TL11 the advanced cybernetic hand becomes available. It resembles the basic TL8 hand but has improved nerve integration and the very best articulation granting increased close manipulation Dexterity. The unit is also configurable with one of the following customisation options:

BUILT-IN HAND COMPUTER (CR. 300)

A standard Hand Computer (*Traveller Core Rulebook* page 91) built into the hand unit. The display surface is either on the back of the hand or the palm, depending on personal preference. The display can be covered with a flap of synthetic skin for convenience and comfort or left bare.

Biotech Equivalent: A standard hand computer can be nerve grafted into the flesh of an organic replacement hand.

BUILT-IN TRANSCEIVER (CR. 750)

A built-in TL9 radio-based transceiver functioning as per the unit described on page 90 of the *Traveller Core Rulebook*. The control interface is a discreet touch-screen panel that can be covered by a flap of synthetic skin on either the back or palm of the hand.

Biotech Equivalent: A transceiver unit can be grafted into the flesh of an organic hand.

BUILT-IN SENSOR ARRAY (CR. 3,000)

The fingers of the hand contain the sensor apparatus that links with the sensor display on either the palm or back of the hand. The sensor array includes a Geiger Counter, Motion Sensor, Temperature Sensor, Electromagnetic Sensor (a basic version of the TL10 Electromagnetic probe) and a Metal Detector.

Biotech Equivalent: No biotech equivalent.

HAND RAZORS (CR. 10,000)

One centimetre-long blades are concealed within the tip of each finger and thumb, emerging from beneath the nail. The blades are easily concealed by the nail and fingertip although weapon detection systems will detect the presence of metal. At triple the cost the blades can therefore be made of ceramics or some other sensor-neutral material that still carries an edge.

Hand Razors add +2 to Unarmed melee attack damage.

Biotech Equivalent: Hand Razors are available as a biotech equivalent with strengthened nails that slide out from beneath the main nail – or nails that simply extend with nerve impulses.

Biotech Equivalent: Scythes are available as a biotech equivalent. Instead of metal the scythes are formed from strengthened and sharpened kertoin, not unlike the claws of a bear or big cat.

HAND (COMBAT)

TL:	*11*
Price:	*Cr. 200,000*
Mass:	*3%*
Enhancements:	*None*
Configurable:	*Y – 2*
Biotech Equivalent:	*No*

The combat model of the cybernetic hand is a militarisation of the Advanced Hand. It is not designed to accentuate manual dexterity and so includes no Dexterity Characteristic enhancement but it is designed to function as a platform for a variety of weapons and be equipped with two of the following options. All are considered Weaponisations.

INTEGRAL BLADES (CR. 5,000)

As per the option for the Advanced Hand described on page 45.

SCYTHES (CR. 20,000) – WEAPONISATION

The Scythe modification adds three half-metre long surgical steel claws to the arm. The claws can be configured to emerge between the knuckles of the fingers or the back of the hand, in front of the wrist. When in use the wrist of the hand becomes locked into place by the extension of the scythe blades and the hand cannot be used for any other actions. The blades work together as a unit and provide the equivalent of a Cutlass (*Traveller Core Rulebook*, page 98). Melee (large blade) is needed to use the scythes effectively although this skill is not conferred as part of the training given after fitting. The scythes extend and retract through nerve control.

INTEGRAL SNUB PISTOL (CR. 20,000)

The hand is hinged at the knuckle where the little finger joins with the top of the palm. Nerve impulses sent by the user cause the fingers and top of the palm to swing down exposing the snub pistol assembly built into the palm and thumb of the hand. The Snub Pistol has the same Characteristics as the weapon on page 99 of the *Traveller Core Rulebook* but has obviously been modified to fit neatly into the cybernetic hand without compromising the limb's basic functions. The pistol is reloaded using a specially adapted magazine, which clips into the base of the hand behind the little finger. The gun is triggered by nerve responses and the Installation, Recovery and Training period of the hand's fitting teaches the user how to activate the finger-drop mechanism and the firing mechanism. This does not, however, confer any Gun Combat (slug pistol) skill; only the nerve control necessary to prepare the weapon for use.

INTEGRAL STUNNER (CR. 20,000)

The hand contains the equivalent of a TL10 Stunner (*Traveller Core Rulebook* page 100). The weapon is not designed to work as a ranged weapon; instead, it works when the cybernetic hand grasps any part of another organic target, delivering the stun through specially designed resonators fitted into the palm and fingers. The Stunner can be used with the Melee (unarmed combat) skill but does not confer it.

GRASP BOMB (CR. 50,000)

This option makes the combat hand a detachable unit from its fixing position. The user either places the hand on a surface or grips an appropriate part of the target, and uses nerve stimulation to detach the hand from its anchoring point and arm the integral bomb built into the device. If the hand was used to grasp something the weapon stays grasped unless it can be cut or prised off in some fashion. The integral bomb can be either a Frag, Smoke or Stun grenade as per the weapon Characteristics on page 101 of the *Traveller Core Rulebook*. The bomb can be set by the user to activate on a timer (up to one hour detonation) or by remote trigger (maximum range 100 metres).

FOOT (BASIC)

TL:	*8*
Price:	*Cr. 20,000*
Mass:	*3%*
Enhancements:	*None*
Configurable:	*N*
Biotech Equivalent:	*Yes*

The basic TL8 foot is a battery powered unit that replaces a standard organic foot with articulated toes and ankle joint. It is not designed to do anything more than provide acceptable balance and stability and can, as with the Basic Hand, be equipped with synthetic skin or left as a bare metallic design. As the foot is usually encased in footwear many opt for the bare design although a synthetic skin sock can be kept in reserve for when the owner needs to go barefoot and does not wish to attract attention.

For the fashion conscious the Basic Foot can be equipped with self-painting toenails that can be pre-programmed with a wide variety of colours and designs, and may be configured to match a preferred shade or style of nail polish. The biotech equivalent does not come with self-painting toenails.

FOOT (ADVANCED)

TL:	*10*
Price:	*Cr. 70,000*
Mass:	*3%*
Enhancements:	*Configuration Specific*
Configurable:	*Y – 2*
Biotech Equivalent:	*Yes*

At TL10 the advanced foot can carry a series of configuration options. The biotech equivalent has a more limited range of configurations. Choose two from the following:

INTEGRAL BLADES (CR. 5,000) – WEAPONISATION.

Two centimetre Blades slide out from sheaths hidden beneath the toenails and triggered by deliberate nerve impulses. When housed, the blades cannot be seen but can be detected by standard weapons sensors. For triple the cost the blades can be ceramic, which makes them immune to weapon sensing technology. Using the blades skilfully requires Melee (small blade) and the five blades taken as one weapons unit have the same weapon Characteristics as a Dagger (*Traveller Core Rulebook* page 98). When used as a foot weapon footwear must be removed or must permit the blades access to extension (open-toed sandals, for instance).

Biotech Equivalent: The nails are made of hardened, sharpened keratin, as for biotech hand razors (see page 16).

MAGNETIC GRAPPLE (CR. 500)

The foot contains an integral magnetic plate that functions precisely as the TL8 Magnetic Grapples described on page 88 of the *Traveller Core Rulebook*.

Biotech Equivalent: There is no biotech equivalent.

PREHENSILE (CR. 6,000)

The foot's configuration mimics the prehensile nature of a simian foot. The big toe is opposable and the remaining toes are long enough to provide full grip and dexterity. The design of the foot does not inhibit movement, balance or stability but it does allow the wearer to use the foot to grip objects as easily as using a hand. Footwear can obviously not be worn over the foot when it is being used in this way. At TL11, and at an additional cost of Cr. 500,000, the Prehensile configuration grants a +1 Dexterity Characteristic enhancement. This is the limit of its enhancement capability; higher Tech Levels do not increase the Dexterity enhancement although the cost is lowered by 10% for each Tech Level above 11.

Biotech Equivalent: The prehensile option can be worked into the structure of the organic equivalent, resembling the foot of a chimpanzee.

SKATES (CR. 1,000)

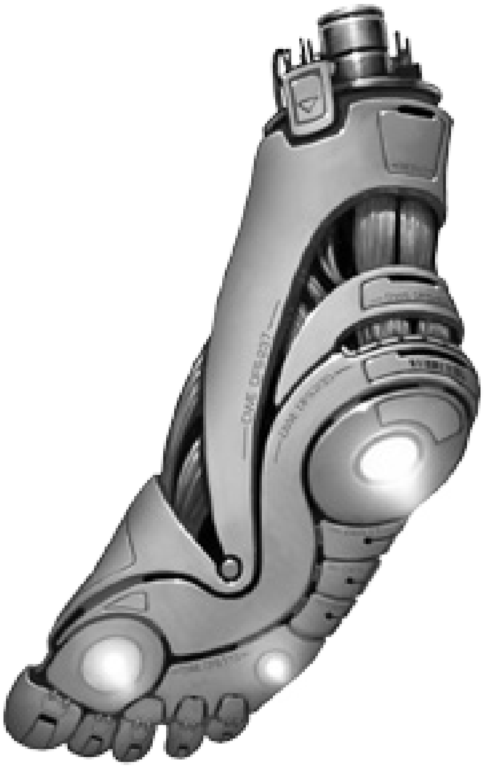
The foot is designed to accept clip-on ice or roller skates (4x4 or inline format). Footwear cannot be worn, obviously, and both feet need to be equipped with skates for this option to be effective. For a further Cr. 1,000 the skates (ice or roller) are integral and emerge from the foot according to deliberate nerve impulses.

Biotech Equivalent: There is no biotech equivalent.

SURE-GRIP (CR. 1,000)

The sole of the foot is formed from high-density rubber and resin composites that offer a non-slip grip on sheer surfaces (essentially tyres for the feet). The sole is not magnetic and will not function in microgravity or zero-g but will offer vastly enhanced traction on low-friction and sheer surfaces. The Sure-Grip, if worn with two cybernetic feet, gives a +1 DM to Athletics (co-ordination) and Athletics (endurance) skill rolls for the purposes of climbing, running and hiking.

Biotech Equivalent: The DNA of the foot is manipulated to produce thousands of tiny hairs and pads not unlike the feet of a gecko or similar lizard. The recipient does not gain the ability to climb-up walls or sheer surfaces but does gain the advantages offered by the Sure-Grip cybernetics option.



REPULSOR (CR. 25,000)

Available at TL11 and higher, the foot is equipped with a gravity repulsor that, when activated, causes the wearer of the foot to hover up to five centimetres from the ground. Forward traction is maintained through normal walking. For the repulsor array to be effective, both feet must be equipped with this configuration. Movement is unaffected, save for the obvious advantage of not being in contact with the ground. The repulsor cannot be used when footwear is worn. The unit if worn with two cybernetic feet, gives a +1 DM to Athletics (co-ordination) for the purposes of jumping.

Biotech Equivalent: There is not biotech equivalent.

LEG (BASIC)

TL:	*8*
Price:	*Cr. 200,000*
Mass:	*20%*
Enhancements:	*None*
Configurable:	*N*
Biotech Equivalent:	*Y*

This is the most basic form of cybernetic leg. Battery powered, life-like prosthesis that, even at TL8, is available in either a synthetic skin version that mimics the real thing, or a deliberately bare armature with exposed internal mechanics. The Basic Leg includes the Basic Foot assembly described on page 17.

LEGS (BLADE)

TL:	*8*
Price:	*Cr. 10,000*
Mass:	*20%*
Enhancements:	*+1 Athletics*
Configurable:	*N*
Biotech Equivalent:	*Y*

Blade legs must be fitted as a pair to a double amputee. Made from carbon fibre or a similar, lightweight, strong, flexible composite, they are recurved in design, mimicking the hind legs of a quadruped.

They are purely mechanical prosthetics and designed to fit to the upper leg where the knee joint has not been amputated. They offer limited stability and balance when standing still but when used for fast forward motion – sprinting and jumping – they confer a +1 DM to Athletics (co-ordination) and (endurance) skill rolls for the purposes of jumping and running.

The mass of the Blade Legs takes into account that they must be used as a pair.

The biotech equivalent resembles the reverse articulation and additional joint of a quadruped's hind leg. Biotech blade legs must be grafted as a pair.

LEG (ADVANCED)

TL:	*11*
Price:	*Cr. 800,000*
Mass:	*20%/40%*
Enhancements:	*Skill and Movement*
Configurable:	*Y – 2*
Biotech Equivalent:	*Y*

The TL11 advanced cybernetic leg resembles the basic leg from TL8 but offers enhancements in terms of Characteristic, skill and other bonuses. It can also be configured with a variety of other options. Note, however, that enhancements are only available where *both* legs are replaced with the advanced cybernetic leg. Balance and stability are crucial to enhanced performance.

ENHANCED SPEED (CR VARIABLE)

The legs increase the movement rate of the character. The amount of movement rate increase is dependent on Tech Level and cost

TL	Movement Rate Increase	Cost
11	x1.5	Cr. 500,000
12	x2	Cr. 750,000
13	x3	Cr. 1,000,00
15	x4	Cr. 5,000,000

ENHANCED AGILITY (CR VARIABLE)

The legs increase Dexterity but not speed of movement. Internal gyroscopes, motion sensors and balance compensators help to boot the Dexterity Characteristic. At TL11 the maximum Dex enhancement is +1 at a cost of Cr. 500,000. Additional increases are available only at higher Tech Levels with the following costs:

TL14 (+2 Dexterity) Cr. 1,000,000
TL15 (+3 Dexterity) Cr. 5,000,000

TENTACLE ARRAY

TL:	*11*
Price:	*Cr. 1,500,000 (4 tentacle array)*
Mass:	*40%*
Enhancements:	*Characteristic*
Configurable:	*Y – variable*
Biotech Equivalent:	*Y*

A tentacle array does not necessarily replace an organic limb (although it may); instead it adds additional, flexible, limbs in the form of cybernetic tentacles controlled by neural impulses through the spinal column. The basic array is four tentacles and the unit is grafted onto the spine, pelvis and the ribcage in order to distribute weight as effectively as possible. Each tentacle has the following Characteristics:

Length:	1.5 metres
Strength:	7
Dexterity:	7

The Strength and Dexterity Characteristics reflect the individual strength of the tentacle; they do not add to or modify the wearer's Characteristics. Either or both of these Characteristics can be increased to the following maximums depending on Tech Level:

TL	Maximum Characteristic Level	Cost per Characteristic Point per Tentacle
11	9	Cr. 500,000
12	11	Cr. 500,000
13	12	Cr. 400,000
14	14	Cr. 300,000
15	15	Cr. 250,000

Thus, a set of TL11 tentacles can be raised from Strength and/or Dexterity 7 to 8 or 9 but no higher. The cost for increasing Strength in each tentacle by one point would be 4 x Cr. 500,000 = Cr. 2,000,000. This is in addition to the cost of the basic array.

At TL11 the tentacle terminates in a three-clawed pincer that is capable of grasping most items, even small things such as a pen or pencil and articulating it with a certain degree of elegance but nothing approaching the fine manual dexterity of a hand. At TL12 a hand attachment is possible that gives full manual dexterity.

A tentacle can also be equipped with a weapon instead of a claw/hand attachment (although the claw can grip a modified weapon). If weapon equipped then the weapon itself must be of a modified design to accommodate the magazine or reloading mechanism. Increase the price of the weapon by an additional 50% for such a modification.

The tentacle array is clearly a bulky cybernetic augmentation. Vacc suits and battledress must be specially modified to accommodate the bulk, increasing their price by 50% to allow full facilities of the suit and enabling the tentacles to operate normally outside of the suit's confines.

The array comes as standard with four tentacles. The maximum the suit array can accommodate is six tentacles, with each one increasing the basic cost of the array by 50% (at Str and Dex base of 7).

Clearly tentacles provide additional functionality for gripping and manipulating equipment. They are controlled by neural impulses and the wearer can, at TL11, perform up to two additional functions with the tentacles as well as any being carried out by his usual limbs. At TL12 this increases to four additional functions. At TL13 the tentacles can be programmed to act autonomously of the wearer conducting functions that the wearer need to concentrate on. This level of intelligence requires an integral AI upgrade to the tentacle array, which adds 50% to the array's cost.

The biotech equivalent takes vat-grown (using cephalopod DNA) tentacles akin to those of an octopus or squid and grafts them onto the nervous system and flesh of the recipient. The tentacles are equipped with suckers that can, like those of a cephalopod, grip and manipulate even very small objects. The biotech tentacles function almost exactly as the cybernetic version and can be made extensible or retractable. The appearance of organic tentacles may prove to be disturbing for many.

Additional configurations are:

Extensible (TL 12 and higher, Cr. 100,000 per tentacle)

The basic tentacle is a fully articulated, 1.5 metre long affair. An extensible tentacle is capable if extending in length to three metres.

Biotech Equivalent: Yes – as for the cybernetic version.

Retracting (TL 12 and higher, Cr. 80,000 per tentacle)

The tentacle is extensible to 1.5 metres – and possibly more if the extensible configuration is bought – but can retract into a casing so that the tentacles are more or less unobtrusive until extended.

Biotech Equivalent: Yes – as for the cybernetic version.

LIMB AUGMENTATION ARMOUR

All the augmentations, including biotech versions, described in this section are unarmoured. Armour can be purchased at the following costs:

Armour Type	Cost per Limb	Protection
Jack equivalent	50	1
Mesh equivalent	100	2
Cloth equivalent	150	3
Flak equivalent	300	4
Combat plating	500	6
Ablat plating	100	1 (6 against lasers)
Reflect plating	1,000	0 (12 against lasers)

MULTI-JOINTING

Any limb, including biotech versions, can have additional joints added, allowing for greater articulation and range of movement.

Multi-jointing is possible at TL10 and higher and it confers a +1 bonus to the Dexterity Characteristic DM, although not to the Dexterity Characteristic itself. Multiple joints in multiple limbs do not stack their bonuses: so having two multi-jointed legs will not give a +2 Dex Characteristic DM, although greater articulation will provide other advantages that do not necessarily have specific skill or Characteristic DMs, such as reaching normally inaccessible areas.

BODY AUGMENTATIONS

The Limbs chapter covers the replacement of one or more limbs with a cybernetic equivalent; only the limb is replaced. However there may be a necessity to replace or augment a larger section of the body – typically the lower torso or even the upper torso and, perhaps, most of the body.

Such augmentations are extreme and usually never carried out for solely aesthetic reasons, even at high Tech Levels. Substantial physical trauma is the normal reason for partial body replacement although it may be possible for some dubious clinics to undertake this work at considerable cost.

Partial body augmentation is possible only at TL10 and higher and it usually involves replacing at least 50% of the body mass with cybernetics. At TL11 almost the entire body can be replaced, with the brain being implanted into a cyborg simulacrum (the so-called 98% Solution). At TL10 it is impossible to disguise so radical an enhancement; the machinery is prominent and visible. At TL11 and higher it is possible to cover the mechanisms with synthetic skin or enclose the machinery in plating that greatly reduces the prominence. At TL13 a 98% Solution simulacrum is an almost lifelike version of the human (or other species) body.

LOWER TORSO REPLACEMENT

TL:	*11*
Price:	*Cr. 1,500,000*
Mass:	*55%*
Enhancements:	*Characteristics, Movement*
Configurable:	*Y – 2*
Biotech Equivalent:	*Y*

A lower torso replacement replaces everything below the ribcage with machinery capable of sustaining life and providing locomotion. The lower torso unit includes all necessary functionality for fully replacing the digestive system and other medical functions. At TL12 it is also possible to provide functional genitalia and at TL13 genitalia that is indistinguishable from the real thing.

The purpose of a lower torso replacement is to maintain life and offer movement. At TL11 enhancements to Characteristics are not usually offered. The torso unit does, however, allow for exotic foodstuffs that would otherwise be unpalatable to the usual digestive system to be consumed. The need to pass urine and faeces is also negated with the torso system being able to process waste materials into an odourless organic composite that can easily and conveniently be emptied away with minimal fuss or mess.

A TL11 lower torso replacement comes equipped with two advanced legs (see page 48) as standard. At TL12 and higher the assembly can be fitted with other methods of locomotion, each acting as a single configuration.

The biotech equivalent comes equipped with advanced legs (see page 48) and can be grown or engineered to reproduce a wide variety of skin patterns and textures, if so desired, at an additional +5% to the base cost.

The configuration options are:

Locomotive Conversion System (Cr. 750,000)

This unit enables the lower torso unit to be detached from its usual form of locomotion – typically legs – and plugged into an alternative locomotion means (see alternative locomotion). Changing locomotive types requires the use of a special harness that lifts the body from the locomotion housing and swings it across to the replacement. The harness is included in the price of the system and can be used by the wearer. Otherwise the wearer needs the assistance of at least one other person to switch locomotive units.

Switching locomotive units takes six Combat Rounds with the harness and 10 Combat Rounds otherwise.

Biotech Equivalent: None.

Tracks (Cr. 750,000)

In place of legs the lower torso is attached to a set of low-footprint, tank-like tracks. To maintain the centre of gravity the wearer's height is reduced by around 30 centimetres.

The track unit can propel the wearer at up eight metres per Combat Round. Furthermore the wearer can negotiate steep and rough terrain without loss of movement.

Biotech Equivalent: None.

Grav Unit (Cr. 2,000,000)

The torso slots into an anti-gravity unit not unlike the same system used in an Air/Raft. The unit allows the wearer to hover and fly through neural impulse control. It resembles an inverted saucer with a 1.5 metre diameter and depth of 75 centimetres.

The unit has a top speed of 80 kilometres per hour and a height ceiling of 1,000 metres.

Biotech Equivalent: None.

Stilt Walker Unit (Cr. 500,000)

This unit comes complete with advanced legs (see page 48) but the legs are a full two metres in height, giving additional height and reach to the wearer. They otherwise function as do advanced legs although without the additional configurations.

For an additional Cr. 100,000 the Silt Walker legs can be made extensible. The legs are, at retracted position, of normal human length but, with a neural impulse command, extend to their full two metres, taking one full Combat Round to achieve full extension.

Biotech Equivalent: In the biotech equivalent the legs and lower torso are lengthened to increase the overall height of the individual. The result can be quite shocking to those unprepared for it. The legs can also be made extensible, as for the cybernetic version.

Zero-G Unit (Cr. 2,500,000)

A development of the Grav Unit the Zero G unit is an integrated vacc suit and propulsion/guidance system that the torso augmentation slots into. The vacc suit portion is a shielded transparent dome with a set of waldo arms attached to the front (this can be replaced by a Tentacle array – see page 48), which forms an airtight seal with the saucer-like base unit. The base unit contains a full, 360 degree zero-g thruster set and air processing/life support unit that is good for up to 18 hours of continuous use.

The Zero-G unit is popular in belter colonies and hostile environments.

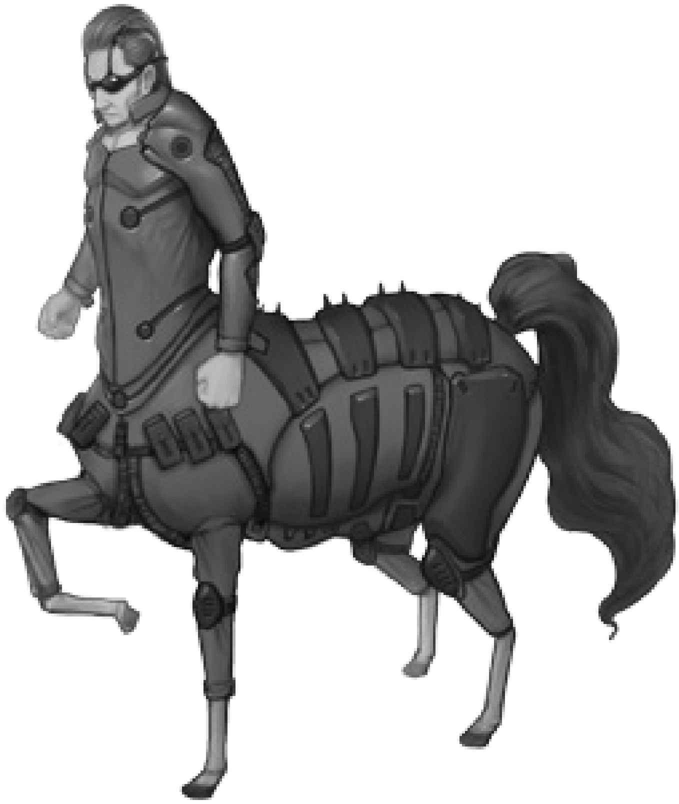
Biotech Equivalent: None.

Animal Lower Torso – Biotech Only (Cr. 3,000,000; Cr. 6,000,000 for quadruped)

An extreme act of surgery, the lower torso and legs are replaced with a specially grown animal version – either bipedal or quadruped – which is then grafted into the rest of the body, creating a man/animal hybrid that may appear, and function like, a centaur of legend. If a quadruped version is taken, movement is increased by two and the recipient is able to carry an additional load of up to 25 kilograms on his new 'back'. The nervous system must be genetically reconfigured so that the recipient gains full use of quadruped locomotion, doubling the amount of surgery and recuperation time. Such extreme bodily adaptations are very difficult to find and have carried out.

UPPER TORSO REPLACEMENT

TL:	*11*
Price:	*Cr. 2,250,000*
Mass:	*45%*
Enhancements:	*Characteristics*
Configurable:	*Y – 3*
Biotech Equivalent:	*Y*



It is occasionally necessary to replace the upper half of the body. In this case the internal organs and, usually, the arms are replaced with a cybernetic exoskeleton that houses the existing upper-body organs (heart, lungs and so forth). In extreme cases these organs need to be replaced too: increase the cost by an additional 50%. The unit utilises remaining tissue and skeletal structure and so does not involve severing the upper body, lower body and head; but rather replacing as much of the mass as possible with a cybernetic shell that contains the necessary vitals (including the all-important spinal cord).

The arms that come with the upper torso replacement kit are advanced arms (see page 41) although other types of limbs can be added at their unit cost – see the Limbs chapter for details. The price is for a standard replacement with a pair of advanced arms but utilising the existing internal organs. This unit offers an immediate +1 to Endurance. Further configurations enhance the features.

The biotech version is a cloning or vat-engineering of the recipient's original torso using personal DNA or stem cells.

Cybernetic Vitals (Cr. 1,225,000)

The heart, lungs, diaphragm, stomach and other essential organs are replaced with cybernetic counterparts. These convey the following benefits:

- Additional +1 Endurance (at TL12 and higher).
- Respirator Unit: Functions as both a Respirator, Filter kit and Artificial Gill (*Traveller Core Rulebook*, page 97) at the appropriate Tech Level.
- Medikit: This unit automatically dispenses a wide range of drugs in response to specific bodily needs or desires, according to Tech Level.

Biotech Equivalent: The features of the cybernetic enhancements are available in strengthened, vat-grown organs.

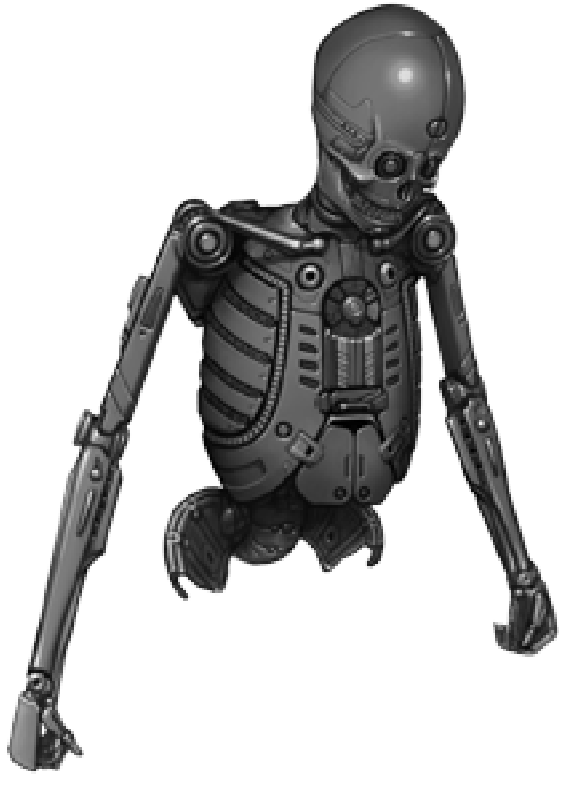
Hi-Endurance Upgrade (Varies)

This is a standard upper torso unit significantly strengthened to provide additional Endurance:

TL12 (+2 Endurance) Cr. 1,000,000
TL15 (+3 Endurance) Cr. 5,000,000

It does not include the Cybernetic Vitals array.

Biotech Equivalent: Chemicals and drugs are used to provide permanent Endurance enhancements, along with various organic implants, structurally modified, to offer the same benefits as the cybernetic equivalent.



INDIVIDUAL BODY ORGAN REPLACEMENTS

Individual organs can be replaced with cybernetic equivalents; essentially individual items from the Cybernetic Vitals package. All these are available from TL10. Biotech equivalents are also available; these are vat-grown from the recipient's DNA and stem cells.

Heart (Cr. 100,000)

Full cybernetic heart. Immune to disease and heart attacks and powered by a very long life (100 years plus) cell battery.

Biotech Equivalent: The biotech heart is powered by the body's natural functions. It is resistant to heart disease through genetically modified tissue.

Lungs (Cr. 80,000)

Not so much a set of lungs as a powerful oxygen/carbon dioxide cycling system. For an additional Cr. 20,000 the array can be modified to include integral Respirator, Filter and Automatic Gill functions.

Biotech Equivalent: Biotech lungs can be genetically engineered to replicate the functions of the cybernetic version, at a similar cost.

Stomach (Cr. 60,000)

The stomach augmentation processes all common organic substances found in the species' diet. For an additional Cr. 20,000 it can be modified to allow organic substances alien to the diet to be processed. For a further Cr. 10,000 the stomach system can be modified to filter ingested toxins that would cause harm if passed into the bloodstream, making the wearer immune to all ingested poisons.

Biotech Equivalent: The biotech equivalent involves genetic modification to allow for the cybernetic functions described previously.

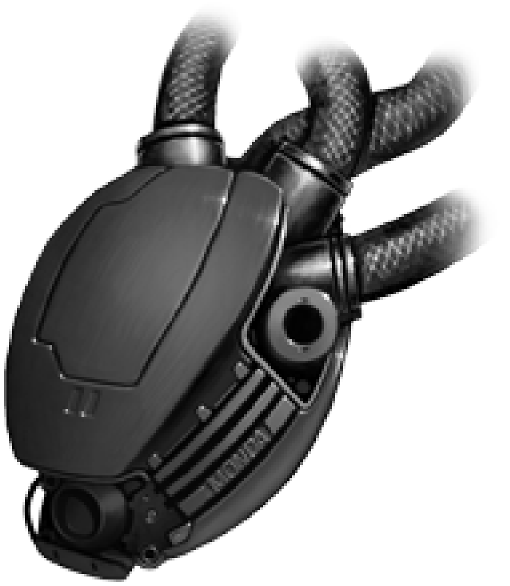
Liver (Cr. 60,000)

The liver is a vital organ with a wide range of functions, including detoxification, protein synthesis and production of biochemicals necessary for digestion. The cybernetic version simulates all these functions; it is also immune to degradation due to excess alcohol consumption.

Biotech Equivalent: As for the cybernetic version, with genetic modification to allow for greater substance abuse capacity.

Kidneys (Cr. 50,000 – pair)

The kidneys are paired organs with several functions. They are an essential part of the urinary system and also serve homeostatic functions such as the regulation of electrolytes, maintenance of acid-base balance and regulation of blood pressure. They serve the body as a natural filter of the blood and remove wastes that are diverted to the urinary bladder. The cybernetic version replicates all these functions.



Biotech Equivalent: As for the cybernetic version, with genetic modification to allow for greater substance abuse capacity.

Intestinal System (Cr. 80,000)

The cybernetic intestinal augmentation replaces the upper and lower intestine with a composite system of filters and biochemical processing chambers that mimic the usual intestinal processes. Those equipped with this system also undergo a rectal replacement that means faeces is no longer produced in a standard manner but instead a solid, odourless pellet that can be easily and discreetly ejected.

Biotech Equivalent: The biotech equivalent does not produce the pellets described for the cybernetic version, but conventional faeces instead.

SIDE BODY RECONSTRUCTION

TL:	*11*
Price:	*Cr. 2,250,000*
Mass:	*45%*
Enhancements:	*Characteristics*
Configurable:	*Y – Arms and Legs*
Biotech Equivalent:	*Yes*

If one side of the body is damaged significantly then it can be replaced cybernetically with a composite array that comprises of a partial upper and lower torso replacement, arm and leg. The unit consists of an unmodified upper and torso unit that replaces the damaged side of the body and an advanced arm and advanced leg (see pages 12 and 18). In this array there is usually no room for enhanced torso configurations as much of the existing body is relied upon to continue the main bodily functions.

Naturally enough the array can equip either the right or left side of the body.

The Biotech equivalent is an extensive surgical reconstruction of the damage body, growing the appropriate tissue, organs and bones in special vats and then using nanotech sutures to graft the entire replacement onto the existing frame.

FULL BODY SIMULACRUM (98% SOLUTION)

TL:	*13*
Price:	*Cr. 10,000,000*
Mass:	*98%*
Enhancements:	*Characteristics*
Configurable:	*Y – variable*
Biotech Equivalent:	*Yes – TL15+ only.*

At Tech Level 13 it is possible to completely transplant the brain, without any detriment to the mind, personality and memories, to a full replacement body. The brain is considered to represent 2% of the mass of the new body, hence the name 98% Solution.

It is most common for the simulacrum to resemble, as close as possible, the original individual, meaning that the simulacrum is equipped with synthetic skin and the face is designed to, almost perfectly, represent that of the old body. It can, of course, be tailored to represent any design or facial features the wearer desires but for legal and ethical reasons a like-for-like refit is the usual procedure. If the wearer (or someone else) wants the body and face to differ substantially from the original, multiply the cost as follows:

Modification	Cost Modifier
Different same-sex face	+ 10%
Opposite sex face and bodily features	+ 15%
Taller/shorter than original body	+ 15%
Fatter/wider than original body	+ 15%
Alien body (humanoid)	+ 25%
Alien body (exotic)	+ 15%
Machine body (i.e., no adornment to make the recipient appear as they were: more robot than replicant)	– 20%

The simulacrum is made-up of standard upper and lower torso replacements (fully integrated), a standard head unit and advanced arms and legs. The simulacrum is engineered and programmed to give the recipient a base of 7 in Strength, Dexterity and Endurance Characteristics with no further modifications. Characteristics can be enhanced at the following costs/Tech Levels:

TL	Characteristic Increase Unit	Cost per Characteristic Point	Physical Characteristic – Maximum Increase Possible
13	+1	Cr. 500,000	+2
14	+1	Cr. 350,000	+2
15	+1	Cr. 300,000	+3
16+	+1	Cr. 250,000	+3

The recipient retains his original Intelligence and Education Characteristics. Social Standing may be affected according to how society views cybernetics, full-body simulacrums and brain transplantation.

All the various configuration options available to upper and lower torso, head (see pages 21 and 22) and limbs are available as options for inclusion in the simulacrum.

The skills of the recipient are generally only affected if the Characteristic modifier associated with the skill rises or falls. The trained level of the skill remains as it was although Referees may impose a lengthy retraining period (a number of months for each skill level possessed) as part of the recuperation and familiarisation process of dealing with the new body.

Although a simulacrum is a functional and passable version of an organic body it will almost always be distinguishable from the living, breathing, original. At TL14 and above it is possible to render an almost perfect version (that will not age, of course, save for the brain) but at double the simulacrum cost. These modifications include simulated hair and nail growth, simulated sweat, skin tanning under sunlight conditions and so forth.

Nutrients

The simulacrum is capable of eating normal foods with the upper torso array processing foodstuffs and passing derived nutrients to the brain – but there is no necessity for this. The simulacrum can ingest biochemical composite pills that contain all necessary nutrients for a healthy brain. These pills cost Cr. 1,000 for a one month dose.

Cloned Bodies

Biotech Equivalents involve cloning the entire body and then transplanting the brain into the waiting simulacrum. The body is artificially aged to the desired point (meaning that older characters could regain lost youth) however it comes at a cost. A standard cloned simulacrum emerges with physical Characteristics at one point lower than for the original due to the speed-ageing process. Further augmentation and enhancement can raise these Characteristics to their previous levels.

A cloned body can have its skin tones, hair and so on modified to whatever style the recipient desires, at an additional +5% to the cost. It is usual, however, for the clone body to resemble the original save for the age.

SUBDERMAL BODY ARMOURING – WEAPONISATION

TL:	***10 (but varies)***
Price:	***Cr. 50,000 (but varies)***
Mass:	***90%***
Enhancements:	***Protection, Skills***
Configurable:	***Y – 1***
Biotech Equivalent:	***Yes***

Subdermal armour is an augmentation rather than a cybernetic replacement. The body can be subdermally armoured across all locations. At TL10, the base Tech Level for this kind of procedure, this adds a mesh of ballistic fibres to the skin and reinforces the skeleton giving the character integral, natural armour protection against kinetic and energy weapons. Subdermal armour stacks with other forms of armour. It can also be as subtle as the recipient wishes; either concealed beneath the skin or worn, carapace-like, above it. If worn as a carapace the cost is reduced by 10% but there may well be social repercussions for the wearer.

The protection available at various Tech Levels is as follows:

TL	Protection Available (Armour Points)	Cost per Armour Point
10	1	Cr. 50,000
11	1, 2, 3	Cr. 35,000
12	1, 2, 3	Cr. 20,000
13	1, 2, 3, 4	Cr. 10,000
14	1, 2, 3, 4, 5	Cr. 10,000
15+	1, 2, 3, 4, 5, 6	Cr. 8,000

Subdermal armour is not a replacement for Battledress.

The armour can also support one additional configuration option, at additional cost.

Camouflage (Double Armour Cost) TL 11+

Either the skin above the armour, or the armour itself, can automatically adopt a camouflage pattern via a neural command from the wearer. The camouflage pattern takes a full Combat Round to initiate and cover the body and another round to be dropped. When wearing the pattern the character gains a +1 DM to Stealth rolls for the purposes of remaining unseen. In combat the wearer gains a –1 DM for ranged attacks made against him.

Chameleon (Triple Armour Cost) TL 12+

Sensors in the subdermal layer measure and replicate the ambient colour patterns and textures. It takes one Combat Round to activate the chameleon function and a further round to drop it. Whilst active the character gains a +2 DM to Stealth rolls for the purposes of remaining unseen when stationary and +1 when moving. In combat he gains a –2 DM for ranged attacks made against him.

Light Diffusion (Quadruple Armour Cost) TL 13+

Light diffusion armouring bends and distort light around the wearer allowing him to blend almost seamlessly with his surroundings when remaining stationary, or to create a confusing and distracting blur when moving. It is not invisibility because the light distortion always provides an image clue but it is almost the next best thing. Activating Light Diffusion takes one Combat Round and another round to drop. When active the character gains a +3 DM to Stealth rolls for the purposes of remaining unseen when stationary and a +2 DM when moving. In combat the wearer gains a –2 DM for ranged attacks made against him.

HEAD AUGMENTATIONS

This section deals with augmentations to the head and skull, including the brain. Such augmentations are available at a variety of Tech Levels although a complete head replacement and brain implant is possible only at TL13 and higher.

BRAIN – ENHANCEMENT

TL:	*12*
Price:	*Variable*
Mass:	*2%*
Enhancements:	*Int, Psi, Skills*
Configurable:	*Y – 3*
Biotech Equivalent:	*Yes*

At TL12 the brain can be cybernetically enhanced with nano-processors that boost intelligence, recall and so forth. Each of these forms a separate modification with an associated TL and cost and the brain can be enhanced with up to three augmentations.

The biotech equivalents for these enhancements are generally chemical or hormone-based and delivered via the replacement of various glands throughout the body.

Intelligence Boost (Cr. 500,000 TL12+)

Slow nerve clusters are replaced with faster synthetic substrates and various nano boosters, which increase thought processes, boosting intelligence. The cost given is a base for TL12 and gives +1 Intelligence. Higher boosts are available at higher Tech Levels:

TL	Increase	Cost per Int Point
12–13	+1	Cr. 500,000
14–15	+1 or +2	Cr. 500,000
16+	+1, +2 or +3	Cr. 300,000

Computer Integration (Cr. 100,000, TL 12)

This unit allows the wearer to either wirelessly connect with a data source, such as a computer or other microprocessor-driven device, or via a neural jack. The user may then interpret the data outputs directly into his brain as sensory information, images and text as needed. He cannot manipulate the data unless he has Computers as an existing skill.

Biotech Equivalent: If the society is of TL14 or higher, where biochips have replaced silicon and other, synthetic computer systems, then biotech computer integration is possible in a similar fashion to the computer integration chip.

Eidetic Memory Chip (Cr. 500,000 TL 12)

Synthetic memory cells are wired into the recall and memory centre of the brain providing the recipient with an eidetic – photographic – memory. This does not enhance Intelligence or augment skills but it does allow the user to memorise, with complete accuracy, just about anything he sees or hears ,assuming he is concentrating on the event in question. It also enables the user to accurately digest written materials accurately (through speed-reading and eidetic absorption of information) at roughly one third the time it would take an unenhanced individual to absorb the same information. Reading a book, for example, would take a normal reader perhaps six hours to digest the content: with an Eidetic Memory Chip it can be accomplished, with accurate recall, in two hours.

Biotech Equivalent: Chemical stimulants (or stem-cell grown brain cells) introduced via artificially implanted glands enhance the memory of the recipient to an eidetic degree.

Psionic Capability Enhancement (Cr. 1,000,000 TL 12)

This extensive series of chips, system arrays and neural integrators confers on the recipient a Psionic Strength of 5. It does *not* confer psionic powers or talents; these cost extra. The Psionic Strength can be raised by one point for every additional Cr. 250,000 spent but Psionic Strength cannot exceed the Intelligence score. If a Psionic Strength of 5 already exceeds the Int score then it cannot go any higher.

To learn a Psionic Talent one must use a Skillsoft enhancement too and Skillsoft memory wafer (see page 57). Costs per basic talent are as follows:

Talent	Skillsoft Cost
Telepathy	Cr. 1,000,000
Clairvoyance	Cr. 1,500,000
Telekinesis	Cr. 3,000,000
Awareness	Cr. 3,500,000
Teleportation	Cr. 10,000,000

Buying Psionic Enhancement and talent wafers is likely to be very strictly controlled and even illegal on many worlds.

The Psionic Capability Enhancement is not compatible with the Psionic Strength Enhancement system.

Psionic Strength Enhancement (Variable, TL12)

Those already possessing psionic capabilities can boost their Psionic Strength by fitting this array into the brain. The cost and available enhancements to Psionic Strength are:

TL	Psionic Strength Enhancement	Cost per Point
12	+1	Cr. 1,000,000
13	+1, +2	Cr. 1,000,000
14	+1, +2	Cr. 750,000
15+	+1, +2 or +3	Cr. 750,000

If the psionic character also gains a Skillsoft implant then Psionic Talent wafers can be purchased at the price listed for the Psionic Capability Enhancement.

Biotech Equivalent: For the Psionic Enhancements listed, the brain undergoes adaptive surgery and chemical enhancement to achieve a similar effect – usually at a registered psionics institute.

Skill Enhancement (Cr. 50,000 per skill, TL 12)

The recipient's nervous system is recalibrated to suit a *specific* task; such as pilot's reflexes and sense of balance being improved. The Skill Augmentation must enhance a specific skill the character possesses (Pilot 0, for example) and it provides a +1 DM when using that skill. A character cannot augment more than three separate skills in this way and no skill can be augmented higher than the +1 DM.

Biotech Equivalent: None.

Skillsoft (Cr. 750,000, TL 12)

A wider application of the Skill Enhancement array. The character receives a memory wafer implant and additional neural wiring that allow him to acquire specific skills he does not ordinarily possess simply by inserting an appropriate skillsoft memory wafer. The cost covers the skillsoft socket and neural wiring. The slot for the skillsoft wafer is usually hidden at the nape of the neck with a covering of synthetic skin to prevent dust and other debris from getting into the circuitry.

There is no biotech equivalent for a skillsoft.

Any of the standard *Traveller* skills can be encoded into a memory wafer at TL12 and higher. Using a skillsoft is as follows:

- Absorbing the information from the skillsoft and becoming attuned to how to make use of the skill takes 1D6+4 minutes.
- If the character does not have the skill already, he gains it at level 0.
- If the character does have the skill he gains 1 level in it. No skill can be raised above level 3 through a skillsoft.
- Only one skill at a time can be loaded.
- The skill remains in force whilst the memory wafer is in place. Once removed the skill fades completely within 1d6x10 minutes.

Skillsofts cover, as mentioned, all of the standard *Traveller* skills plus additional areas of knowledge and expertise, such as historical subjects, languages and so on. A guide to the price of a skillsoft wafer per skill or knowledge area is given in the skillsoft table on the following page.

Some skillsoft wafers, such as military or highly specialised skills, may not be available on the open market and may cost significantly more than the listed cost. Referees should adjust the price to fit their campaign's details.

BRAIN – CYBERNETIC REPLACEMENT

TL:	*15*
Price:	*Cr. 10,000,000*
Mass:	*2%*
Enhancements:	*Various*
Configurable:	*Y – 3*
Biotech Equivalent:	*Y – TL15+*

At TL15 it is possible to replicate the organic brain with a purely electronic device. This can be inserted into any full body simulacrum or head replacement unit. The preparation procedure involves copying and encoding the full spectrum of personality, memory, training, education and emotion. It does not include psionic capabilities; any possessed are lost and can only be replaced through further augmentations.

The cybernetic brain is immune, naturally, to psionic attacks or interference. It is not, however, immune to EMP unless specifically shielded, which increases the cost by 25%. Neither will the cybernetic brain deteriorate with age or disease, as does an organic brain.

The brain can be enhanced with up to three further configurations applicable to the brain, as described earlier in this chapter. It does come with an integral skillsoft array, which does not count against the limit of three further augmentations. Skillsoft wafers must be bought separately.

Biotech Equivalent: At TL15 and higher the brain can be entirely reproduced in a specialised vat, retaining the personality and memories of the original. However, this comes at a cost. Once implanted into a body, the Int and Edu of the character are reduced by one, reflecting the lack of maturity and life experience of the regrown brain. It takes 1d6+3 months to regrow and remap a brain in this fashion.

Skill	**Skillsoft Cost**
Admin	Cr. 1,000
Advocate	Cr. 1,000
Animals	
Riding	Cr. 750
Veterinary	Cr. 5,000
Training	Cr. 2,500
Farming	Cr. 1,000
Art	
Acting	Cr. 2,000
Dance	Cr. 1,000
Holography	Cr. 1,000
Instrument	Cr. 2,000
Sculpting	Cr. 2,000
Writing	Cr. 1,000
Astrogation	Cr. 3,000
BattleDress	Cr. 3,000
Broker	Cr. 1,000
Carouse	Cr. 1,000
Comms	Cr. 2,000
Computers	Cr. 1,000
Deception	Cr. 2,500
Diplomat	Cr. 2,500
Drive	
Mole	Cr. 3,000
Tracked	Cr. 3,000
Wheeled	Cr. 1,000
Engineer	
M-Drive	Cr. 3,000
J-Drive	Cr. 4,000
Electronics	Cr. 1,000
Life Support	Cr. 1,500
Power	Cr. 1,000
Explosives	Cr. 3,000
Flyer	
Grav	Cr. 3,000
Rotor	Cr. 2,500
Wing.	Cr. 2,500
Gambler	Cr. 1,000
Gunner	
Turrets	Cr. 3,000
Ortillery	Cr. 3,500
Screens	Cr. 3,000
Spinal Weapons	Cr. 3,500

Skill	**Skillsoft Cost**
Gun Combat	
Rifle	Cr. 1,500
Pistol	Cr. 1,000
Shotgun	Cr. 1,000
Assault	Cr. 2,500
Special Weapon	Cr. 3,000
Heavy Weapons	
Artillery	Cr. 3,000
Launcher	Cr. 3,000
Investigate	Cr. 2,500
Language	Cr. 1,000 (Human language, homeworld) Cr. 2,500 (Human language, different world) Cr. 3,500 (Alien language)
Leadership	Cr. 2,000
Mechanic	Cr. 1,500
Medic	Cr. 3,000
Navigation	Cr. 2,500
Persuade	Cr. 1,000
Pilot	
Small Craft	Cr. 3,000
Spacecraft	Cr. 4,000
Starships	Cr. 8,000
Recon	Cr. 2,500
Remote Operations	Cr. 1,500
Science (Life, Physical, Social and Space)	Cr. 3,000, any branch
Seafarer	
Sail	Cr. 1,000
Submarine	Cr. 3,000
Ocean Ships	Cr. 3,000
Sensors	Cr. 2,000
Stealth	Cr. 2,500
Steward	Cr. 1,000
Streetwise	Cr. 1,000
Survival	Cr. 1,000
Tactics	Cr. 2,000
Trade	Cr. 1,000
Vacc Suit	Cr. 1,500
Zero-G	Cr. 1,500

EARS – HEARING ENHANCEMENT

TL:	***10***
Price:	***Cr. 50,000***
Mass:	***Negligible***
Enhancements:	***Hearing, Skills***
Configurable:	***Y – 1***
Biotech Equivalent:	***Y***

The inner ear mechanism is replaced with a finely tuned cybernetic replacement, which replicates the range and definition of standard human hearing (around 12hz). At this basic level deafness can be cured and normal hearing restored. This is known as Level 1 Hearing.

The biotech equivalent uses cloned or stem cell-produced inner ear mechanisms to achieve the same effects as the cybernetic version.

For further cost the hearing sensitivity can be enhanced as follows:

Level 2 (Cr. 150,000, TL 11)

Equivalent to the hearing of a terran canine. Sensitivity is in the 40 to 60,000hz range with hearing capable of detecting ultrasonic frequencies unavailable to Level 1 hearing.

Level 3 (Cr. 500,000 TL 12)

Equivalent to the hearing of a terran bat. Sensitivity is in the 20 to120,000hz range. At this level the wearer can use sound to detect both distance and distinct nature of a sound very accurately (to within 10 centimetres of its true location) and to determine both size, density, nature (organic/inorganic/machine) and texture of the noise source.

EARS – CYBERNETIC REPLACEMENT

TL:	***10***
Price:	***Cr. 90,000***
Mass:	***Negligible***
Enhancements:	***Hearing, Skills***
Configurable:	***Y – 1***
Biotech Equivalent:	***Yes***

The Hearing Enhancement array is an implant designed to augment the existing ear and does not replace the outer ear. This is a complete replacement for both inner and outer ears. The outer ear can be replicated to resemble a normal organic ear or it can be modified to any of a number of designs (a mesh opening, flush with the skull, for example, or something exotic such as the ear design of an animal or alien species).

The replacement comes with hearing Level 1 as standard. At higher Tech Levels hearing Level 2 or 3 can be substituted at 75% of the cost of the Hearing Enhancement price.

EYES – SIGHT ENHANCEMENTS

TL:	***Varies***
Price:	***Varies***
Mass:	***Negligible***
Enhancements:	***Sight, Skills***
Configurable:	***Y – 2***
Biotech Equivalent:	***Yes***

Sight enhancements use micro-cybernetics to enhance eyesight by chipping into the optic nerve, lenses and so on of an existing eye; the eye itself is not replaced. Only two such augmentations can be worn together in order to prevent sensory and optic nerve overload.

General Information Chip (Cr. 10,000 TL 9)

The eye is chipped with a tiny implant that displays the following information permanently in the lower peripheral vision of the wearer. Thought impulses can scroll through the information sets, usually displaying two elements at a time.

- Date
- Local Time
- Time for another time zone/world
- Ambient temperature
- Relative humidity
- Humidex
- Geographical co-ordinates (longitude and latitude) – available only where GPS is present
- Altitude
- Compass bearing

Biotech Equivalent: None.

Peripheral Vision Enhancement (Cr. 50,000 TL 10)

The depth and acuity of standard far and mid peripheral vision is enhanced. It confers the following benefits:

- Recon or other rolls to spot unusual or hidden things, or take in a wide field of vision without movement gain a +1 DM.
- +1 to Initiative rolls in combat.

Biotech Equivalent: The lenses and muscles of the eye are surgically adapted to provide peripheral vision enhancement, as per the cybernetic version.

Low-Light Enhancement (Cr. 60,000, TL 10)

Daytime vision remains as normal but the recipient gains night sight at the equivalent of a terran canine or feline. Movement in the dark is easily detected and heat sources are outlined with a glow commensurate with their temperature. The user suffers no negative DMs for night-time conditions.

Biotech Equivalent: The rods and cones of the eye are surgically adapted to provide the same enhancements as the cybernetic version.

Anti-Flash (Cr. 3,000 TL 9)

The eye is given an artificial lens, replacing its natural one. These are fairly common among pilots as they are designed to stop a person fitted with them from being blinded by a bright light, or even a low powered laser, if shone into their eyes.

At TL10 there is an upgraded version, which will prevent the individual from being stunned by the use of some weapons. This costs Cr. 10,000 and also involves an implant to the ears that neutralises the effects of a stun grenade, for example.

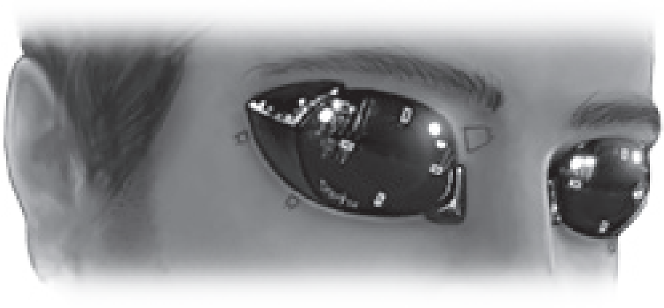
Sunscreen (Cr. 8,000, TL 9)

The eye is fitted with the equivalent of a polarising filter lens, which reduces direct and peripheral glare in the same way a pair of good quality sunglasses operates.

The biotech equivalent is a simple graft producing a similar effect.

Mirrorshades (Cr. 12,000, TL 9)

A set of reflective lenses are fitted across the eye socket completely enclosing the eye and functioning as per the sunscreen enhancement. The eye is invisible behind the lens meaning that eye colour cannot be seen; however, in the mirrored form retinal identification is impossible, so the lenses can also be obtained in a non-reflective variant that does not obscure retinal identification systems and leaves the eye visible. The lenses also protect the eye from small intrusions such as dust and so other airborne irritants. The lenses are water, scratch and grease resistant. Underwater, vision is as clear as wearing goggles. Prescription variants to correct vision defects are available at an additional 1% of the cost.



Nictating Membranes (Cr. 8,000 TL9)

A nictating membrane, as found in birds, fish and some mammals, is a lateral third eyelid that is used to protect the eye from intrusion, clean away dirt and debris and offer a transparent screen that ensures that vision is not blurred when underwater. A nictating membrane can be added to a normal, organic eye or a cybernetic one. In use it immediately cleans away foreign objects that would cause irritation or pain and also ensures perfect clarity of vision when underwater, as though wearing goggles. Because the membrane is transparent and relatively unobtrusive, few will notice the enhancement unless watching closely.

Eyes – Cybernetic Replacement

TL:	*9+*
Price:	*Cr. 30,000 per eye*
Mass:	*Negligible*
Enhancements:	*Sight, Skills*
Configurable:	*Y – 3*
Biotech Equivalent:	*Yes*

This is a standard cybernetic replacement for an organic eye. The standard model can have any shape, style or colour of iris including exotic options (strange colours, goat-like slits, no pupil and so on). Taken as a pair of cybernetic eyes confer 20/20 vision. Taken singly, individual eye defects such as myopia or astigmatism can be cured.

A variety of enhancements – up to three combined – are available. All the Eye-Sight Enhancement options earlier can be fitted.

The biotech equivalent is a cloned or stem cell produced organic eye. The enhancements it can receive are limited.

Telescopic/Micro Sight (Cr. 80,000, TL 9)

The eye is capable of magnifying images up to x10 using a combination of optical and digital magnification. It also offers a +1 DM for aiming without the need for separate weapon-mounted sights.

Biotech Equivalent: Enhanced eye corneas offer the same advantages as the cybernetic version.

Combat Range Finder (Cr. 125,000, TL10)

Incorporating the Telescopic/Micro Sight functionality the Combat Range Finder also confers the following information and benefits:

- Laser Sight (additional +1 DM for aiming)
- Crosshairs

- Range calculation to target and visual peripheral field display
- Wind direction and strength
- Heat source intensification (no adverse DMs if a target is obscured by darkness, smoke or fog)

The Combat Range Finder eye is classed as a weaponisation augmentation.

Biotech Equivalent: None

Multi-Spectrum Vision (Varies)

The eye is capable of seeing a variety of spectrums depending on the Tech Level of the implant:

TL10	Near Infrared (Cr. 50,000)
TL11	Ultraviolet, Near Infrared (Cr. 100,000)
TL12–13	Microwave and Far Infrared, Ultraviolet, Near Infrared (Cr. 150,000)
TL14–15	Radio, Gamma, Microwave and Far Infrared, Ultraviolet, Near Infrared (Cr. 250,000)
TL16+	Radio, Gamma, High Energy Gamma, Microwave and Far Infrared, Ultraviolet, Near Infrared (Cr. 300,000)

Biotech Equivalent: Enhanced retina cells offer the same advantages as the cybernetic version.

Camera (Cr. 90,000 TL 9)

The eye functions as a digital still or video camera, transferring data to a memory wafer via a skillsoft implant. The camera functions as a full motion video camera or, through a deliberate eye blink, as a 50 megapixel digital imaging camera. Blank recordable data wafers can usually hold up to one hour of video or 20,000 still images.

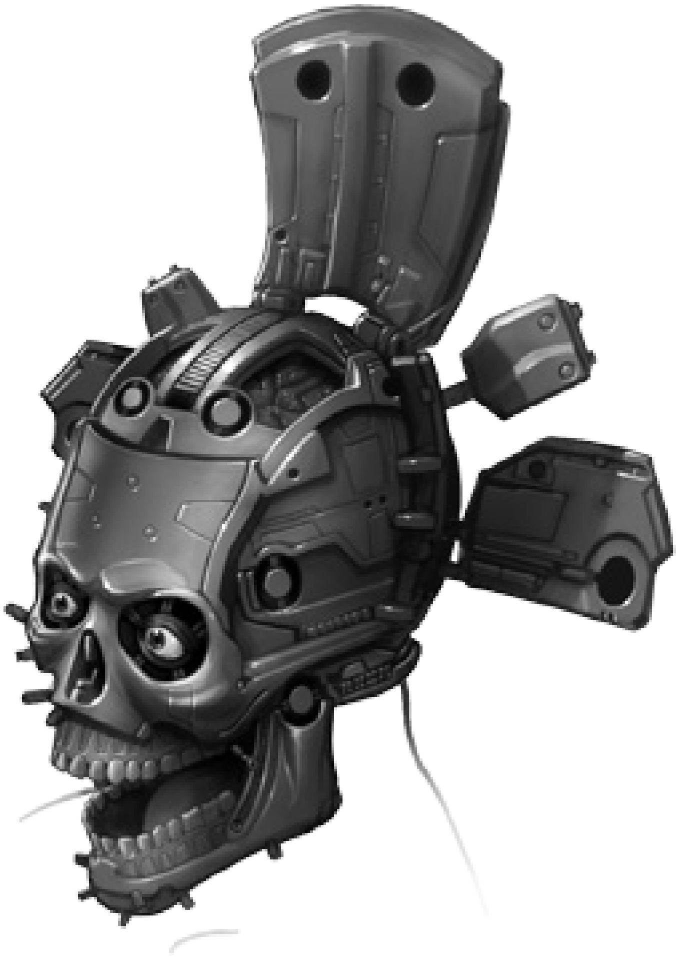
The eye can also replay stills or video upon neural command with a menu interface coming into the field of vision and controlled by eye blinks to select an image or video clip. The eye must be closed for this replay to occur.

Biotech Equivalent: None.

HEAD – FULL CYBERNETIC REPLACEMENT

TL:	*15*
Price:	*Cr. 5,000,000*
Mass:	*10%/12% (including brain)*
Enhancements:	*Various*
Configurable:	*Y – 6*
Biotech Equivalent:	*Yes*

At TL15 the entire head can be replaced with a cybernetic or biotech version similar to that used in the full body simulacrum.



The head must be equipped with either a transplanted brain or a fully encoded cybernetic brain.

The cybernetic head – but not a biotech one – can accept up to six enhancements from those presented in this chapter at additional cost. Otherwise it comes with a set of standard eyes, Level 1 hearing ears, voice replicator and so forth. As in the full body simulacrum the facial features are generally designed to represent the recipient's but features can be varied at extra cost. There are also a number of individual enhancements the full cybernetic head can benefit from:

360 Degree Swivel Mount (Cr 100,000, TL 15)

The head is mounted on a servo-assisted collar that allows it to swivel through a full 360 degrees and tilt at the usual neck extension.

Biotech Equivalent: None.

Facial Morphing (Cr. 1,000,000, TL 15)

Molecular and microgears in the synthetic skin and the head mechanism allow the facial features to be changed into a wide variety of different configurations, providing an integral disguise kit. Eyes can be widened and narrowed; brows and cheekbones distorted; mouth size elongated and contracted; and so on. Even the pigmentation of the hair used in the head can be altered.

Affecting a face change takes time to accomplish. Use the following as a rough guideline:

Altering 1 Facial Feature:	1 Combat Round
Altering 2 Facial Features:	3 Combat Rounds
Altering 3 Facial Features:	6 Combat Rounds

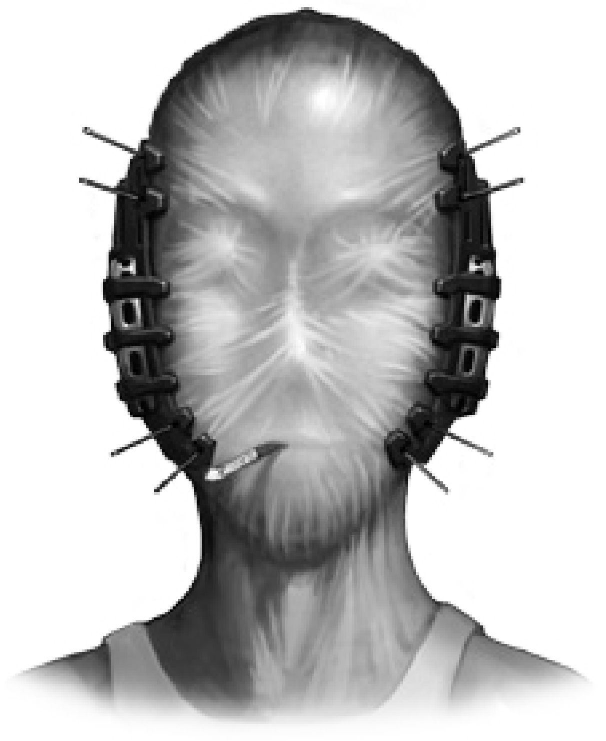
Replicating someone else's face can be achieved in one hour and will offer a passable, but not exact, resemblance (roughly 80% likeness). Achieving a match of 80+3d6% requires 1D6+2 hours.

Biotech Equivalent: Nanobots are implanted throughout the facial muscles that allow a similar morphing technique to occur. However the degree of likeness is 50+4D6% rather than the 80% of the cybernetic version.

Blank Face (Cr. 30,000 TL 15)

The face is shielded behind a layer of gas-permeable synthetic flesh with only the facial relief showing. The face therefore has no expression – simply a blank canvas of skin presented to the world. Such an extreme variation is generally frowned upon in most civilised worlds.

Biotech Equivalent: None.



Head Weapon Mount (Cr. 250,000 TL 15) - Weaponisation

The head unit is equipped with a mount for a small (handgun sized) weapon. The mount can be fixed to the skull or side of the face, as desired. The mount is intended for small, recoilless weapons (Recoil 0 or lower) and the weapon itself must be modified to fit the mount, at an additional 50% increase to the weapon's cost.

The weapon is fired using neural impulses and any weapon fired from the head mount is subject to a –1 DM to the attack roll. Combat Range Finder eye modifications can help offset this disadvantage.

The mount is always obtrusive and cannot be easily disguised: it is usual for a weapon mount to be added only to 'unskinned' cybernetic heads although there is no reason, aside from obvious aesthetics, why it cannot be mounted to a skinned head. Only one Weapon Mount can be added to a cybernetic head.

Biotech Equivalent: None.

JAW

TL:	*9*
Price:	*Cr. 160,000*
Mass:	*Negligible*
Enhancements:	*Bite*
Configurable:	*Y – 1*
Biotech Equivalent:	*Yes*

The standard cybernetic jaw replaces the lower jaw structure of the face with a micro-server controlled jawbone that connects with the existing masseter muscle tissue and skull. In its most basic form it is a simple replacement that, when covered with synthetic flesh, is almost indistinguishable from the original.

The jaw is equipped with ceramic dentures and the unit also comes equipped with the cybernetic mouth unit described later. At an additional cost of 0.75% the teeth of the upper jaw can be replaced to match the artificial teeth.

If the cost is doubled the cybernetic jaw becomes a far more powerful unit with enhanced servo motors, synthetic muscles to replace the existing tissue and stronger teeth made of tungsten or stronger metal (optionally ceramic coated although many leave the teeth unadorned). This enhanced jaw is capable of biting through steel cable up to one centimetre in thickness and easily severing fingers and other such objects. The recipient of an enhanced jaw gains a Bite attack that inflicts 1d6 damage.

The biotech equivalent is a vat-grown replacement that can be engineered to offer the same enhancement as the cybernetic version.

MOUTH/THROAT – VOICE ENHANCEMENT

TL:	***9***
Price:	***Cr. 50,000***
Mass:	***Negligible***
Enhancements:	***Various***
Configurable:	***Y – 1***
Biotech Equivalent:	***Yes***

The trachea and voice box are subject to implants that replicate the voice of the user following extensive original voice sampling. In its standard state the enhancement restores a voice lost to other surgery or trauma. However several enhancements are available.

Voice Simulator (Cr. 20,000, TL 9)

The Voice Simulator contains up to three separate voice patterns selected by the recipient. The voice can be changed to a different one using neural impulses. The pre-set options are:

Male: No Accent
Female: No Accent
Machine

The user can thus replicate his own voice, a generic male or female voice and a deliberately synthesised voice as found in many voice-responsive items.

At an additional cost of Cr. 10,000 a specific voice, including accent, can be recorded, sampled and then used to replace one of the generic options. Such a facility is generally restricted for obvious reasons.

Voice Amplifier (Cr. 20,000 TL9)

The voice amplifier boosts the volume of a normal voice to three times its usual volume and range with a neural impulse control.

In both these cases the Biotech Equivalent involves surgery to alter the function of the larynx to replicate the cybernetic effects.

MOUTH/THROAT – CYBERNETIC REPLACEMENT

TL:	***9***
Price:	***Cr. 125,000***
Mass:	***Negligible***
Enhancements:	***Various***
Configurable:	***Y – 3***
Biotech Equivalent:	***Yes***

The entire mouth, trachea and voice box is replaced with a cybernetic or biotech version. Usually the lips of the mouth are still intact although they too can form part of the assembly. The unit is designed to allow for normal breathing and swallowing, including a gag reflex; however it can be customised with the following enhancements (as well as either of the Voice Enhancements listed previously).

Breather Mask (Cr. 1,000 TL9)

Equivalent to the TL8 Breather Mask found on page 97 of the *Traveller Core Rulebook*. The unit is located in the throat assembly and is quite discreet.

Artificial Gill (Cr. 8,000 TL 9)

Functions as the Artificial Gill found on page 97 of the *Traveller Core Rulebook*. It, too, is a discreet enhancement.

Enhanced Taste (Cr. 5,000 TL9)

The synthetic taste buds of the cybernetic mouth are a significant enhancement on the standard organic sense. Individual flavours can be sampled to an intense degree – satisfying demanding gourmets – and the unit can be calibrated to appreciate and enjoy flavours previously unpalatable to the recipient, including exotic, alien foods.

Breath Weapon (Cr. 300,000, TL10) – Weaponisation

The unit is equipped with the means to expel gas (of any kind; poison, nerve, sleep and so on) without affecting the user. The weapon is located in a magazine fixed into the neck, which is accessible externally and covered with synthetic skin. A single capsule of gas has enough for one exhalation before it must be replaced. The gas has a range of Personal and effects depend on the type of gas used:

Poison (Cr. 3,000 per capsule): Inflicts 2d6 damage.
Nerve (Cr. 3,000 per capsule): Roll End 8+ or be subject to partial paralysis for 1d6 rounds (reduce Dexterity to one quarter its normal value for the duration of the gas).
Sleep (Cr. 2,000) per capsule: Roll End 8+ or be rendered unconscious for 2d6 minutes.

NOSE – OLFACTORY ENHANCEMENT

TL:	***9***
Price:	***Cr. 50,000***
Mass:	***Negligible***
Enhancements:	***Skills, Smell***
Configurable:	***N***
Biotech Equivalent:	***Yes***

This is an enhancement to the olfactory senses rather than a replacement of the olfactory apparatus. Sense of smell is augmented by chips or glands located in the sinus cavities, which increase the sense of smell from human standard (Level 1) to Level 2, which is roughly equivalent to that of a canine. Scents normally undetectable to humans are placed within olfactory range with even extremely small quantities of aromatics detectable, whether airborne or in a fixed location. Aromatics that may seem to have a very similar smell at Level 1 can be differentiated easily at Level 2.

The benefits this confers are as follows:

- Rolls used for detecting hidden persons or things by sense of smell gain a +2 DM.
- Scents and scent trails can be memorised and detected for up to 1D6+1 hours later.

Nose – Cybernetic Replacement

TL:	*9*
Price:	*Cr. 120,000*
Mass:	*Negligible*
Enhancements:	*Various*
Configurable:	*Y – 2*
Biotech Equivalent:	*Yes*

Replacing the existing external nose and olfactory apparatus the cybernetic nose is generally structured to reflect the original although the nose can, of course, be customised to something more aesthetically pleasing or even exotic in appearance (at an additional 1% increase in cost). As a standard unit sense of smell is Level 1 – human normal olfactory range – although at a cost of an additional Cr. 50,000 olfactory enhancement provides the benefits described earlier. The nose is immune to damage from drugs or stimulants ingested nasally.

Additional enhancements are as follows:

Air Filtration (Cr. 1,000, TL 9)

The nose can effectively filter harmful airborne substances before they reach the lungs, acting as an integral Breather Mask as described on page 97 of the *Traveller Core Rulebook*.

Biotech Equivalent: Functions as per the cybernetic version.

Particle Analysis (Cr. 20,000 TL 9)

As well as the benefits of olfactory enhancement, described earlier, the olfactory apparatus is capable of undertaking detailed particle analysis whether the particles are airborne or placed into the nostrils. The wearer can identify chemical composition, malignant/benign compounds and even differentiate between different species' aromatics. This confers a +1 DM to all Physical Sciences (Chemistry) rolls when analysing substances nasally.

Biotech Equivalent: None.

Mouth/Nose – Extreme Atmosphere Life Support

TL:	*10*
Price:	*Cr. 800,000*
Mass:	*4%*
Enhancements:	*Survival*
Configurable:	*No*
Biotech Equivalent:	*Yes*

The nose, mouth, throat and lungs are replaced with an advanced atmosphere processing unit that allows the recipient to breathe Tainted, Dense, Corrosive and Exotic atmospheres with no ill-effects. The unit cannot handle vacuum and an atmosphere supply of some kind must be carried in Trace or vacuum environments.

This augmentation cannot be disguised at TL10 and the appearance of the wearer is severely compromised as the nose, mouth and throat are visibly mechanised, which may lead to certain social consequences.

At TL11 the system can be made less obtrusive so that the apparatus is roughly enclosed within the structure of the neck and face although it will be obvious still that the recipient has been modified.

At TL12 the system can be fully hidden with appearance remaining unaffected.

Some societies may punish their criminals by sending them to perform hazardous hard labour in environments where Extreme Atmosphere Life Support is essential; this tends to be the most common reason for this form of cybernetic augmentation although some explorers may also opt for the surgery so that they can conduct long-duration studies of alien and extreme environments.

The biotech equivalent uses specially vat-grown substitutes to achieve the same effects but without the obtrusive appearance of the cybernetic version.

Skull – Strengthening

TL:	*9*
Price:	*Cr. 100,000*
Mass:	*Negligible*
Enhancements:	*Special*
Configurable:	*No*
Biotech Equivalent:	*Yes*

The skull is strengthened with the introduction of armour plating. The plating provides Armour 2 for the purposes of head wounds but also makes the skull impervious to knocks and the possibility of concussion. Any blow to the head meets with unexpected resistance and the wearer cannot be rendered unconscious or concussed through head-targeted blunt trauma (although guns and other high velocity projectiles will still cause damage).

CHROME, CHIPS AND PLUG-INS

This section deals with miscellaneous augmentations covering a wide range of functions that are not necessarily associated with a specific body part. Most of the items in this section are wired into the body in some way or provide improvements to the cybernetics already covered in the preceding chapters.

HEIGHTENERS

There are various different types of heighteners, all of them acting on the nervous system and involving the implantation of a very small cybernetic or gland-based module in the brain stem, where it meets the spinal column. Each Heightener module has a specific application: no individual can have more than two Heightener modules implanted simultaneously.

Awareness (Cr. 100,000 TL10)

An Awareness chip heightens the brain and nervous system's natural attenuation to external threats, essentially boosting the 'fight/flight' response and enhancing the 'sixth sense' that all humans tend to carry as part of their latent instincts.

Awareness chips come in three levels. Level 1, at Cr. 100,000, grants a +1 DM to all rolls made for judging danger, noticing things out of the ordinary and so on.

Level 2 is double the cost and grants a +2 DM.

Level 3 is quadruple the cost and grants a +3 DM.

Level 2 and 3 Awareness heightening do introduce some neurological side effects, though. Roll on the Heightened Awareness Side Effects table once for Level 2 and twice for Level 3. The condition received is permanent and even removing the chip will not cure the condition.

Combat Reflexes (Cr. 500,000 TL10) – Weaponisation

Heightened Combat Reflexes improve performance in combat conditions. Available in three levels each level confers a new augmentation:

Level 1 (Cr. 500,000): Initiative is rolled on 3d6 rather than 2d6 as normal.

Level 2 (Cr. 1,000,000): As for Level 1 and the character gains a +1 DM to all attack rolls.

Level 3 (Cr. 3,000,000): As for Level 2 and the character treats his Endurance Characteristic modifier (not the Characteristic itself) as 1 level higher (thus a character with Endurance 8 would gain a +1 modifier, although his End does not, itself, increase).

AWARENESS SIDE EFFECTS

1d6	Condition	Effects
1	Agoraphobia	The character is terrified of open spaces and large crowds. Must successfully roll Int 8+ whenever faced with going outdoors for an extended period. Failure on this roll induces panic attacks, withdrawal and so forth.
2	Claustrophobia	Fear of confined spaces: the character must successfully roll End 8+ when in any enclosed area of less than three cubic metres or suffer panic attacks, nausea, withdrawal and so forth.
3	Paranoia	The character becomes nervous and fearful of anyone or anything unknown to him, perceiving all as an actual threat. Suspicions of conspiracy are seen everywhere and the character constantly suffers the need to watch everyone and everything, trusting only those things and people he is intimately familiar with.
4	Insomnia	The character cannot sleep and only experiences 1d3-1 hours of sleep per night unless drugged. All Characteristics with the exceptions of Edu and Soc suffer a –1 reduction if a character receives less than 50 hours sleep per week.
5	Migraine	Once a month the character must roll End 8+ or be crippled by an intense headache lasting 1d6+1 hours. The headache is foreshadowed by dancing lights or spots before the eyes (usually an hour or so before the migraine begins) and when the migraine starts the character must find a quiet, darkened room and wait for it to pass. Drugs have no effect on the migraine's intensity.
6	Photophobia	The character is highly sensitive to bright lights, including bright, direct sunlight. He must roll End 8+ or suffer intense pain in the head and eyes when exposed to any form of bright light. The only way to counter the pain is to close the eyes and retreat to somewhere dark. Sunglasses or eye augmentation can cure this condition.

Piloting Reflexes (Cr. 250,000 TL10)

Heightened Piloting Reflexes enhance a pilot's ability to anticipate and respond to aerial or space conditions far faster and more effectively than normal. Available in three levels, Level 1, at Cr. 250,000, provides a +1 DM to any one Pilot skill Speciality. Level 2, at Cr. 500,000, provides a +1 DM to a second Speciality. Level 3, at Cr. 1,000,000, provides a +2 DM to all Pilot Specialities.

Ambient Conditions Response (Cr. 125,000 TL10)

This heightener makes the recipient acutely aware of very, very small shifts in local ambient conditions: air pressure and density; temperature variation; background radiation; magnetic fields; chemical concentrations and so on. The recipient does not know the cause of such changes but is sensitive to their variations without the need for sensors or other equipment. Tiny changes in the environment may be enough to forewarn of catastrophe that someone with Heightened Ambient Conditions Response can judge and therefore act upon.

INTEGRATORS

Integrators are very similar to a skillsoft augmentation (see page 57) but are specifically designed to hook the wearer into a specific piece of machinery, allowing direct control of it, including over-riding programming, imparting thought-control, diagnostics and so forth. Like Heighteners, Integrators are tapped and chipped into the brainstem with a standard neural interface (wired or wireless) providing the connection to suitably modified equipment.

No character can have more than two integrators. Unless the society uses bio-organic weaponry, there is no Biotech Equivalent for these integrators.

Heavy Weapons Integration (Cr. 750,000, TL10)

The character connects with a suitably modified Heavy Weapon via a neural jack. He may add his Int Characteristic modifier to any attack rolls made with the weapon and gains a +1 DM to Initiative rolls when using Heavy Weapons.

Artillery/Turret Integration (Cr. 750,000, TL10)

The character connects with any suitably modified artillery or turret-based weaponry. He may add his Int Characteristic modifier to any attack rolls made with these weapons and gains a +1 DM to Initiative rolls when using either Artillery or Turret mounted weapons.

Spinal Mount Integration (Cr. 1,000,000, TL11)

As per the Artillery/Turret Integration augmentation but applied to spinal mounted weapons (particle beams, meson weapons and so on).

Ship Systems Integration (Cr. 650,000, TL10)

The character interfaces directly with the essential systems of a starship: piloting, life support, sensors, navigation, engineering, damage control and so forth. These systems can be controlled through direct integration without the need for being at a static helm position, which means that a starship can be controlled and its systems manipulated, remotely from the bridge. Integration does not replace any necessary skill rolls for controlling the ship; it merely provides a more direct interface. If a ship's systems can be slaved or connected to a remote control point, then integration can be effected remotely, as well.

Computer Integration (Cr. 500,000, TL10)

The character interfaces directly with a computer, meaning that all its programs and functions can be controlled through neural impulses rather than through voice or external commands/interfaces. Furthermore, internet functions (or their equivalent in a *Traveller* campaign) and connections can be visualised graphically by the integrated character: usually as columns of colour representing sources of data, with different shades and depths of colour signifying different types and intensity of data. Armed with the right software a Computer Integrated character can mount raids and remote manipulation attempts on other computers and data sources through mental and neural commands and impulses.

Vehicle Integration (Cr. 300,000, TL10)

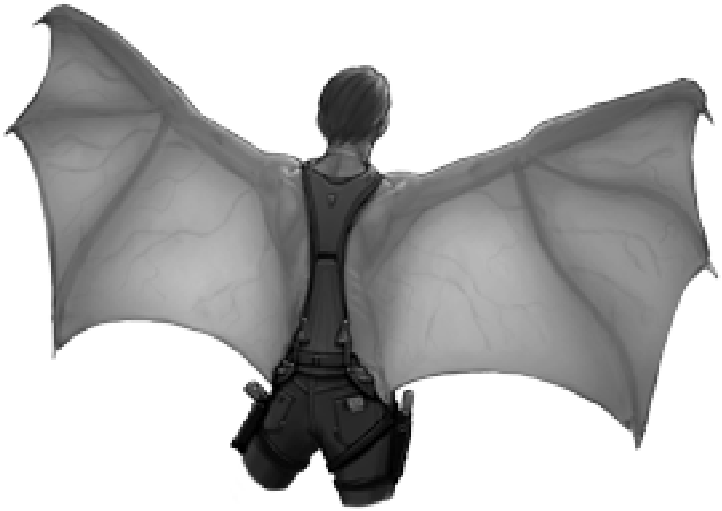
Interfacing directly with any suitably modified vehicle that the character is skilled to operate, the character gains the following benefits:

- Add his Int Characteristic modifier to any skill roll used to operate the vehicle.
- Gain immediate mental information relating to vehicle status, performance, faults and so on.
- Over-ride any security features installed on the vehicle by using the Computer skill (roll 8+).
- If the vehicle is mounted with viewing cameras for blind spots, rear view and so on, the character can gain multiple visual perspectives and information (distance, speed, relative speed and so on) for other objects surrounding the vehicle.

GLIDING MEMBRANES

TL:	*9*
Price:	*Cr. 45,000*
Mass:	*1%*
Enhancements:	*Capabilities*
Configurable:	*N*
Biotech Equivalent:	*Yes*

An exotic augmentation, gliding membranes are a pair of extensible micro-light wings that are built into the back of the recipient and fold both flat and almost completely when retracted. The wings have a span of three metres and allow the user to glide using thermals and up-drafts in precisely the same way



as an external parasail or hang-glider facilitates flight. The user must have Flyer 0 to use the gliding membranes successfully.

The wings take three seconds to deploy or retract, controlled by a neural impulse command. Someone using gliding membranes must launch from a suitably high position to take advantage of air currents: the wings cannot flap and one cannot take off from low, flat ground unless towed, parasail style, by another motive source.

The membranes are only capable of supporting up to the user's weight plus an additional 25% in extra equipment; they are therefore not suitable for carrying passengers.

The biotech equivalent involves grafting lengths of skin between the arms and torso in a manner akin to a flying squirrel or bat. At TL15 and above, the gliding membranes may even take the appearance of wings that are grafted onto the skeleton and spinal column.

BONE LACING

TL:	*10*
Price:	*Cr. 25,000 per 10% of Mass*
Mass:	*Varies*
Enhancements:	*Endurance*
Configurable:	*N*
Biotech Equivalent:	*Yes*

Take the skeleton of an organic being and introduce a metal to coat and strengthen the bone: this is bone lacing. The entire skeleton can be laced in this way although it can be applied to a localised area.

By strengthening the bone the following benefits are gained:

- The Endurance Characteristic modifier (but not the Characteristic itself) increases by +1.
- Conversely the Dexterity Characteristic is reduced by –1.
- The character's mass is increased by 5% for every 10% of body mass laced.
- Laced bones are resistant to breakage and act as a form of internalised armour, providing one Armour Point against projectile and melee attacks.

SUS-AN ARRAY

TL:	*10*
Price:	*Cr. 250,000*
Mass:	*Negligible*
Enhancements:	*Special*
Configurable:	*N*
Biotech Equivalent:	*No*

Sus-An is short for Suspended Animation. The Sus-An array continually monitors the body's state of health and, if body functions fall to dangerous levels, the Sus-An array releases chemicals that lower the body's temperature and slow the heart rate almost to a standstill, mimicking external forms of suspended animation such as a cryonics chamber. For all intents and purposes the character appears to be dead although the Sus-An array continually monitors brain activity and provides necessary stimulants to prevent brain damage.

The Sus-An array keeps the character alive even after suffering large amounts of trauma that would result in death due to subsequent organ failure or haemorrhaging. The character remains in this state until the array senses that vital signs have been stabilised and key organs healed to a sufficient, life supporting level. Consciousness then returns.

The Sus-An array is not designed to be activated at will, although it can be mentally over-ridden if the character senses that suspended animation for a time would be prudent. When activated in this way the character lapses into a Sus-An coma for a timed period of no more than six hours. This period can be extended if the character makes a successful Int 8+ roll at the end of the period to retrigger the Sus-An state.

EMP GENERATOR

TL:	*11*
Price:	*Cr 300,000*
Mass:	*5%*
Enhancements:	*None*
Configurable:	*N*
Biotech Equivalent:	*No*

The EMP Generator is built into an individual and confers the ability to generate a localised EMP that affects all unshielded electronics within a given area, causing them to cease functioning. EMP generators come in three levels, each with a different radius of effect:

Level 1 (Cr. 300,000): 3 metre radius
Level 2 (Cr. 600,000): 10 metre radius
Level 3 (Cr. 1,000,000): 30 metre radius

Any cybernetics carried by the user of the generator must be shielded or they, too, will cease functioning.

The EMP burst is instantaneous. Shielded electronics are unaffected, as are those beyond the radius of the burst (although electronics within six metres of the edge of the radius will be prone to some malfunction or short-term disruption on a roll of 8+ on 2d6).

The EMP generator can produce one burst every 12 hours – the time taken for internal power cells to recharge. Increase this time by six hours for Level 2 bursts and by 12 hours for Level 3 bursts.

EMP Cybernetic Shielding (Cr – Varies, TL 11)

At an additional cost of 25% cybernetic augmentations can be shielded again EMP attacks. Some units have shielding specified as an option already but this variant extends the protection to all items. This is vital for any character who decides to carry and use an EMP Generator who also has additional cybernetics himself.

CHIPS

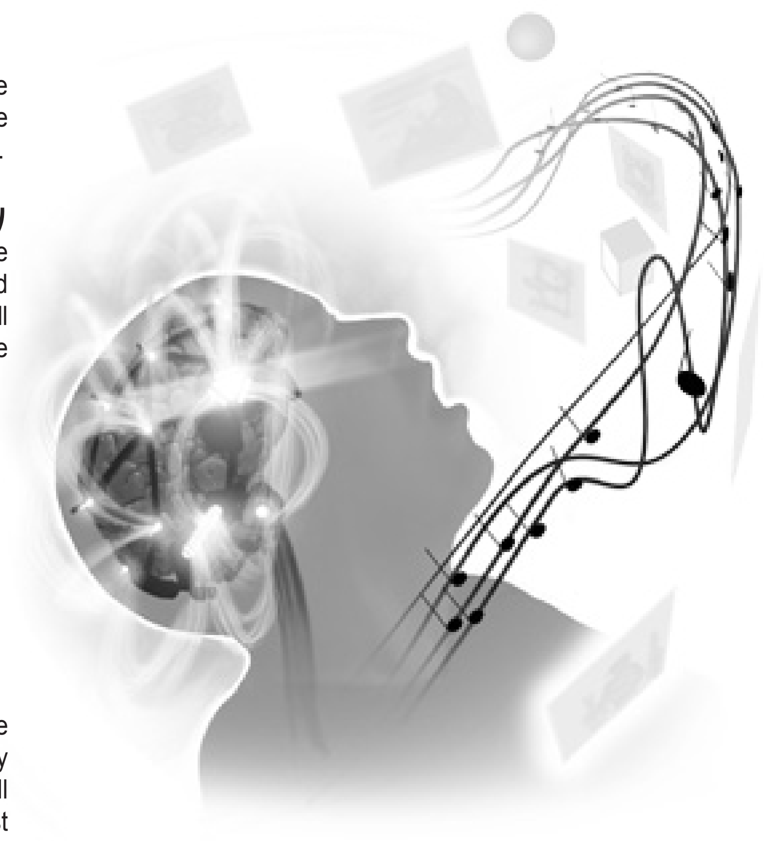
TL:	*Varies by Chip*
Price:	*Varies by Chip*
Mass:	*Negligible*
Enhancements:	*Varies by Chip*
Configurable:	*N*
Biotech Equivalent:	*No*

Similar to skillsoft chips (see page 57), additional chips are available to augment all kinds of different areas of capability and interaction. Availability is dependent on Tech Level and will also be influenced by Law Levels, so some kinds of chip, whilst desirable, may not be commonly available.

Chips can either be hardwired into the recipient or softwired, allowing them to be removed, using a standard skillsoft interface. If a chip is hardwired then the cost is 10% greater than that listed.

The effects of a chip last for as long as the user keeps the chip active: there are, however, some potential downsides to prolonged, continuous use of a chip which are similar to those for Heighteners, explored earlier.

After a chip has been used, an Int 2d6 roll is made against a specific target number. If the roll is failed then one must roll on the Chip Side Effects table to determine what happens.



Continuous Chip Use table

Hours of Use	Target Number (modified by Int DM)
Up to 1	2
1–3	3
4–6	6
7–9	8
10–11	10
12–15	12
16+	14

Chip Side Effects Table

2d6	Condition	Effects
2	Agoraphobia	The character is terrified of open spaces and large crowds. Must successfully roll Int 8+ whenever faced with going outdoors for an extended period. Failure on this roll induces panic attacks, withdrawal and so forth.
3	Claustrophobia	Fear of confined spaces: the character must successfully roll End 8+ when in any enclosed area of less than three cubic metres or suffer panic attacks, nausea, withdrawal and so forth.
4	Paranoia	The character becomes nervous and fearful of anyone or anything unknown to him, perceiving all as an actual threat. Suspicions of conspiracy are seen everywhere and the character constantly suffers the need to watch everyone and everything, trusting only those things and people he is intimately familiar with.
5	Insomnia	The character cannot sleep and only experiences 1d3-1 hours of sleep per night unless drugged. All Characteristics with the exceptions of Edu and Soc suffer a –1 reduction if a character receives less than 50 hours sleep per week.
6	Migraine	Once a month the character must roll End 8+ or be crippled by an intense headache lasting 1d6+1 hours. The headache is foreshadowed by dancing lights or spots before the eyes (usually an hour or so before the migraine begins) and when the migraine starts the character must find a quiet, darkened room and wait for it to pass. Drugs have no effect on the migraine's intensity.
7	Photophobia	The character is highly sensitive to bright lights, including bright, direct sunlight. He must roll End 8+ or suffer intense pain in the head and eyes when exposed to any form of bright light. The only way to counter the pain is to close the eyes and retreat to somewhere dark. Sunglasses or eye augmentation can cure this condition.
8	Short-Term Memory Loss	Memories of the time spent using the chip become hazy. Roll Int 8+ to recollect the barest details.
9	Personality Damage	Roll End 8+. If successful, there is no effect. If unsuccessful the traits of the last chip become effective even when the chip is not in use, but at a milder level. Discuss the implications with the Referee.
10	Neural Damage	Synapses are fried. Reduce Int or Edu by one point.
11	Physical Damage	Take 1d6 damage to Str, Dex or End.
12	Sever Damage	Apply results of both 10 and 11.

Chip – Mood (Cr. 50,000, TL10)

This chip comes in a variety of different personality types. The personality encoded onto the chip alters the behaviour of the user so they act in the way specific to the personality. Thus, someone who is ordinarily shy and reticent can become outgoing and gregarious. Some of the personalities available are listed here – but there are hundreds of combinations:

Amorous and seductive
Flirtatious and playful
Gregarious and fun-loving
Confident before an audience
Open-minded and free-thinking
Caring and compassionate
Brutally honest
Self-secure
Shy and introverted
Standoffish and aloof
Quiet and reserved
Thoughtful and reserved
Single-minded and ambitious
Bombastic and pugnacious

Chip – Aggression (Cr. 100,000, TL10) – Weaponisation

An aggression chip overrides the mind's natural inclinations towards restraint and defence. The user becomes highly aggressive, confrontational and unaccepting of any condition save outright victory through force.

Users of Aggression Chips gain the following benefits:

+1 DM to all attack rolls.
+1 DM to Initiative.
+1 DM to damage with Melee weapons.
Unconsciousness results only when the third physical Characteristic has been reduced to half its usual value.

However the increased adrenalin and endorphin release during the aggression chip's use produces additional side effects to those already described earlier. As soon as the aggression chip is deactivated the character suffers the following:

–1 to Str, Dex, End and Int Characteristics for 2d6 hours due to physical and emotional fatigue.
–1 DM to Initiative for the same period.

Chip – Ambidexterity (Cr. 10,000, TL10)

This chip simply makes the user ambidextrous, incurring no penalties or deficits for using tools, weapons or implements with the off-hand.

There is no need to roll for chip side effects for using an ambidexterity chip.

PERSONALITY RECORDING

TL: *12*
Price: *Cr. 1,000,000*
Mass: *Negligible*
Enhancements: *Not Applicable*
Configurable: *N*
Biotech Equivalent: *Yes*

At Tech Level 12 it is possible to record an entire personality through advanced brain mapping techniques. Every aspect of a persona's character: moods, memories, proclivities, loves, hates, likes, dislikes, prejudices and preferences are captured, stored and made accessible via a data chip that can be accessed through a standard skillsoft interface.

Using a full personality chip allows the personality of the recording to replace the personality of the user and access everything the original had – including skills, memories and experiences. The user's own personality fades into the background and the recorded personality takes over. Switching back to one's own personality – pushing the recording into the background – requires an Int 8+ roll to be successful and takes a full Combat Round to take effect. The user suffers a certain amount of disorientation as his own personality returns and, for the next 1d6x10 minutes all his skills and Characteristic DMs operate at one level lower than usual.

The longer one inhabits a recorded personality the riskier it becomes. Log how many hours the recording is active: when this figure equals the Intelligence of the user he must roll Endurance 8+. If the roll is successful he can shrug-off the recording's personality without difficulty. If the roll fails he cannot switch back to his own personality unless he succeeds in making an Int 10+ roll: all subsequent attempts to switch back are at Int 10+ and even removing the personality chip leaves the user with lasting impressions of the recording, such that he has trouble differentiating between himself and the recording. Referees should adjudicate specifics here but in moments of stress or dramatic importance, where a character needs to rely on his own personality, he may find aspects of the recording taking over and supplanting his own. This could be either advantageous or disastrous, depending on the circumstances.

Personality recording needs to be undertaken at a specialised facility which may or may not be illegal. Such facilities may also sell, rent or provide personality recordings to those who want to use them. Buying a recorded personality costs the same as having a recording made. Personality recordings of important people, if available, will cost more to obtain. As a rule of thumb it costs Cr. 1,000,000 multiplyed by the Social Standing Characteristic DM of the original person.

Some personality recordings may be made by governments, judicial and military agencies for highly secretive or specialised purposes and these personality recordings will be held under the strictest of security for obvious reasons. Some examples:

Notorious criminals, including serial killers (to study their psyche and motives).
Wise, intelligent or highly experienced professionals (politicians, generals, scientists and so forth) to preserve their knowledge for future generations.
Inspirational figures, gurus, celebrities and so on.

Having a recording of a character's own personality is possible depending on certain conditions:

- The character can afford it.
- The Referee allows it.
- A facility can be found that will do it.

Personality recording clearly offers a way for a character to cheat death, although the recording is obviously not the real person – only a construct. Nevertheless it may be difficult to tell where the real person ended and the recording begins.

STIMULATION/ENTERTAINMENT MODULE

TL:	*10*
Price:	*Cr. 20,000*
Mass:	*Negligible*
Enhancements:	*Experiences*
Configurable:	*N*
Biotech Equivalent:	*No*

As societies gain the ability to directly manipulate stimuli through direct access to the centres of the brain responsible for them, entertainment in the form of music, drama and even sex, are elevated to new heights.

The Stimulation/Entertainment module, or STENT, allows electronic entertainment of any form to be delivered directly into the brain allowing the user to experience music and video emotionally, in the first person, in three dimensions, with smell and other sensory stimuli as though they were there. The STENT generally accepts content from any internet (or equivalent) entertainment delivery system and it can be programmed to accept timed recordings, recordings by a particular artist, live feeds and casts and so on – exactly as current PVRs allow for flexibility. The user experiences the broadcast mentally with no requirement for any other form of interface; but he must be in a position of relaxation and rest. The module is designed not to operate if the user in control of machinery or a vehicle, or is in an already heightened state. The unit offers no enhancements to Characteristics or skills; it is merely a direct entertainment medium.

SexSTENT (Cr. 35,000)

The unit can also be programmed, at an additional +15% to its cost, to aid the act of sexual congress. Two (or more) STENT users experience not only their own arousal and satisfaction but that, too, of their partners, creating an incredibly intense and intimate experience for all.

Current Provider (Cr. 90,000)

A development of the SexSTENT, the current provider beams a tiny amount of electrical current directly into the pleasure centre of the brain, creating an intense, highly soporific, highly personal, highly addictive experience that surpasses any other form of artificially derived pleasure. Those who use current provision are submitted to a state of absolute bliss for as long as the current provider module keeps working. These Wireheads are oblivious to their surroundings and, eventually, never emerge from their addiction, starving, happily to death, whilst under the wire.

Most current providers have a timer setting that automatically cuts the power after a pre-determined period and will not reactivate for another pre-determined period (usually 1d6+6 hours). Current addiction forms steadily: each hour of current use should be logged and when the total hours exceeds the sum of Str, Dex and End, current addiction is assured. Current addicts must roll End 8+ to voluntarily come out from under the wire or remain there for 1d6+6 hours. At the end of this period a further End roll is made but this time at 9+ – and so on until the addict either comes out of the trance, or, eventually, cannot come out at all with someone disrupting the current or they starve to death.

Neural Communications Modules

Integrated communications modules come in a variety of chip types but all work in a similar way: the user is placed into direct communication with other users of a similar device without needing an external piece of equipment, such as a radio, cell phone or other form of hand-held communicator.

Neural comms units begin at TL10. They are fully integrated into the nervous system and require no power supply:

TL10	Audio Only (radio, cell phone)	Cr. 1,000
TL12	Audio and visual, Computer/0	Cr. 5,000
TL14	Multiple data arrays, Computer/1	Cr. 20,000

These communications devices have identical capacities to the standard comm. equipment described on page 90 of the *Traveller Core Rulebook*.

WEAPONS

So far cybernetic weapons have been discussed and described in terms of a specific limb, body part or augmentation. This chapter focuses on weaponisation without replacing a limb in its entirety but linking some kind of weapon system into the body to be triggered at need.

Some of the following weapons may require another augmentation as a pre-requisite and, if so, this is noted in the weapon's description. All the weapons in this chapter, though, are considered cybernetic weaponisations with all the restrictions explored in the first chapter, Before the Chrome.

HAND RAZORS

TL: ***11***
Price: ***Cr. 20,000***
Mass: ***Negligible***
Enhancements: ***+2 Damage***
Configurable: ***N***
Biotech Equivalent: ***Yes***

One centimetre-long blades are concealed within the tip of each finger and thumb, emerging from beneath the nail. The blades are easily concealed by the nail and fingertip although weapon detection systems will detect the presence of metal. At triple the cost the blades can therefore be made of ceramics or some other sensor-neutral material that still carries an edge.

Hand Razors add +2 to Unarmed melee attack damage.

CLAWS/SCYTHES

TL: ***11***
Price: ***Cr. 50,000***
Mass: ***Negligible***
Enhancements: ***Damage***
Configurable: ***N***
Biotech Equivalent: ***Yes***

These take the scythes described on page 16 of the Limbs chapter and apply them to a healthy organic arm. Muscles in the arm are modified to deploy and retract the blades and this is reflected in the cost of the augmentation. The knuckles of the hand need to be modified to allow the claws to emerge without breaking the flesh and causing additional pain (although there is always a degree of pain involved when deploying the blades), building discreet slots into the knuckle/finger recesses. This means that, to the observant, the scythe augmentation can be detected unless, at a cost of Cr. 5,000, the recipient has a set of self-healing synthetic skin patches installed at the same time to reduce the chance of detection.

Of course, carrying so much metal in the forearm will be detected by weapon security sensors. For this reason the blades can be constructed from either ceramics or some other sensor-evading material that can still carry an edge: this triples the cost of the augmentation.

NEEDLES

TL: ***11***
Price: ***Cr. 60,000***
Mass: ***Negligible***
Enhancements: ***Damage***
Configurable: ***N***
Biotech Equivalent: ***Yes***

Built into either the hand or arm, this augmentation allows the recipient to fire a cluster of very fine (2.5mm length) needles in a burst of five needles at a time. The needles do not cause significant damage on their own – although it fired into the face of an opponent they will cause a distraction, imposing a –3 DM to any attacks or skills for 1d6 Combat Rounds. If the needles reach the exposed eye, then intense pain results. Needles can be blocked by one point of armour protection over a location. Otherwise they inflict one point of damage.

The needles can, though, be used to introduce poisons or toxins if aimed at an unarmoured location. At an additional cost of Cr. 6,000 the needles can be configured to deliver a small dose of the toxin of choice. Five needles striking an unarmoured location are enough to introduce a toxin dose that causes harm to the victim.

The augmentation carries two, five shot sets of needles. Replenishing the needles requires minor surgery and costs Cr. 3,000.

PORCUPINE ARMOUR

TL: ***12***
Price: ***Cr. 20,000*** ***per 10% mass covered***
Mass: ***Negligible***
Enhancements: ***Damage and Protection***
Configurable: ***N***
Biotech Equivalent: ***Yes***

Porcupine armour laces the muscles of the recipient with hundreds of nylon, sharp-pointed quills. Neural impulses cause the quills to deploy, penetrating the skin and standing erect across the body, to a length of one centimetre. The quills provide the equivalent of one Armour Point of protection and also deliver 1d6 damage to anyone who tries to grasp the wearer.

Part of the implantation procedure involves introducing an anaesthetic reservoir that nulls the pain felt when the quills are activated. Activation is a Minor Combat Action but retracting them is a Major Action.

The quills cannot be deployed through any other form of clothing or armour: the flesh must be exposed for the quills to be effective.

POISON RESERVOIRS

TL:	***10***
Price:	***Cr. 8,000***
Mass:	***Negligible***
Enhancements:	***Damage***
Configurable:	***N***
Biotech Equivalent:	***Yes***

Poison reservoirs are usually located in the finger tips and used in conjunction with Hand Razors or Nail Darts although they can be used simply with fingers nails.

Each finger can contain one reservoir and each reservoir contains one dose of whatever contaminant the user wants to hold. The liquid is extruded with neural impulse and can be used to coat hand razors, nail darts, fingernails or any other blade or object. One dose coats a one centimetre squared area.

Refilling the reservoir is via hypodermic injection directly into the sub-dermis tank.

NAIL DARTS

TL:	***11***
Price:	***Cr. 60,000***
Mass:	***Negligible***
Enhancements:	***Damage***
Configurable:	***N***
Biotech Equivalent:	***Yes***

Take the fingernail and replace it with a sharp, ceramic prosthetic. Now, install a tiny propellant behind the nail, in the fingertip. Then, with a neural impulse the nail can be fired, dart like, at Personal Range.

A nail dart cannot penetrate armour but it can be used to deliver a poison extruded onto the dart from a Poison Reservoir without the need for making direct contact.

GREASEPAINT

TL:	***10***
Price:	***Cr. 70,000***
Mass:	***Negligible***
Enhancements:	***Protection***
Configurable:	***N***
Biotech Equivalent:	***Yes***

Artificial glands set beneath the dermis exude a greasy film via the sweat glands. The film has three functions.

First it offers protection against temperatures of up to minus 18 degrees Centigrade, retaining body-heat. Second, it masks the thermal signature of its wearer, rendering them invisible to heat-sensitive vision or sensors. Third, it makes the body slippery: anyone trying to grasp a greasepaint glanding opponent on an exposed area of flesh encounters an ultra slippery film that prevents a firm grasp from being made unless a Dex 11+ roll can successfully made.

Glanding greasepaint is possible beneath clothing in which case its thermal protection properties stack with any garment protection.

It takes 1d3 Combat Rounds for a body to become fully greased. Greasepaint is naturally reabsorbed into the body over a six hour period and can be re-glanded seven hours after its first application.

FANGS

TL:	***9***
Price:	***Cr. 6,000***
Mass:	***Negligible***
Enhancements:	***Damage***
Configurable:	***Y***
Biotech Equivalent:	***Yes***

Ceramic fangs are not an uncommon prosthetic and are available at TL7. However, retractable fangs, as is the case here, become available at TL9.

The fangs are one centimetre in length, sharpened and can fully retract into the gum line through neural impulse. They confer +1 damage to any bite attack and can also be hollowed-out to include a poison reservoir – although anyone using fangs to deliver poison must take an appropriate anti-venom serum before using the poison to prevent accidental ingestion.

Fangs are an essential augmentation in those communities where vampires are *still* considered to be cool, misunderstood, pale and interesting, role models...

SYNTHETIC SKIN AND ADVANCED SYNTHETIC SKIN

TL:	*9*
Price:	*Cr. 1,000 per 10% mass covered*
Mass:	*Variable*
Enhancements:	*—*
Configurable:	*Y – 2 (Advanced Skin)*
Biotech Equivalent:	*Yes*

Synthetic skin is generally included in the cost of an augmentation, if a natural look is required for a cybernetic prosthetic. The skin is vat-grown over a collagen substitute to the required area and then coloured to skin-hue, offering a near-perfect match. At its most basic (TL9) synthetic skin is hairless but, by doubling the cost, it can be modified to include realistic hair to match the hair covering of the wearer. Synthetic skin is resistant to tanning in its basic state although, again, at an additional 20% of the base cost it can be treated to react to sunlight and tan (but not burn) as for normal skin.

At TL10 Advanced Synthetic Skin is available. This costs Cr. 1,000 more per 10% of mass area covered and can also be configured in the following ways:

Life-Like (+20% of base cost)

The skin is engineered to contain synthetic blood, carried in capillaries, synthetic sweat glands and all other accoutrements necessary for the skin to behave just as real skin.

Self-Tattooing (+20% of base cost)

If the wearer of the skin also has a skillsoft implant, chips with all manner of designs can be bought (Cr. 250 each) that carry around 10,000 stock or custom designs. Neural impulses directed to sensors in the skin's fabric cause implanted pigments to form the design on the skin's surface, in the area desired. The design can be reabsorbed by a second neural impulse as the wearer so desires; however, no more than 10% of the synthetic skin's area can be self-tattooed in this way.

Fire-Resistant (+15% of base cost)

The skin is resistant to temperatures of up to 200 degrees Celsius – although any it will not prevent internal organs from reacting to prolonged exposure to high heat.

Self-Healing (+25% of base cost)

The skin is capable of healing itself through implanted nanotechnology. Scratches heal within 1d6 minutes. After that, each point of damage sustained takes one hour to heal. Naturally only the skin heals; internal trauma is unaffected.

Ablative (+30% of base cost)

The skin functions as ablat armour although it is effective *only* against lasers and does not offer ablat's one Armour Protection against other forms of damage.

CYBERSPACE

Most cultures have, at TL 7, developed some form of integrated computer/telephony-based network enabling the instantaneous exchange of data. Whether this network is called the Web, Internet, Matrix, Network or whatever, the concept of cyberspace accompanies it. Cyberspace is the virtual, unseen fabric existing between databases and computer entities. It is a nebulous, electronic world where data is exchanged between nodes of interpretation. Cyberspace is a concept more than a reality: it is not *meant* to be perceived; it arises as a way of visualising this vast exchange of data that happen invisibly and instantaneously. What individuals do see is the processed output of this data exchange – via electronic displays, computer screens, audio signals and so on.

At TL 8 enterprising individuals have developed computer programs and specialised equipment that enable cyberspace to be visualised as an interactive environment. The form of this representation varies from one culture and race to another but essentially cyberspace is represented as a grey (or black) horizon-less plane where concentrations of data are represented as nodes of colour and exchanges of data represented as rivers of silver (silver representing encryption). Data nodes do not reflect their geographical location but rather their proximity to other nodes of shared data. An international corporate network, for example, with locations spread across several continents, would show as a group of clustered nodes resembling the sky-line of a city perhaps. Data centres exchanging information with the corporation would appear as nodes spaced around the cityscape connected by rivers of silver – and data centres, because they probably share data with many other entities, would appear simultaneously in many, many locations.

Entering cyberspace allows data flows to be observed, mapped and understood. The width of the data rivers show the concentrations of data flowing between nodes. The higher a node is, the more information it contains. Different colours within individual nodes or clusters of nodes represent different forms of data. Intensities of colour represent concentrations and importance of data – or its security. The higher the node and the deeper the colours, the more information contained therein.

And, because data can be mapped and visualised, it can be penetrated, manipulated, copied, stolen or destroyed – if the person wanting to do all this can overcome the security set in place to protect the data – whether it is from within a corporate network, or from without.

GENERAL DATA TOPOGRAPHY

Data colour	Data Type	Level
Black	Military data	3
Red	Government data	3
Purple	Financial data (including tax records)	3
Green	Environmental data	2
Blue	Technology/technical data	3
Yellow	Personnel data	2
White	Public records	0
Orange	Media/entertainment data	1
Grey	Unspecified/uncategorised data	1

Data levels are explored in the Programs section.

CYBERSPACE SECURITY

Each node represents a server or a closely linked network of servers. Servers tend to contain one form of data and so a single node can have many bands of colour. Clusters of nodes represent linked server networks with a dispersed geography. Most nodes carry a series of properties listing:

- Corporate or business name.
- Internet address code.
- Geographical code.
- Government registration code.

These properties are freely viewable and may even be displayed in cyberspace above a node – usually part of local legislation requirements. Nodes that do not carry such properties are usually private data sources belonging to individuals, or 'black' corporate entities that are operating without government permission.

Every node carries security. This ranges from basic firewalls and antivirus software through to deep-level, 100% encryption algorithms that render the data contained within the node unreadable from the outside (causing the silver appearance). Security is rated on a scale of 2 to 15, just as with standard *Traveller* Characteristics. The higher the number, the greater the level of security. The Security (Sec) rating usually represents the target number to be rolled on 2d6 if one wants to overcome the security and gain access to the data.

EXAMPLE SECURITIES

Security Level	
2	Home data network running basic firewall and antivirus software.
5	Small business data running advanced firewall and antivirus.
8	Medium sized network running custom-developed security software.
12	Government grade security protection with trace programs.
15	Military grade security with trace and hunter/killer programs.

Security comes at a cost, as follows:

- Security ratings 2-6: Cr. 100 per year per level of Sec, per node.
- Security ratings 7-9: Cr. 500 per year per level of Sec, per node.
- Security ratings 10-12: Cr. 1,000 per year per level of Sec, per node.
- Security ratings 13-15: Cr. 5,000 per year per level of Sec, per node.

Thus, a small business with a single node running Sec 5 security would spend Cr. 500 per year for its software whereas a corporation with 10 nodes running Sec 10 security would spend Cr. 100,000 per year.

Protection Programs

Security programs of Sec 7 and higher carry integrated protection programs offering the following functionality:

Sec Level	Protection
7–8	Intrusion alert: outside attacks are notified to administrators but cannot be traced.
9–10	As for previous, plus automatic notification of intrusion attempts to security services.
11–12	As for previous, plus trace programs that identify the source of the attempt. Hunter/Killer present on a 2d6 roll of 10+.
13–14	As for previous, plus trace programs that automatically deny any future attempts from the same source. Hunter/Killer present on a 2d6 roll of 8+.
15	As for previous, plus Hunter/Killer available on a 2d6 roll of 6+ that launches an automatic counterattack against the source, with an Intrusion level of 15.

NAVIGATING CYBERSPACE

Viewing cyberspace requires a cyberspace configured computer, known as a deck. The deck attaches to a Computer Integration link and, when the deck is activated, the user, or jockey, as they are sometimes known, enters cyberspace with his own deck represented as a node with a data river connecting him to any other nodes that he exchanges data with. The proximity of these connected nodes is arbitrary; distance has no real meaning in cyberspace. A jockey can see what nodes he is connected to but no others. The general flow of data through cyberspace is perceived as a grey static shadow hanging around and in the general fabric of cyberspace.

To navigate to a particular node or cluster of nodes the jockey enters the internet address code for that node or cluster of nodes: this establishes a very basic, casual connection between his deck and the nodes he wants to view. There is nothing suspicious in this; it is the equivalent of visiting a corporate home page using a conventional internet connection. The nodes he connects with fold into existence out of the cyber-fuzz; however, whereas a series of internet pages does not belie the server array behind it, in cyberspace the nodes, irrespective of geographic location, that make-up that network, are visible of towers of colour with their data streams to other locations apparent.

The jockey cannot see what other nodes a node he is viewing connects with unless he penetrates security and is able to reveal a node's data connections. This is the most basic level of cyberspace intrusion.

Public-access information, such as PR materials, public accounts and so forth can generally be viewed in cyberspace without any difficulty. Hidden, private data and data flows can only be viewed and manipulated with successful intrusion.

INTRUSION

Intrusion rests on overcoming a node's security. The Sec level represents the target number for a 2d6 roll with DMs applied for the following:

- Computers skill.
- Deck Tech Level.
- Intrusion software level.
- DMs for other forms of assistance software that may fool or divert the node's security.

To attempt intrusion one must be using a cyberspace deck: traditional hacking techniques of the kind found in the contemporary world can be useful in *Traveller* but generally intrusion attempts need to be direct assaults. The deck's capacity to run software is therefore of importance: the following Deck Table shows the price and capabilities of typical cyberspace decks.

TL of Deck	Capacity	Software Level Max	Armour	Price
8	2	1	0	Cr. 5,000
9	3	1	0	Cr. 8,000
10	4	1	1	Cr. 14,000
11	5	2	1	Cr. 26,000
12	6	2	2	Cr. 40,000
13	6	2	3	Cr. 60,000
14	6	3	4	Cr. 80,000
15	8	3	6	Cr. 100,000

- Capacity: The number of programs the deck can launch and run simultaneously.
- Software Level Max: The maximum level of a program the deck can run. Programs begin at level 0.
- Armour: The deck's defence against hostile counter-intrusion programs such as hunter/killers.
- Price: The cost, in credits, for a good cyberspace deck. Second hand or obsolescent models will cost less.

Burning the Chrome

To overcome a node's security and get its data, use the following steps:

- Subtract the deck's Tech Level from the Sec level of node. The result, if it is greater than zero, becomes a DM to the intrusion attack roll.
- Roll 2d6. Apply any Computers DM and Software level.
- If the result is greater than the Security of the node, access is gained.

The amount of time one has inside a penetrated node depends on how long one can stay hidden from internal detection programs – Watchdogs – that are constantly hunting and alert for unfamiliar data signatures within the system. Subtract eight from the result of the modified Intrusion roll: this is the number of minutes, in d6, (and always with a minimum of 1d6) one has before detection is likely. Software running on the deck can extend this time or render the deck invisible to Watchdogs.

Failed intrusion attempts run the risk of detection by the security program. Sec 11 and higher identifies the deck's unique identifier and can possibly trace it unless the deck is running an anti-trace program of its own.

If the Security program is equipped with a Hunter/Killer program facility – usually only available at Sec 15 – the Hunter/Killer launches a reverse attack immediately against the intruding deck:

Roll 2d6. The Hunter/Killer must overcome the TL of the intruding deck. The deck's Armour (both integral and program based) is used as a negative DM against the Hunter/Killer's counter-attack. If the attack is successful damage is inflicted according to the Hunter/Killer damage chart. The deck's Armour is used as a negative DM against this roll:

If the Security program notifies local security services, this means that local or regional anti-cybercrime authorities are provided with the identity of the deck. Law enforcement of this type has its own trace programs that can find the geographical location of the deck within 1d6 minutes for every level of Armour the deck is equipped with. A TL14 deck, with four points of Armour, would take 4d6 minutes to trace – unless anti-trace software is running.

GATHERING DATA

Successfully within a node, one is free to peruse, manipulate, modify, copy or destroy data. This requires an appropriate program to be running; there are discrete programs for each type of data, as categorised in the General Data Topography boxed text on page 75. Some programs have one function (such as copy or delete); others have multiple functions. The more functions, the higher the program's level. Doing anything to data, be it a simple copy or a more destructive approach, takes time. Data sets have their own protection algorithms that slow-down manipulation speeds of assaulting decks. How long it takes to manipulate any set of data, irrespective of what it is, depends on the data type.

Data colour	Data Type	Manipulation Time (Minutes)
Black	Military data	3d6x10
Red	Government data	3d6x7
Purple	Financial data (including tax records)	3d6x7
Green	Environmental data	2d6x7
Blue	Technology/technical data	3d6x7
Yellow	Personnel data	2d6x5
White	Public records	2d6x3
Orange	Media/entertainment data	2d6x5
Grey	Unspecified/uncategorised data	2d6x3

Precisely what a jockey might do with data when he gains access to it is down to individual goals, missions, circumstances and so forth – as are the repercussions. Referees will need to adjudicate these according to the needs and nature of the campaign.

CYBERDECK PROGRAMS

These are the most commonly used cyberdeck programs. A deck can run a number of programs simultaneously according to its Tech Level. Any number of programs can be held in memory and activated as needed but the jockey must specify which program, or programs, are rendered inactive to make way for a new program to run.

No deck can run a program at a level higher than its Software Level Max rating. Programs have levels 0 through to 3, with 0 being the most basic version of the software and 3 being the most sophisticated and powerful.

Anti-Trace

COST PER LEVEL: CR. 2,000

Anti-Trace deters attempts to trace a cyberdeck's identity and location.

- Level 0: Security system traces of Sec 13 and lower cannot trace the deck.
- Level 1: Security system traces of Sec 14 and lower cannot trace the deck.
- Level 2: Security system traces of Sec 14 and lower cannot trace the deck; denial attempts for future intrusion can be ignored.
- Level 3: As for level 2 but traces run by law enforcement agencies are also useless.

Armour

COST PER LEVEL: CR. 5,000

Each level of the program increases the decks Armour value by one point. This additional armour cannot be used to mitigate Hunter/Killer damage.

HUNTER/KILLER DAMAGE CHART

2d6	Effect
1 or less	No effect
2	The Hunter/Killer wipes one randomly determined program clean. The program must be rebought; it cannot simply be reinstalled.
3	The Hunter/Killer wipes two randomly determined programs clean. The programs must be rebought; they cannot simply be reinstalled.
4	The Hunter/Killer wipes three randomly determined programs clean. The programs must be rebought; they cannot simply be reinstalled.
5	The Hunter/Killer wipes 1d6+2 randomly determined programs clean. The programs must be rebought; they cannot simply be reinstalled.
6	Hard drive of the deck is wiped clean: it must be replaced at a cost of 25% of the original deck, along with all software costs.
7	Hard drive of the deck is wiped and memory circuits are burned through. They must be replaced at a cost of 50% of the deck, plus software costs.
8	The deck itself is irreparably damaged and must be completely replaced.
9	The Hunter/Killer unleashes a neural reflux impulse that injures the jockey; take 1d6 damage.
10	The Hunter/Killer unleashes a neural reflux impulse that injures the jockey; take 2d6 damage.
11	The Hunter/Killer unleashes a neural reflux impulse that injures the jockey; take 3d6 damage.
12	The Hunter/Killer unleashes a neural reflux impulse that injures the jockey; take 4d6 damage.

Change

COST PER LEVEL: DEPENDENT ON SOFTWARE CATEGORY

Change programs allow the jockey to alter (but not move, copy, delete or destroy) existing data. The time taken to change data depends on the general degree of alteration and this is in addition to the manipulation times listed bove:

Degree of Change	Minutes
Minor changes (altering a name, for example)	1 minute
Average changes (rewording paragraphs of text)	1d6
Major changes (rewording a contract or sub-routine)	1d6x10
Extensive changes (altering lines of subroutine code)	3d6x60

The level of the software determines what changes are possible:

Level 0	Minor Changes
Level 1	Average Changes
Level 2	Major Changes
Level 3	Extensive Changes

Each level above 0 performs the degree of change for the preceding level.

Costs per level depend on the category of data being changed. Each category requires its own program.

Data colour	Data Type	Cost per Level
Black	Military data	Cr. 7,000
Red	Government data	Cr. 6,000
Purple	Financial data (including tax records)	Cr. 5,000
Green	Environmental data	Cr. 3,000
Blue	Technology/technical data	Cr. 6,000
Yellow	Personnel data	Cr. 2,000
White	Public records	Cr. 500
Orange	Media/entertainment data	Cr. 2,500
Grey	Unspecified/uncategorised data	Cr. 3,500

Connect

COST PER LEVEL: DEPENDENT ON SOFTWARE CATEGORY

Connect programs connect a node to a different node of the jockey's choosing. The level of the program determines both the data that can be connected and the node it can be connected to. Military data, for example, is Level 3 meaning that a Level 3 Connect is needed and a connection with levels 0 through 3 are possible.

Data colour	Data Type	Level	Cost per Level
Black	Military data	3	Cr. 3,500
Red	Government data	3	Cr. 3,000
Purple	Financial data (including tax records)	3	Cr. 2,500
Green	Environmental data	2	Cr. 1,500
Blue	Technology/technical data	3	Cr. 3,000
Yellow	Personnel data	2	Cr. 1,000
White	Public records	0	Cr. 250
Orange	Media/entertainment data	1	Cr. 1,250
Grey	Unspecified/uncategorised data	1	Cr. 1,500

Copy

COST PER LEVEL: DEPENDENT ON SOFTWARE CATEGORY

Copy programmes enable data to be copied securely, leaving no trace and with built-in encryption to ensure on-going security for the jockey. As most corporate systems have in-built copying prevention the level of the program determines what systems can be copied from.

Data colour	Data Type	Level	Cost per Program
Black	Military data	3	Cr. 2,500
Red	Government data	3	Cr. 2,000
Purple	Financial data (including tax records)	3	Cr. 1,500
Green	Environmental data	2	Cr. 500
Blue	Technology/technical data	3	Cr. 2,000
Yellow	Personnel data	2	Cr. 5000
White	Public records	0	Cr. 150
Orange	Media/entertainment data	1	Cr. 250
Grey	Unspecified/uncategorised data	1	Cr. 500

There is no additional copying time to the general manipulation time given on page 78.

Crash

COST PER LEVEL: CR. 10,000

Crash programs introduce a routine designed to bring a working data system to a halt, causing a reboot and/or reinstallation of critical systems. The program also affects redundant systems to ensure maximum inconvenience – although the Crash program does not manipulate or destroy data itself.

Level 0: System can be restored in 1d6x10 minutes.
Level 1: System can be restored in 2d6x10 minutes.
Level 2: System can be restored in 1d6x6 hours.
Level 3: System can be restored in 2d6x6 hours.

Delete

COST PER LEVEL: CR. 12,000

Delete programs delete data but do not destroy it; back-ups are unaffected only the primary data being deleted.

The level of the program determines what category of system data can be deleted:

Data colour	Data Type	Level
Black	Military data	3
Red	Government data	3
Purple	Financial data (including tax records)	3
Green	Environmental data	2
Blue	Technology/technical data	3
Yellow	Personnel data	2
White	Public records	0
Orange	Media/entertainment data	1
Grey	Unspecified/uncategorised data	1

Restoring deleted data from a back-up takes 2d6x10 minutes – but only once the deletion has been detected.

Destroy

COST PER LEVEL: CR. 24,000

Destroy works in the same way as Delete but affects all back-ups, effectively destroying data. The program runs traces throughout all nodes hunting for back-ups and redundant systems and destroys those at the same time as destroying the source data.

Disperse

COST PER LEVEL: CR. 18,000

Disperse must be run in conjunction with a Copy or Delete program and a Connect program. It takes data and disperses it to other nodes that the data source is connected to, or the jockey establishes a connection with (via the Connection program).

The level of the program determines what kind of node the stolen data can be dispersed to; it also determines what kind of data can be dispersed (for example, Personnel data requires a Level 2 program and it can be dispersed to other Personnel nodes, Media/Entertainment nodes, and Public Records.

Data colour	Data Type	Level
Black	Military data	3
Red	Government data	3
Purple	Financial data (including tax records)	3
Green	Environmental data	2
Blue	Technology/technical data	3
Yellow	Personnel data	2
White	Public records	0
Orange	Media/entertainment data	1
Grey	Unspecified/uncategorised data	1

Disrupt

COST PER LEVEL: CR. 18,000

Disrupt programs actively target data streams between different nodes but not within the same node. Thus, disrupt could affect payroll instructions between a financial institution and a corporate site but not data connections within the corporate network. Disrupt must be introduced through an Insert program.

The level of the program must be equal to, or higher than, the highest of the two data levels: see the Data Type and Level table in the Disperse description earlier. For example, a connection between a corporation's Personnel Records (for payroll, Level 2) and a bank (for issuing the paycheques, Level 3) requires a Level 3 Disrupt program.

Disrupt slows down and disrupts data transfers through a data stream: it does not break the data stream – Sever is needed for that. The level of the Disrupt program determines the speed of delay across the data stream:

Level 0: 1d6 Minutes
Level 1: 1d6 Hours
Level 2: 1d6 Days
Level 3: 1d6 Weeks

Disrupt continues to work until either removed (using a Delete program) or is countered by the targeted data source.

False Site

COST PER LEVEL: CR. 35,000

This program creates a false node in cyberspace, at co-ordinates of the jockey's choosing. The site looks like, and appears to be, a legitimate node of a size corresponding to the program's level:

Level 0: Small business node.
Level 1: Medium sized network with perhaps one or two international branches.
Level 2: Small corporation or government agency.
Level 3: Large corporation, central government or military installation.

The false site contains appropriate data centres for its nature and the software even creates realistic, public-facing accounts, publicity material and so forth. Using a program such as Connect the jockey can even create data stream connections between real nodes and the fake node (or connections between several fake nodes). The false site only gives the impression, the illusion, of processing data: in reality it is nothing more than a front for the jockey's own deck and any data streams created do not provide data unless the jockey has also established a means to do so.

The false site projects a Security level commensurate with its level and nature but does not possess a true Security Level. This is only apparent if someone attempts an intrusion – but, given that the data held in the false site is also false, no one can cause any damage through an intrusion. In fact, the program will display all the usual hallmarks of resisting intrusion although the intruder will simply register a success – which may set alarm bells ringing if the intruder's capabilities are such that an intrusion attempt should, in all reality, *fail*.

Hunter/Killer

COST PER LEVEL: CR. 50,000

This is Hunter/Killer software for a deck – and designed to work against enemy decks. It functions in exactly the same way as Sec 15 Hunter/Killer software with each level of the program negating one point of a target deck's in-built armour (additional armour from a Hunter/Killer Armour program is not affected).

Hunter/Killer Armour

COST PER LEVEL: CR. 10,000

As per the Armour program; however the level of the software also counts as mitigation towards Hunter/Killer damage.

Insert

COST PER LEVEL: CR. 9,000

Insert allows a third party program, such as a Monitor or Disrupt, to be introduced to a node. Insert must be equal to, or higher than, the level of the program it is introducing. Insert also places masks and anti-detection measures to ensure that whatever program is introduced remains undetected for 1d6 days per level of the Insert software (assuming anyone is looking for an intrusion). Insert can also be set on a timer so that the third party program activates at a pre-set time or date. The Insert's level determines the maximum time period for the timer:

Level 0: 1d6 days
Level 1: 1d6 weeks
Level 2: 1d6 months
Level 3: 1d6 years

Mask

COST PER LEVEL: CR. 50,000

Mask is a configurable mimetic weapon. When activated it makes the deck – and whatever software the deck is running – appear to come from a legitimate, authorised, data source of a level equivalent to the software. For example, a Level 2 Mask could mimic a legitimate audit request from a government revenue investigation agency.

The Mask's level acts as a negative DM to the Sec level of the node: a Level 2 Mask launched against a Sec 10 node would treat the node's Security level as 8.

The Mask's level must be equal to, or exceed, the level of data being targeted. Thus, the Level 2 audit request could not be used against Military data (level 3).

Monitor

COST PER LEVEL: CR. 20,000

Monitor must be introduced with an Insert program. It provides an ongoing link between the deck and activity within the target data source until the Monitor itself is either deleted (using a Delete program) or discovered and countered by the target.

The level of the Monitor program must be equal to, or exceed, the data level of the target. All activity is monitored in real-time, logged and reported back to the jockey as and when required.

Sever

COST PER LEVEL: CR. 25,000

An enhancement of the Disrupt program, Sever breaks a data stream link, severing all communications between two nodes. The level of Sever must be equal to, or higher than, the data level of highest data source in the data stream.

Stall

COST PER LEVEL: CR. 20,000 (LEVEL 1 AND UPWARDS)

Stall must be introduced with an Insert program. It temporarily reduces the data level of a targeted data set by its own level – although it cannot reduce it below zero. Thus a Level 3 Stall could reduce the data level of Environmental data from 2 down to 0. As most data stores have precautions against attacks on integrity in this way, Stall acts for a limited time:

Level 1: 1d6 Minutes
Level 2: 1d6 Hours
Level 3: 1d6 Days

Obviously Level 0 Stall would be ineffective.

PROGRAMS, PRICE AND AVAILABILITY

Cyberspace decks run highly specialised, sophisticated software that is tailored specifically to the cyberspace environment. Some jockeys write their own programs but those who do not have the time must buy them – and the nature of the software means that these programs are clandestine and, more often than not, highly illegal. As the programmers run severe risks if they are caught, the prices charged are very high, reflecting the risks being taken, the software's sophistication and the material gains individual jockeys can make through using it. The prices quoted, therefore, are deliberately high when compared with standard computer software. They also reflect availability. A character making a living as a cyberspace jockey can make contact with cyberspace software producers and vendors (who may be intermediaries or fences for the original programmers) on a Streetwise 8+ roll. The target number can be adjusted upwards by the level of the program sought if Referees feel this is appropriate.

Jockeys are frequently employed by corporations to raid the data centres of competitors: sometimes the jockey will be directly employed by a corporation and kept safe and secure behind that corporation's firewall; however many are freelancers working from apartments, basements, bedsits and even spaceships in high orbit. This reduces the risk of tracing and capture and means the employer can easily deny involvement. Whatever the nature of employment it is not unreasonable for the jockey to request that the employer provide both the deck and the software, at their own cost, for a specific job, with the deck being either destroyed or handed back when the job is complete. Thus there will be circumstances where a cyberspace jockey does not need to fund the cost of software himself – it all depends on how the jockey handles negotiations with his employer, his reputation for discretion and success and the nature of the cyberspace mission.

Lone jockeys, though, will need to be able to fund their own software purchases if they are to undertake solo raids on corporate networks. A deck and software may form part of a mustering out package when leaving a particular career. The following table offers some suggestions that will help new *Traveller* characters who fancy a career in cyber piracy after their career terms.

CYBERSPACE MUSTERING BENEFITS OPTIONS

Career	Mustering Out Options	Pre-Requisites
Agent	Substitute cash option rolls of 6 or 7 for deck and software to the equivalent cash value	None
Citizen	Substitute cash option rolls of 6 or 7 for deck and software to the equivalent cash value	None
Drifter	Substitute cash option roll of 7 for deck and software to the equivalent cash value	Must have minimum of Edu 8 to take advantage, or have gained Computers
Merchant	Substitute cash option rolls of 5 or 6 for deck and software to the equivalent cash value	None
Navy	Substitute cash option rolls of 6 or 7 for deck and software to the equivalent cash value	Must have minimum of Edu 8 to take advantage, or have gained Computers
Nobility	Substitute cash option rolls of 3 or 4 for deck and software to the equivalent cash value	Must have minimum of Edu 8 to take advantage, or have gained Computers
Rogue	Substitute cash option rolls of 5 or 6 for deck and software to the equivalent cash value	Must have taken Thief as a term specialisation.
Scholar	Substitute cash option rolls of 5 or 6 for deck and software to the equivalent cash value	Must have taken Field Researcher as a term specialisation
Scout	Substitute cash option rolls of 5 or 6 for deck and software to the equivalent cash value	Must have minimum of Edu 8 to take advantage, or have gained Computers

GETTING AWAY WITH IT

A successful intrusion results in a computer system being hacked, data being copied, modified, destroyed; or funds are transferred to untraceable bank accounts, corporate secrets exposed or exploited and so on. This is all down to the jockey, his software and his willingness to tackle the big boys.

But, even at lower Tech Levels, cyber crime can be traced, eventually. It may take some time for data owners to realise they have been attacked but, sooner or later they will, and they will not take the intrusion lightly. Knowledge is power: financial losses are damaging but things such as market share, product identity, research and development and so on are sometimes far more valuable, long-term. Insurance policies can cover against outright theft but loss of corporate information is far more difficult to mitigate.

Corporations are likely to employ their own jockeys who are responsible for hunting down those who have launched an attack – successful or not – and bringing them to the attention of the corporate higher-ups. If a corporation is scrupulous in its dealings with the authorities then Law Enforcement will be notified and such agencies have their own, high-end resources for tracing and tackling cyberspace pirates. Characters may find themselves suddenly arrested or snatched from the streets, their decks confiscated and facing hefty punishments.

Corporations and individuals with important networks who are less than scrupulous will also hire jockeys to do the detective work – but may take the law into their own hands and extract revenge that is, at best, intimidating and, at worst, fatal.

Scrupulous corporations will look for proof of theft, tampering and so on. Unscrupulous ones may not care. Either way, jockeys need to be able to hide their tracks and shift anything they have stolen to somewhere secure so that proof is difficult to come-by. What this means is that *only a fool* would conduct a data intrusion without first planning for getting caught. Fake identities, holding accounts, secret, secure servers, fences, alibis, smokescreens – all these things should be taken into account before a cyberspace intrusion takes place. Some things for cyberspace pirates to consider:

- What is the nature of the run? Profit? Mischief? Revenge? Corporate sabotage? What are the implications for success? What are the implications for failure?
- What sort of security level does the target operate at? Can it be easily penetrated? Is it worth risking a run against a Sec 15 corporation and getting fried by its Hunter/Killer?
- Where can stolen data or money be moved to? Can it be traced if moved? Can other custodians be trusted? What will setting up a secure holding area cost? Who funds it? How long must something stolen be held for before it can be used? Who is watching?

- If a data stream or data source is disrupted or destroyed, what are the implications for the innocent? Millions of people could be affected. The jockey may not care about these people but the authorities will – and harming millions attracts far higher penalties than injuring a few corporate suits and their share options.
- Does the target employ its own jockeys? If so, can they be disabled first to prevent later tracing? The corporation might not have Hunter/Killer but freelance jockeys they employ might... Do some research.
- What software is needed to complete the mission? Is the deck up to it? What is the cost of acquiring the software? Does the reward fit the risk and offer a return on investment?
- Who are you going up against? Does the target have friends in high or low places? Will they use the authorities to pursue an intruder or employ people with much lower moral and ethical standards? Will you get hurt?
- Can you trust your employer? Will that corporation sell you out to protect its own interests? What does it stand to gain and you stand to lose? Is it worth it?

Making preparations for a run can form an exciting part of a *Traveller* adventure, with the run itself and the getaway (or escape from capture) forming a terrific third-act denouement. It is therefore a good idea to roleplay through preparations rather than rely on dice rolls to abstract the preparation phase. But, if dice rolls are preferred, so that the action can focus on the cyberspace intrusion and the outcome, the following skills are useful:

- Investigate – To determine who, what, where, why and how. Perhaps one roll of Investigate 8+ against each of these questions to determine the outline for the cyberspace mission to come.
- Streetwise and Broker – To find fences, reliable contacts and helpers, suppliers of alibis, suppliers of software and information to assist in getting as much street-level information as possible.
- Computers – A straightforward Computers roll to gain some facts about the target, carried out outside cyberspace: node identifiers, geographical locations of data centres, audits and accounts, interests, links with other organisations and so on. Know Your Target!
- Computers – A trial run in cyberspace: perhaps a quick, non-damaging intrusion against the target to test security and assess what data is there before the run proper. A Recon roll may also assist to just check facts, figures and so on.
- Advocate – If you were to get caught, what defence could you mount? An Advocate 8+ roll will help assess risk versus reward.

BURN-OUT AND CYBERSPACE ADDICTION

Cyberspace is a beguiling place. Utterly different to the real world it is a realm of data, metrics, relationships and data flows seen in an abstract way. A successful run and successful get away creates an adrenalin rush unlike any other. Cyberspace jockeys can get hooked on the environment, spending longer and longer in Cyberspace and less and less time in the real world. They become distanced from friends, loved ones and colleagues. Personal hygiene is neglected; food becomes secondary. Sleep is not an option. All that matters is the run, the rush and the reward. Some jockeys do not even *care* about the reward or getting rich; the risk IS the juice; the challenge is the focus; the reward is a bonus – if that, even.

Being outside cyberspace becomes depressing – like withdrawal from a narcotic. Only when jacked-in, navigating the data streams, is the jockey truly functional.

Simulating this addiction is an optional rule for consideration. It works as follows:

- Either the Referee or character should keep a log of how many hours the character spends in cyberspace. Every 12 hours (concurrent or incrementally) accrues one Cyberspace Addiction point.
- Every successful cyberspace intrusion accrues Cyberspace Addiction points based on the Security level of the target: take the Security level and divide by five, rounding down; this is the number of Cyberspace Addiction points the cyberspace run accrues (so, a run against a Sec 10 organisation yields two Cyberspace Addiction Points).
- Once Cyberspace Addiction points reach, or exceed, the Int Characteristic, the character must make an Endurance 8+ roll. Any excess of Cyberspace Addiction points over the Int Characteristic is used as a negative DM for the character.
- If the Endurance roll succeeds, there is no detrimental effect; the character copes with the potential addiction. If the roll fails, then the character must roll on the Cyberspace Addiction table and apply the effects.
- Addiction points are reset to zero but will accrue as described previously. However, the next Endurance roll is triggered when Cyberspace Addiction points reach one below Intelligence. Each subsequent accrual reduces the Int threshold by one, making Endurance rolls more frequent and increasing the negative DM for accrued points.
- If, or when, a character reaches a point where his Int threshold reaches one or zero, the Endurance roll may be immaterial and an Addiction condition roll becomes automatic.

CYBERSPACE ADDICTION

2d6	Condition
2	Disaster... Reduce the Int Characteristic to half its current level. The character has reached a point of total dependence on cyberspace. Therapy and rehabilitation is needed. The character cannot relate to the real world any longer. 2d6 months of concentrated rehab is needed to restore Int and effectively treat the character.
3	Serious addiction. Reduce the Int Characteristic by 1d3 points. The character has become reclusive and spends all waking time in cyberspace. Sleep only comes when exhaustion sets-in. The character has withdrawn from the physical world.
4	Standard addiction. The character can only leave cyberspace, or resist going into it, on a successful End 10+ roll. Outside contact is limited to perhaps a few hours a week, if that.
5	Mild addiction. The character can only leave cyberspace, or resist going into it, on a successful End 8+ roll. Outside contact is limited to perhaps a few hours a day. Personal hygiene is neglected. Showering is a thing of the past. Friends? They don't understand you...
6–8	Addiction signs. The character can only leave cyberspace, or resist going into it, on a successful End 6+ roll. Cyberspace is all you can talk about – or want to talk about. You show contempt for, or impatience with, those who have never roamed the data networks. You are beginning to smell a little, too.
9 –12	It is clear to you that cyberspace is where real life truly happens. Your abilities distinguish you from the rank and file. You prefer to associate only with other jockeys. You obsess about the next run and are tempted to brag about previous ones. You are intent on making a name for yourself as a cyberspace bandit: it is more important than any so-called 'real-life' achievement.

PATRONS

The following are a series of patrons who can provide travellers with employment. All of these jobs involve cybernetics somehow, be they an opponent, the patron, the target or even the Travellers themselves.

Each patron is described according to the following template:
Patron Name and Title: Describes the person offering the job.
Patron Career: The career and speciality of the patron.
Required Skills : What skills are required to complete the job with the least difficulty. The travellers do not necessarily need to have these skills but they will prove useful.
Required Equipment: If any specialist equipment is needed it will be mentioned here.
Players' Information: The details of the job for the Player Characters, including the amount they will be paid.
Referee's Information: Additional information for the Referee only.
Possible Outcomes: A list of complications that could turn a small job into a full blown adventure.

1. HIS HOLINESS VARPAK VASHINELLI, RELIGIOUS LEADER

Noble, Administrator
Required Skills: Drive, Gun Combat, Recon.
Required Equipment: None.

Players' Information

The Order of Sanctity is a religious group that has a following on a number of worlds within the subsector. Their beliefs regarding death involve the sanctity of the body in order to ensure the passing of the soul to the next life. These beliefs include the idea that cybernetic parts will corrupt the body and hence the soul, which will prevent a person from moving on to the afterlife.

His Holiness is on a tour of the faithful and preaches against the use of cybernetics in a fiery manner. Not only does he wish to prevent members of his religion from having cybernetic parts but he wishes for the technology to be banned from any world where The Order of Sanctity holds any power. On those worlds where the order has the most influence full or partial bans have already been enacted and now he plans to spread the ban still further.

His firebrand speeches and outspokenness has left him many opponents. Veteran groups, disabled groups and health workers and among those who see him as the leader of a heartless organisation who would have people suffer in order to promote their own agenda. As such Varpak needs protection from professionals and this is where the Player Characters come in, since believers are not allowed to carry arms within the sight of His Holiness.

His Holiness will pay 2,000 credits per week for each Player Character, payable upon the completion of the tour, which is scheduled to last for nine weeks.

Referee's Information

Varpak will be met by demonstrations wherever he goes. These are expected but more serious threats may arise. Varpak and his followers are very likeable and personable people outside of their beliefs, although Player Characters may find it disturbing the way the followers are always trying to get them to 'see the light'.

Possible Outcomes

1d6 Result	Outcome
1	A group of protesters plan to humiliate His Holiness by throwing several gallons of paint at him. These will be paint filled balloons, of course if the Player Characters start opening fire at the protesters when they start throwing the projectiles they could very quickly become the targets of local law enforcement.
2	A lone gunman will try to assassinate His Holiness at the starport.
3	As for previous but the gunman fires just as some smugglers are handing over some prescribed goods to a local criminal cartel. Both groups immediately believe it is a double cross and the Player Characters end up being part of a five way fire fight (themselves, the sniper, the smugglers, the cartel and starport security).
4	A group of activists attempt to attack His Holiness using non-lethal force. They will also attack Player Characters getting in their way, using a variety of non-lethal weapons.
5	As for previous but the activists are trying to kill His Holiness and are armed appropriately.
6	As for previous but the activists have been set up by members of the sect who believe that by killing Varpak they will martyr him and make a ban all the more likely on this and neighbouring worlds. There will be more than one attack and the Player Characters will be asked by Varpak (with a suitable bonus offered to them) to track down his attackers before they strike again.

2. DEPUTY ALEXANDR FELIX, POLICE OFFICER

Agent, Law Enforcement
Required Skills: Diplomacy, Investigate, Persuade, Streetwise.
Required Equipment: None.

Players' Information

A local police officer believes that he has discovered there is a serial killer in the city and needs the Player Characters to track him or her down. Unfortunately no one in the department believes him and he has managed to get himself suspended with strict orders not to continue investigating the killings himself. Alexandr comes from a wealthy family and is not prepared to let the killer get away with it and has tracked down the Player Characters in order to get their help (if one of the characters has a suitable Contact or Ally in law enforcement then it will be Alexandr).

Since the local police are not interested Alexandr believes that the killer is either being protected by corrupt officers or is part of a group unofficially sanctioned by some political group.

The killer, or killers, is targeting people with cybernetic parts and removing them from their bodies. The deaths are well spread out and the methods of killing are all different, one thing which may be behind Alexandr's colleagues not believing him. Several of the victim's deaths are being treated as accidents and the missing cybernetic parts explained away (scavengers taking away parts of the body, parts falling from decomposing bodies in a body of water and so on).

Alexandr has limited funds available but will gladly pay Cr. 3,000 per Player Character for the apprehension of those responsible for the crimes.

Referee's Information

The investigation will be difficult but the Player Characters will be able to find out there is something bothering the cyborg community. Other police officers will be suspicious of the party, even after they resolve their investigation, disliking the idea of outsiders trying to do their job. Player Characters can expect a subtle (and, on occasion, not-so-subtle) campaign of harassment from Alexandr's erstwhile colleagues.

Possible Outcomes

1d6 Result	Outcome
1	There is no serial killer. The deaths are unconnected and those believed to be accidents are just that. The cyborg community is worried mostly because Alexandr has caused them to be concerned there may be a killer out there after them. When the Player Characters report their findings Alexandr will pay them off, thanking them for their work and muttering something about being too long in the job and needing a long vacation. In reality he believes the Player Characters themselves have become part of the conspiracy and hires another group to track them down and capture them. He is not bothered if some of them are not taken alive, as long as he can interrogate one or two to find out who is behind the plot, so the attackers will use lethal force if they deem it necessary.
2	Alexandr is right although there is no conspiracy. It is the work of a lone madman who believes cyborgs are trying to kill him by sending signals to his brain and trying to microwave it. The killer is dangerous and very paranoid, however if the previous killings are studied in detail the travellers will be able to deduce his identity.
3	Alexandr is right, although there is no conspiracy. The killings are carried out by fanatical followers of Varpak Vashinelli, who cut out the cybernetic parts after killing their victims in order to ensure their victims' souls manage to get to the afterlife. They are getting frustrated that the killings have not been connected so they are planning a mass killing in order to highlight their cause, to make people stop using the parts.
4	As per 2 but there is a conspiracy. The killer is the son or daughter of a powerful figure on the planet (politician, noble, industrialist, war hero or other establishment figure) and he is covering for his child, ensuring any investigations get nowhere. He has a small team of well paid hirelings who make sure most the bodies are not found or any clues linking the killer to his crimes are removed from the scene.
5	As per 3 but there is a conspiracy. Members of the police sympathetic to the aims of the religion are ensuring that the crimes do not get investigated competently. Unfortunately they are being too successful as no one has linked the crimes, so the group's message that cybernetics are bad is not getting out.
6	Alexandr is right but he is the killer. He has a split personality brought about by a malfunction in a cybernetic part attached to his own brain. Subconsciously his alter ego knows, somehow, cybernetics are to blame for his murderous rampage and hence he targets those with implants. There is no conspiracy; Alexandr is using his police knowledge to ensure no one can connect the crimes.

3. MR. SMITH, INDUSTRIAL SPY

Agent, Corporate
Skills Required: Computers, Recon, Stealth.
Equipment Required: None.

Players' Information

Cyberline Industries are at the forefront of cybernetic research and are one of the leading providers of various top end models. Mr. Smith represents an interested party who believes Cyberline's success is due to industrial espionage. Mr. Smith wants the group of travellers to infiltrate one or more of Cyberline's offices to find the proof so it can be used against them in future patent violation lawsuits.

Smith wants to avoid unnecessary casualties, as they will only cause the authorities to take the break-ins more seriously. Preferably no trace of the party will be left, if this is impossible then the party should make this look like a normal, criminal theft and take with them any portable valuables they can find. This way Cyberline may not suspect the true motive behind the thefts, increasing the chances of success if future operations prove necessary.

Mr. Smith will provide Cr. 10,000 per party member in return for any proof of wrongdoing the party is able to provide.

Referee's Information

If the travellers think to look up Cyberline in available records they will find the corporation has been accused of similar skulduggery in the past. However the accusations have never been proven, although there are hints that Cyberline may be protected by powerful, political figures.

Possible Outcomes

1d6 Result	Outcome
1	Mr. Smith is working for a rival company eager to steal secrets from Cyberline, who legitimately lead the way in their field. If anything goes wrong Mr. Smith will leave the characters to their fates whilst Cyberline will pursue the matter to the fullest, especially since they are a major corporation with a massive amount of influence within the government. Woe betide the characters if Cyberline ever identifies their involvement.
2	Mr. Smith works for Cyberline and is attempting to test security. As long as the party does not inflict any injuries on Cyberline employees they will be paid off after stealing information from three sites and being debriefed as to their methods by Mr. Smith (if necessary he will pay a Cr. 2,000 bonus each for this). If any Cyberline employee is seriously hurt or killed, however, Mr. Smith will inform law enforcement of the Player Characters' location and then disappear offworld, leaving them to their fate.
3	All is as described. The security at the Cyberline buildings is poor and the Player Characters should find the information in the second building they check.
4	All is as described. Security is tight, however, and Cyberline security officers are a mercenary unit who are well paid to ensure anyone who breaks into their buildings never leave the perimeter of any sites alive. To avoid costly damage to the buildings the mercenaries will attempt to ambush the party as they leave the building.
5	All is as described, except the mercenaries are free to engage the party at any point, collateral damage is considered an acceptable price to pay. As long as the message gets out that breaking into Cyberline will get you killed, the costs involved are considered worth it.
6	Mr. Smith is sadly misinformed. Cyberline are legitimate and security at their buildings is tight. The security for the buildings is so good that it is very likely the Player Characters will be identified very quickly, forcing them to flee or face arrest.

4. CHEN WEI PO, REVOLUTIONARY

Citizen, Worker
Skills Required: Explosives, Gun Combat, Stealth.
Equipment Required: Weaponry.

Players' Information

Chen's world is ruled by a dictatorship that uses elite troops equipped with many cybernetic implants to bully the population and hold on to power. Chen's group wants change, like most of their people, but need experts to complete a special job that could alter the balance of power and hopefully overthrow the current, corrupt regime.

Chen needs a group of experts to infiltrate a government communications centre and help set up some equipment. This will set off a coded signal that will shut down the cybernetics parts of the military and police, allowing the government to be swiftly overthrown with a minimum of conflict.

Individual units have been implanted with different codes in order to be able to shut down any group who might be attempting a coup against the leadership. Chen's organisation has managed to get hold of these codes and now needs professional help in order to get it to where it will have the most effect.

A flat fee of Cr. 50,000 is available, with up to a quarter available up front. Unfortunately the dictatorship has bled the world dry and there are few resources for Chen's people to draw upon.

Referee's Information

Chen's world is tightly policed by the government and the local secret police are efficient in watching offworlders, seeing them as potential troublemakers. Although sympathisers will allow weapons to be smuggled through customs (separately from the Player Characters) it will be difficult to deal with the small team of secret policemen who doggedly trail the party.

Possible Outcomes

1d6 Result	Outcome
1	Chen is a government plant and the whole situation will be used as an excuse to crackdown on dissidents. The Player Characters should be able to guess that something is wrong prior to their attempted attack on the communications centre, failure to take heed of the large numbers of guards will probably lead to their capture. From there they will have to attempt to escape from a high security prison as they are locked up and forgotten about.
2	All is as Chen said. Unfortunately the codes are out of date and the coup fails dismally. The Player Characters will have to try to escape back to the starport amidst fighting on the streets as the superior government forces smash the rebels.
3	As for previous but only some of the codes are out of date. As the result of the fighting remains in doubt the government leaders attempt to flee to a safe haven where they can coordinate a counter offensive (which will prove decisive). Chen will try to get the party to help him prevent their escape with the backdrop of heavy fighting in the streets.
4	Everything is as described except that there are some added security features, which slow down the ability to broadcast. The Player Characters can either attempt to hold off the government forces whilst Chen's people slowly shut down the enemy units one-by-one or they can leave their employers in the lurch and make a break for the starport, to be later hunted by both the survivors of Chen's group, eager to get revenge against their betrayers, and the government, who are keen to eliminate all the rebels.
5	All is as described but a traitor is discovered in Chen's group. This traitor must be tracked down and eliminated before they can inform the authorities. Fortunately Chen's base is isolated in the wilderness and there is a chance that the traitor can be caught before she can do any damage.
6	All is as described, however the resistance is a fragmented group of individuals with different goals. As soon as the government falls there will be anarchy and the Player Characters will have to attempt to escape as different groups make a bid for power and see them as a potential threat.

5. BORAN ENSHEVALA, GOVERNMENT AGENT

Agent, Intelligence
Required Skills: Deception, Investigate, Streetwise.
Required Equipment: Cybernetic implants.

Players' Information

Cybernetics are banned on Boran's world due to religious reasons but there are rumours that degenerates with implants still meet and plot against the government. Boran needs offworlders with implants to infiltrate these heinous criminal groups and bring proof of their illegal activities. If proof can not be found Boran can provide it. As unbelievers and offworlders the travellers will be given any guarantees they require allowing them to keep their cybernetic implants without fear of prosecution.

The Cyberclub were an organisation dedicated to promoting the use of cybernetic parts in society on the world before they became banned. The group is believed to have gone underground and is now supplying parts, and repairs, to those wishing to have them. They are also suspected of plotting against the government to overthrow it, changing the law in order to allow their disgusting behaviour to flourish.

Boran knows the identity of several suspected members of the group and needs unbelievers with cybernetic parts to infiltrate them and find their headquarters. Once they have been infiltrated it is up to the Player Characters to find evidence of crimes and any plots and bring them to Boran's attention. Once enough evidence has been gathered Boran will arrange for arrests to be made and the Player Characters will be free to leave the world with their payment.

The pay will be Cr. 1,000 per week per character with a Cr. 20,000 bonus to be split amongst the party for providing (or planting) the required evidence. If Boran suspects the travellers are dragging their feet he will begin to put pressure upon them, if they still do not produce the required results they will find out just how vindictive he can be.

Referee's Information

Boran is a fanatic and if he does not get what he wants he will react very badly. Unfortunately there is a lot of rivalry in the various intelligence organisations on this world and the Player Characters may find themselves harassed (or worse) by those wishing Boran to fail.

Possible Outcomes

1d6 Result	Outcome
1	There is no cyberclub and Boran is misinformed. He will not believe this, however, and insist the Player Characters are working for the enemy, thus making their guarantees null and void. The Player Characters will then have to escape a world where almost everybody will be hostile towards them because of their cybernetic implants.
2	The cyberclub is nothing more than a group who talk about cybernetics and try to rationalise their beliefs against the utility of implants. They will be genuinely shocked if the Player Characters reveal that they have implants, reporting them to the police. Boran may accept this or suspect there is more going on, which could cause problems for the party.
3	The cyberclub are all individuals who wish to change the law, seeing it as draconian and against the principles of freedom of choice. Most do not have any desire to have implants but they are not judgemental towards those who do. Boran will see them as criminal sympathisers and try to get the Player Characters to plant evidence so the group can be rounded up and arrested.
4	The cyberclub are a small group of scared individuals desperately trying to avoid the attention of secret policemen like Boran. Although they are not plotting any crimes they all have implants or are related to those who have. While not looking for trouble if they discover who the Player Characters are they will react using force.
5	Boran is correct and the group are planning to remove those running the government. However they are merely the tip of the iceberg who have the support of the vast majority of people in the system. When the arrests are made it triggers widespread unrest, which could cause more problems for Boran and the party.
6	The cyberclub are aware of Boran and of the role the Player Characters in trying to unmask them as they have sympathisers in the government. The party and Boran are likely to be drawn into an ambush when they attempt to crackdown on the group and a number of Boran's colleagues will betray them and ensure no help is forthcoming. They will have to escape on their own.

6. JO 'LAUGHING BOY' PAPADRANOUS, SMUGGLER

Rogue, Smuggler
Required Skills: Astrogation, Pilot.
Required Equipment: A starship of some type.

Players' Information

Jo is trying to smuggle high grade, but stolen, cybernetic parts to a foreign world. He needs someone to do the shipping for him, although he does not trust a group of complete strangers. In return for a big pay off he expects to be able to send some of his henchmen along to ensure everything goes smoothly.

Jo already has the parts in his homeworld's starport (where the Player Characters are currently) and has contacts on the foreign world who have paid off some corrupt customs officers when the shipment arrives at its destination. What he is lacking is a ship and his schedule is tight, which is where the party comes in.

Jo offers a flat fee of Cr. 100,000 for the entire party for successful delivery of the products.

Referee's Information

Jo will not trust the Player Characters and will be very cautious around them, always sleeping in his armour and keeping a weapon nearby. His henchmen will be similarly careful, after all they know exactly what kind of scum they are likely to be dealing with.

Possible Outcomes

1d6 Result	Outcome
1	The entire shipment is fake. Jo is a member of a pirate gang and plans on sending his henchmen to hijack the ship. As soon as the ship has left its current system they will wait for an opportunity to present itself. If the Player Characters have taken strong precautions against this possibility then any anti-hijack computer program will have been compromised by the pirates at the starport with a computer virus having been uploaded.
2	A group of pirates from a different criminal organisation have been tipped off about the shipment. They will be waiting for the Player Characters when they arrive at their destination. It is possible one of the henchmen on board the party's starship is a traitor who will help in the attempt to seize the vessel.
3	As for previous but Jo suspects something is wrong. The shipment contains mostly near-worthless scrap while the real thing gets shipped by an alternative route. If the Player Characters make it to their destination they will discover no one is waiting for them and they will end up not being paid by Jo (who is now long gone and using a different alias).
4	The goods are as advertised and the trip is uneventful. Unfortunately the corrupt customs officer has been arrested for other misdeeds and Jo insists that the Player Characters have to find a way past security, otherwise he will pin the blame for any losses on them. If they try to leave the planet he will ensure local law enforcement officers are waiting for them in orbit, having tipped them off about their cargo. (Some of these are also corrupt and Jo has no doubt he will get back his goods, just not immediately.)
5	Double-cross. The 'businessmen' Jo has set the deal up with have no intention of paying and arrive with a group of associates in order to take the goods by force. The henchmen and the party will have to ensure they do not succeed.
6	Double-cross. Jo wants to rip off the cartel and has shipped worthless goods. In addition to the party and the henchmen tagging along Jo has more gunmen waiting to ambush his erstwhile business partners. Unfortunately Jo's reputation has preceded him and the cartel is expecting this move and have plenty of their own gunmen present. The site of the exchange will turn into a battlefield.

7. SERGEANT IVOR MCCABE (RETIRED), LOOTER

Drifter, Scavenger

Required Skills: Engineer (electronics), Mechanic, Medic, Recon.

Required Equipment: Vacc suits, a starship, tunnelling or blasting equipment, medical and electronics kits.

Players' Information

Ivor McCabe will introduce himself to the party, having explained he was given one of their names from a mutual acquaintance (although he will not name this person). He claims he has a business proposition that should pay handsomely, although the work involved will not be for the squeamish and could cause difficulties with local law enforcement. Once an agreement has been made McCabe will tell the Player Characters the details.

About 10 years ago McCabe was part of a regiment which took part in an assault on a pirate base on one of the dwarf planets, Morino, in the system's Kuiper belt. The fighting was fierce and a lot of men were left buried within the base beneath the surface of the planet.

After the fighting McCabe left the unit, having never really fit into the military, and has since been absent without leave. After spending years on the run McCabe was one of those who benefited from a general amnesty and now seeks to profit from the battle fought so long ago.

In addition to the potential loot in the base itself, of which there should be plenty, many of McCabe units were cyberneticly enhanced with top of the range implants. Anyone willing to remove these from the bodies would be able to make a small fortune.

McCabe will offer the party a share in the profits. McCabe will entertain an even 50-50 split with the party but will initially offer a measly 10 percent share to the Player Characters.

Referee's Information

For the authorities this kind of thing is about as low a criminal can get. Looting the honoured dead is never something dismissed lightly and should the Player Characters attract any kind of attention upon themselves they will be in for a very difficult future.

Possible Outcomes

1d6 Result	Outcome
1	Time and the extreme cold of space have meant most of the equipment is worthless, damaged beyond repair. However the authorities somehow discover the looting expedition and the party will have to deal with angry marines wanting to hunt them down for desecrating the bodies of their former comrades.
2	As for previous except there is a rich haul of loot for the Player Characters to have, Cr. 1,500,000 worth on the black market. With the marines on their tail the party may discover that holding onto their ill gotten gains is the most difficult part of the entire expedition.
3	McCabe is not the only person interested in retrieving loot from the battlefield. Some surviving pirates are already on the scene and the players will have to fight them in the tunnels of Morino.
4	As for previous, except the pirates have returned to the dwarf planet and now have a fully functional base hidden there beneath the wreckage of the original. They will be very keen to ensure no one escapes with news of their new hideout.
5	Although there is loot to be had at Morino the Navy has not forgotten the dead and it is a regular stop off point for patrols, who are likely to notice illegal salvaging activity. Fortunately the Navy will be keen to bring such ghouls to trial rather than just obliterate them using their superior vessel, giving the travellers a chance to escape.
6	As for previous but instead of being merely a point visited on patrol Morino is now a hidden naval base, using the debris field from the battle to hide its activities from pirates and other threats to the system. Having some scavengers turn up is unlikely to put the garrison commander in a good mood!

8. Professor Donald P. Steinbrucker, Scientist

Scholar, Field Researcher
Required Skills: Computers, Deception, Engineer (any), Medic, Science (xenology), Stealth.
Required Equipment: Cybernetic implants.

Players' Information

Professor Steinbrucker is the head of Alien Technology Studies at a prestigious university, where the best and brightest from across the sector go for their higher education. He is currently on a sabbatical and needs a group to investigate a unique civilisation on an interdicted world. Steinbrucker has permission from the sector government to study this world but due to a disagreement with the scout service needs to go elsewhere for his support team.

The population of both the inhabited worlds in the system are all human cyborgs who appear to have lost their individuality. The authorities are very concerned if the cyborgs manage to travel beyond their home system as they may prove formidable enemies. Steinbrucker's work is to evaluate how these societies work, how aggressive they are, discover how the current situation came about and why it is maintained, and how advanced they are technologically.

At the moment there is a sizable Navy task force positioned to watch over the area and ensure no major shipbuilding effort is underway. At the moment it appears the cyborgs do not have jump technology and it is deemed relatively safe to send in a team under the supervision of experts to investigate.

The expedition is well funded, with a nice Cr. 50,000 reward per character upon completion of a month's work.

Referee's Information

Information can be gathered from computer records, interrogation of the cyborgs and whatever other methods the Player Characters are able to come up with. This does not mean the mission will be straightforward, though.

Possible Outcomes

1d6 Result	Outcome
1	The cyborgs are aware that they are being watched and have been building jump capable ships in underground facilities for a long time. If the Player Characters are able to successfully infiltrate one of the worlds they are able to discover this but then must somehow escape offworld once the alarm is raised. If the nearby navy task force can strike before the fleet is ready to launch the cyborgs fleet is doomed, however the fleet is powerful enough to sweep aside the watching ships if it is not taken out on the ground.
2	The cyborgs are essentially harmless. Because they are no longer driven by their feelings they do not have the desire to leave their home system and are only mildly curious about visitors to their world. They will pause briefly to stare at the Player Characters before moving off to complete whatever they were doing before encountering the party member.
3	The cyborgs share a group mind and any intrusion will be spotted easily. Fortunately they are not overly hostile but will take steps to defend themselves. Because of their different perspective on things misunderstandings can result in a minor problem escalating into a disaster for the expedition.
4	As for previous but the cyborgs are paranoid of those not of their group and will be hostile towards intruders. The expedition will only have a limited time in which to discover what needs to be known before hostile forces begin to bear down on them.
5	The cyborgs have not lost their individuality but who have used cybernetic parts to better adapt to their world and improve themselves. They can be easily infiltrated and suffer less of the problems found in human space (crime, poverty, wars and so on) although they will not necessarily be friendly to expedition members if they are discovered.
6	The cyborgs are individuals but are ruled by an elite group who have used the implants to modify behaviour to ensure they hold onto power. These leaders can either be non-cyborgs or be more machine than man, in either case they are paranoid about the possibility of losing power and will use the controlled drones to destroy the expedition if they become aware of its existence.

9. WALDO BUNKER, CYBERSPACE JOCKEY

Cybernet, Cyberhacker
Required Skills: Astrogation, Deception, Pilot, Streetwise.
Required Equipment: Starship.

Players' Information

The party are approached by an unhealthy looking young man, on the wrong side of malodourous. The pale, underfed individual introduces himself and says he needs passage offworld and soon.

Waldo explains he has managed to upset some powerful people and must be smuggled into the starport and from there offworld. He will pay a small fee upfront with a large bonus when he has reached safety, he does not expect for there to be any violence but cannot guarantee this to be the case.

Waldo is a cyberspace jockey who has spent much of the last few years hacking into various governmental and corporation systems. Unfortunately he was caught unawares by some new security programs installed on multiple sites which allowed hackers like him to be traced. These lay dormant and watched his every move before being able to identify him (he was not the only person caught out; the local cyberspace jockey community has been severely culled with many of them arrested or simply disappearing). He fears for his safety, expecting at any moment he will be arrested, although this is him at his most optimistic, he is also worried there are those out there who wish to deal with him with extreme prejudice.

Waldo will give Cr. 1,000 up front with a big Cr. 50,000 bonus when he reaches safety.

Referee's Information

Waldo is an irritating individual at the best of times, however he is presently in a particularly filthy state as he has tried to avoid others and has been too paranoid to worry about personal hygiene. This in itself may simply be annoying, or it could attract unwanted attention to the group.

Possible Outcomes

1d6 Result	Outcome
1	Waldo is paranoid and the entire anti-hacker program is a clever hoax. The recent arrests were of hackers who the government had identified over the course of several years and then arrested in one fell swoop, spreading the story of the program to scare others into the open. Waldo's identity is unknown and there will not be any real problems in getting him offworld, other than he insists on being smuggled into and out of the starports.
2	Waldo has been identified by the government and law enforcement officials are actively trying to track him down. As long as the Player Characters do not use lethal force against the police they are liable to be let off with a large fine before being expelled from the world, should they be caught.
3	As for previous but the government is using bounty hunters to track down the criminal hackers. These are more likely to shoot first and ask questions later if they come up against the party.
4	Waldo is being hunted by mercenaries hired by one of the corporations he hacked into. These are killers, not interested in taking anyone alive. If they trap the party they will try to parlay and are willing to let the Player Characters go as long as Waldo is handed over (he will be shot dead as soon as he is, however).
5	As for previous but Waldo has stolen some very valuable data from the corporation. If necessary he will use its value, and offer a share of the proceeds to the Player Characters, to ensure he is protected until he can get offworld.
6	As for 4 but Waldo has sensitive (but still encoded) data from the government. This would cause severe diplomatic repercussions if it ever was decoded and found its way into the public domain. As such they will spend every practical resource in eliminating Waldo and anybody associated with him.

TABLES

LIMBS

Item	TL	Price (Cr)	Mass	Enhancements	Configurable	Options
Arm (Basic)	8	100,000	10%	None	No	
Arm (Adv)	11	500,000	10%	+1 Str	3	Advanced Hand Combat Hand Hand Razors Scythes Int. Weapon Grapple Medkit Toolkit
Arm (Heavy Duty)	12	1,500,000	13%	+1 Str, +1 Dex	2	Weapon Mount Heavy Eqpt Mount Pincer Tendrils
Hand (Basic)	8	25,000	3%	None	N	
Hand (Adv)	11	75,000	3%	+1 Dex	1	Computer Transceiver Sensors Blades
Hand (Cmbt)	11	200,000	3%	None	2	Blades Snub Pistol Stunner Grasp Bomb
Foot (Basic)	8	20,000	3%	None	N	
Foot (Adv)	10	70,000	3%	Various	2	Blades Mag. Grapple Prehensile Skates Sure-Grip Repulsor
Leg (Basic)	8	200,000	20%	None	N	
Legs (Blade)	8	10,000	20%	+1 Athletics	N	
Leg (Adv)	11	800,000	20%	Characteristics, Speed, Skills	2	
Tentacles	11	1,500,000	40%	Characteristics	Various	Extensible Retracting

ARMOUR

Armour Type	Cost per Limb	Protection
Jack equivalent	50	1
Mesh equivalent	100	2
Cloth equivalent	150	3
Flak equivalent	300	4
Combat plating	500	6
Ablat plating	100	1 (6 against lasers)
Reflect plating	1,000	0 (12 against lasers)

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