

BIOWARE

This section details the vat-grown, genetically engineered implants that have no metal or plastic in them at all. Bioware could easily be termed as “biological cyberware”. It represents the pinnacle of modern medical technology, though it is still fairly new, and as such is very expensive compared to a piece of similar cyberware. The advantage of Bioware is that there is no social withdrawal or penalties to Interaction skills because of them. They are all organic, and do not suffer the same problems of pushing their users toward human separation.

Bioware is bought with the Limitation: Bioware (-.5). This reflects the fact that Bioware must be implanted, can be removed, can be damaged, reduces the character’s magic skills, and is limited by the character’s BODY characteristic.

- Characters have a maximum Bio Index which is equal to their maximum (do not consider damage, drains, transfers, etc.) BODY x 2. Each piece of Bioware has a Bio Index Cost.
- Characters may never have more Bioware implanted than their maximum Bio Index. If they attempt to have another piece installed, the body automatically rejects it.
- For every point of Bio Index paid, the character loses 1 point from his Magic Attribute.

ADRENAL PUMP

The Adrenal Pump is a small, muscular sac implanted in the lower abdominal cavity and connected to each of the two suprarenal (or adrenal) glands. When dormant, the pump concentrates and serves as a reservoir for the hormones adrenaline and noradrenaline. When activated, the sac contracts, sending a surge of concentrates into the bloodstream. Stress and other emotional states such as anger, fear, or lust will also activate the pump. Typically, the Pump will not activate unless the character suffers BODY or STUN damage. The character can also activate the Adrenal Pump by taking a dose of the adrenocorticotropic hormone (ACTH, see equipment). The drug MAO (see equipment) can suppress the effects of unwanted pump activation. When the pump kicks in, its effects last for 5 minutes before running out. After this time, the character suffers incredible fatigue (STUN Drain). The Adrenal Pump requires 1 hour to regenerate the supply of hormones before it can be used again.

Power: DEX, STR, EGO; Lightning Reflexes Talent; **Adv:** None; AP: 26/52; **Lim:** Bioware (-.5); No conscious control (-2); 1 Continuing charge lasting 5 minutes (-.75); Side Effect: 3d6 STUN Drain (-.5)

Type	DEX	STR	EGO	LR	Bio Idx	Nuyen
Level 1	+3	+5	+3	+4	5.4	100000
Level 2	+6	+10	+6	+8	12.2	200000

CAT’S EYES

The recipient of cat’s eyes receives a new set of replacement eyes, vat-grown and specially designed to incorporate a structure and amplifies light and enhances the user’s night vision. The number of light-sensitive rods and detail-enhancing cones in the eyes also increase. Like the eyes of a cat, this bioware incorporates a mirror-like organ in the cornea that reflects light toward the retina. Under low-light conditions, these eyes seem to be reflective and to glow in the dark. The pupils are also slitted like a cat’s eyes, to increase the amount of light received. The eyes can perceive color.

Power: Ultraviolet Perception; Sight; **Adv:** None; AP: 5; **Lim:** Bioware (-.5)

Type	Bio Idx	Nuyen
Cat’s Eyes	3.3	12500

CEREBRAL BOOSTER

Increasing the power of the brain with a Cerebral Booster involves the introduction of additional nervous tissue, along with convolutions and gyri (ridges and furrows) into the frontal lobes of the cerebellum. The extra cells and increased surface area improve the efficiency of the cognitive and other higher level brain functions because the brain areas augmented are those responsible for those functions.

Power: INT; **Adv:** None; AP: 4/8; **Lim:** Bioware (-.5)

Type	INT	Bio Idx	Nuyen
Level 1	+4	2.7	10000
Level 2	+8	5.3	20000

DECENTRALIZED HEART

This replaces the heart with vat-grown implants that disperse the chambers, main arteries, and main veins to three areas within the torso. This helps to reduce the chance of impairing and disabling wounds to the torso.

Power: BODY; **Adv:** None; AP: 12; **Lim:** Bioware (-.5); Only to determine impairing and disabling wounds to the chest (-2)

Type	BODY	Bio Idx	Nuyen
Decentralized Heart	+6	3.4	30000

ENHANCED ARTICULATION

This is a combination of a number of extensive procedures, including joint-surface coating, relubrication, and tendon and ligament augmentation. These procedures result in a muscle and joint system of extreme fluidity. Enhanced Articulation allows a character to execute motion-intensive skills in a more precise and speedier fashion.

Power: Skill Levels: Agility Skills; **Adv:** None; AP: 15; **Lim:** Bioware (-.5)

Type	SL	Bio Idx	Nuyen
Enhanced Articulation	+3	10	37500

EXTENDED VOLUME

Although the volume of air contained in the lungs of an average adult is approximately 2.5 liters, the actual tidal volume (the amount of air that enters and leaves the lungs with each breath) is only .5 liters. By augmenting the amount of flex in the diaphragm, it is possible to increase the tidal volume, thus increasing the efficiency of gas exchange, and as a result, increasing stamina.

Power: REC; **Adv:** None; AP: 4/8/12; **Lim:** Bioware (-.5); Only to recover END and STUN (-.5)

Type	REC	Bio Idx	Nuyen
Level 1	+2	2	10000
Level 2	+4	4	20000
Level 3	+6	6	30000

MNEMONIC ENHANCER

By attaching a highly concentrated growth of gray matter to the hippocampus region of the brain, the Mnemonic Enhancer can increase the capacity for both short- and long-term memory. A person with a Mnemonic Enhancer is less likely to forget events or information that he or she encounters.

Power: Eidetic Memory Talent; **Adv:** None; AP: 5; **Lim:** Bioware (-.5)

Type	Bio Idx	Nuyen
Mnemonic Enhancer	3.3	25000

MUSCLE AUGMENTATION

Using a biological weaving treatment, special vat-grown muscle cables are braided into existing muscle fibers, enhancing the muscle’s mass and performance.

Power: STR; **Adv:** None; AP: 4/8/12/16; **Lim:** Bioware (-.5); Cannot combine with certain cyberware/bioware (-.25)

Type	STR	Bio Idx	Nuyen
Level 1	+4	2.3	20000
Level 2	+8	4.6	40000
Level 3	+12	6.9	60000
Level 4	+16	9.1	80000

MUSCLE TONER

This treatment incorporates vat-grown elastic muscle fibers into existing muscle tissue, increasing muscle tension and flexibility. Users of this augmentation are quicker and more limber. Cannot combine with Joint Augmentation.

Power: DEX; **Adv:** None; AP: 12/18/24/30; **Lim:** Bioware (-.5); Cannot combine with certain cyberware/bioware (-.25)

Type	DEX	Bio Idx	Nuyen
Level 1	+4	6.9	60000
Level 2	+6	10.3	90000
Level 3	+8	13.7	120000
Level 4	+10	17.1	150000

SHADOWPUNK—BIOWARE

NANOTECH VISUAL UPGRADE

Specialized nanosurgeons rebuild the user's retinas and optic nerves changing the ratio of rod and cones, giving the user the ability to naturally perceive the Ultraviolet and Infrared Spectrum. This process is irreversible.

Power: Ultraviolet Perception: Sight; Infrared Perception: Sight; **Adv:** None; AP: 10; **Lim:** Bioware (-.5); Must have organic eyes (-.25)

Type	Bio Idx	Nuyen
Nanotech Visual Upgrade	5.7	25000

NEPHRITIC SCREEN

With the implementation of a Nephritic Screen, the kidney is rebuilt to enable a more effective cycle of filtration and reclamation. Finer discrimination in the removal of waste products and the reclamation of useful materials extends a greater level of well-being to the user.

Power: Power Defense; **Adv:** None; AP: 1-20; **Lim:** Bioware (-.5); Only affects injection-vector toxins (-.5)

Type	DEF	Bio Idx	Nuyen
Nephritic Screen	1-20	DEF x .5	DEF x 2500

PAIN RESISTER

This is a cluster of specialized nervous tissue designed to filter out specific sensory stimuli. Activation and deactivation of the Resister is a learned reflex. When the Resister is voluntarily triggered, the individual is no longer subject to any sensations of pain, including feedback pain. He or she is also very resistant to torture and difficult to stun.

Power: CON; **Adv:** None; AP: 20; **Lim:** Bioware (-.5); Only to resist being stunned (-1)

Power: Resistance Talent; **Adv:** None; AP: 5; **Lim:** Bioware (-.5)

Type	Resist	CON	Bio Idx	Nuyen
Pain Resister	+5	+10	11.3	20000

PLATELET FACTORY

Platelet factories improve the body's ability to handle damage. By selective enhancement, thrombocyte (platelet) production within the bone marrow is increased to a high level, resulting in the formation of "Platelet Factories". When a wound affects the body, the increased amount of platelets in the bloodstream stops bleeding at the site, lessening the trauma from large wounds. When the character takes damage from an attack, the Platelet Factory automatically heals back 1 BODY after the attack. The Platelet Factory only works after taking damage.

Power: Healing: BODY; **Adv:** Trigger (+.25); Reduced END: 0 END (+.5); Standard Effect (+0); AP: 17.5; **Lim:** Bioware (-.5); Only works through Trigger (-1); Does not Heal STUN (-1)

Type	Healing	Bio Idx	Nuyen
Platelet Factory	1 BODY	5	15000

REFLEX RECORDER

With this enhancement, extra neural material is grown in small clusters around the thirty-one pairs of spinal nerves. These clusters allow memorization of certain "learned" motor reflexes. The reflex recorder adds some skill levels to a skill chosen when it is implanted. A user may have multiple reflex recorders, but each must be dedicated to a different Agility skill.

Power: Skill Levels: Specific Agility Skill; **Adv:** None; AP: 4; **Lim:** Bioware (-.5)

Type	SL	Bio Idx	Nuyen
Reflex Recorder	+2	2.7	10000

SKINWEAVE

This weaves an energy-diffusing material under the skin that gives the recipient the equivalent of personal armor. The transformation of normal skin into Skinweave is an extensive process. The individual's skin is peeled back section by section, and the body's dermal layer is fortified by grafts of sythagen (a strengthened and reinforced collagen-protein derivative), flextin (a synthetic and more resilient form of the elastin protein), and flakes of modified and laced cartilage. Once transplanted, Skinweave grows just like normal skin and is virtually indistinguishable from unaugmented skin. The underlying epidermis is altered at the same time to enable it to sustain the new dermal architecture. An additional bonus from Skinweave is that any damage to the body heals with little or no scarring. This process covers the whole

body at once. Cannot combine with Dermal Plating, Dermal Sheath, or Subdermal Armor cyberware.

Power: Armor; **Adv:** None; AP: 6; **Lim:** Bioware (-.5); Cannot combine with certain cyberware/bioware (-.25)

Type	rPD	rED	Bio Idx	Nuyen
Skinweave	+2	+2	1.1	100000

SUPRATHYROID GLAND

The Suprathyroid Gland is a regulating gland that is vat-grown, then implanted on the top of the thyroid gland in the body. This gland supersedes the metabolic functions of the thyroid, optimizing catabolism (the breakdown of complex substances such as starches and sugars) and anabolism (the chemical conversion of substances such as that of complex sugars) within the body. The altered metabolism produces more energy and effectively supercharges the recipient. Having a Suprathyroid gland increases the subject's physical attributes. Because of the higher amounts of energy available, characters with a Suprathyroid gland tend toward hyperactivity.

Power: STR, DEX, CON, BODY, SPD; **Adv:** None; AP: 27; **Lim:** Bioware (-.5)

Type	STR	DEX	CON	BODY	SPD	Bio Idx	Nuyen
Level 1	+3	+2	+3	+1	+1	18	115000

SYMBIOTES

Symbiotes consist of a number of tailored microorganisms (nanites) that are introduced into the host subject's bloodstream. The so dramatically enhance the body's own regenerative function that the host's natural healing time is significantly reduced.

Power: REC; **Adv:** None; AP: 10/20/30; **Lim:** Bioware (-.5); Only to recover BODY (-.5)

Type	REC	Bio Idx	Nuyen
Level 1	+5	5	25000
Level 2	+10	10	50000
Level 3	+15	15	75000

SYNAPTIC ACCELERATOR

With the implantation of the Synaptic Accelerator, the neural cells, which make up the spinal cord and other main nerve trunks, are encouraged to replicate and lengthen. This provides a wider "data-path" for the transmission of impulses, and decreases the amount of time required for the signal to traverse the distance. Thus, more data can be sent from and received by the brain in a shorter period of time. Those who have Wired Reflexes, Boosted Reflexes, Move-By-Wire System cannot install the Synaptic Accelerator, as their nerve fibers have already been modified.

Power: SPD; **Adv:** None; AP: 30/40; **Lim:** Bioware (-.5); Cannot combine with certain cyberware (-.25)

Type	SPD	Bio Idx	Nuyen
Level 1	+3	17.1	100000
Level 2	+4	22.9	200000

SYNTHACARDIUM

This boosts the heart's capabilities by increasing its ability to handle higher levels of activity. Synthacardium consists of artificially enhanced myocardium, the muscle tissue that makes up the heart. When added to the structure of the heart it enables the organ to perform at higher levels of strenuous activity with greater ease.

Power: END; **Adv:** None; AP: 5/10; **Lim:** Bioware (-.5)

Type	END	Bio Idx	Nuyen
Level 1	+10	3.3	12500
Level 2	+20	6.7	25000

SHADOWPUNK—BIOWARE

TAILORED PHEROMONES

It is possible to alter the main sweat glands of an individual so that they will release discrete levels of specially designed pheromones into the surrounding air. Only a few molecules of the pheromones are required to trigger the effect, but no matter how low the concentration of secreted pheromone, all persons in the area of dispersion are affected equally. Tailored Pheromones have no effect on individuals who have no sense of smell and do not affect those who cannot be affected by smell (seen through video camera, etc.).

Power: PRE; COM; **Adv:** None; AP: 5/10; **Lim:** Bioware (-.5); ½ effect in windy areas (-.25); Must be able to smell the character (-.25)

Type	PRE	COM	Bio Idx	Nuyen
Level 1	+3	+4	2.5	12500
Level 2	+6	+8	5	25000

TOXIN EXTRACTOR

As the main site of catabolism, or the breakdown of complex substances in the body, the liver is the prime site of defense against potentially toxic compounds and drugs. The Toxin Extractor is a specially cultivated cluster of cells implanted in the liver that greatly improve its efficiency and expands the spectrum of catabolic activity. The Toxin Extractor subtracts its defense from the effects of ingestion-based attacks.

Power: Power Defense; **Adv:** None; AP: 1-20; **Lim:** Bioware (-.5); Only affects ingestion-vector toxins (-.5)

Type	DEF	Bio Idx	Nuyen
Toxin Extractor	1-20	DEF x .5	DEF x 2500

TRACHEAL FILTER

Traps and filters are implanted at the top of the trachea just below the larynx. This cluster of specialized tissues absorbs airborne impurities and keeps them from reaching and subsequently affecting the lungs. Solid matter (smoke, pollen, dust, etc.) is easily blocked and expelled with outgoing breath. Gaseous compounds are rendered inert or less effective through the various chemical reactions performed by the filter. The Tracheal Filter subtracts its defense from the effects of inhalation-based attacks.

Power: Power Defense; **Adv:** None; AP: 1-20; **Lim:** Bioware (-.5); Only affects inhalation-vector toxins (-.5)

Type	DEF	Bio Idx	Nuyen
Tracheal Filter	1-20	DEF x .5	DEF x 2500

CULTURED BIOWARE

Bioware may be bought as Cultured, which decreases the Bio Index rating by 25%. Cultured Bioware costs 3 times as much as standard.

DAMAGING CYBERWARE AND BIOWARE

Cyberware and bioware are much like any other types of equipment except that they are implanted in the body. And just like other pieces of equipment, they can be damaged by the outside world.

- If a character takes BODY damage from a single attack, one piece of cyberware or bioware could possibly be damaged. Roll 1d6; if the result is less than the amount of BODY taken, a system has been damaged. The extent of damage is the amount of BODY taken minus what is rolled on the d6, expressed as a percentage. *Ex: Shadowkill has taken 8 BODY from a single attack. Rolling 1d6, he rolls a 5. One system has been damaged by 30%.*
- If the character has only either cyberware or bioware, determine the system randomly on the tables below.
- For cyberware, use the tables below to determine which system.
- For bioware, randomly determine which system and use common sense to see if it could have been damage in that location.
- If the character has both cyberware and bioware, roll 1d6. On a result of 1-3, determine damage for cyberware. On a result of 4-6, determine damage for bioware.

Roll	Location
2d6	Head Location
2-5	Headware
6-7	Bodyware Neural Interface
8-9	Cyber-optic
10-11	Cyber-audio
12	Cyber Limb Neural Interface

1d6	Hand Locations
1-2	Bodyware
3-6	Cyber Limb/Cyberhand
1d6	Arm Location
1-3	Bodyware
4-6	Cyber Limb/Cyberhand

No Roll	Shoulders/Chest/Stomach/Vitals Locations
	Bodyware

1d6	Thigh Location
1-3	Bodyware
4-6	Cyber Limb

1d6	Leg Location
1-3	Bodyware
4-6	Cyber Limb

1d6	Foot Location
1-2	Bodyware
3-6	Cyber Limb/Cyberfoot

- If the character does not have the type of cyberware rolled, then he or she was lucky and there was no damage.
- Once the type of cyberware is determined, a random roll among all systems of that type possessed by the character determines which one is damaged.
- If a system takes 100% damage, then it is considered destroyed and it must be replaced.
- Repairing of cyberware requires surgery, and the character must undergo the same level of surgery that was done to implant it in the first place.
- Note also, that damaged cyberware functions at reduced capacity until repaired.
- The percentage of damage is the reduction in efficiency of the piece.
- Pieces that cannot be reduced as such simply cease to function until repaired.

IMPLANTING CYBERWARE AND BIOWARE

The implanting of cyberware and bioware is a delicate and sometimes painful process. The character is surgically opened, the cyberdoc implants the cyberware, and then the character must rest to heal and recover.

The system for implanting cyberware and bioware is as follows:

- The implanting cyberdoc must make a Cybernetics Surgery skill roll, with a -1 penalty to the skill per 2 points of Essence or Bio Index of the item to be implanted.
- Success means that the character takes BODY damage equal to the Essence or Bio Index of the cyberware or bioware item just implanted. The surgery takes an amount time equal to the Essence or Bio Index in hours. The system becomes fully functional when the character recovers all of his BODY. If the cyberdoc makes an exceptional roll (modified skill minus 10), then the character only takes BODY equal to one-half the Essence or Bio Index. No matter how much damage the implantation takes, a character cannot die during the implantation process, even if the damage takes the character to negative BODY equal to his BODY. It just extends the recovery time. A character is still unconscious until he recovers to positive BODY.
- Failure means that the character takes BODY damage equal to the Essence or Bio Index of the implant, but the procedure failed. The surgery takes an amount of time equal to the Essence or Bio Index in hours. The process may be tried again, starting over from the beginning. If the cyberdoc fails critically (rolling an 18), then the character takes BODY equal to twice the Essence or Bio Index, and this failure can cause a character to die on the table.

SHADOWPUNK—BIOWARE

SURGERY AND HEALING

Healing from injuries typically requires a bit of time. A PS: Doctor skill is required to heal another or oneself effectively. This test takes 8 hours, though the attending doctor need not stand over the character for the entire 8 hours. A successful PS: Doctor skill roll means that the character will heal 1 BODY in 1 Day, and a roll is required each day. An exceptional roll (modified skill minus 10) means that the injured character recovers 2 BODY for that day. A failed PS: Doctor roll means that the character being treated cannot be healed that day. Another doctor may try, taking 8 hours in the attempt. A very bad failure (rolling an 18) means that the doctor did not heal the injured character but instead caused another 1 BODY of damage.

Complementary skills to PS: Doctor are SS: Medicine or SS: Surgery. The following table detail modifiers to the PS: Doctor table for healing.

Condition	Modifier
No Equipment	-3
Under-equipped	-1
Medkit only	0
Street Doc equipment	+1
Hospital	+3
Poor conditions	-1
Bad conditions	-3
Terrible conditions	-5
Decent conditions	+1
Good conditions	+3
Excellent conditions	+5
Patient is a Magician	-3

MEDICAL COST TABLE

Service	Nuyen
Paramedic	
Normal	500
High-Threat	2000
Doctor	
Normal Healing Procedures	250/day
Complicated Healing Procedures	500/day
Cyberdoc	
Implanting Cyberware	250/hour
Repairing Cyberware	100/hour
Street Clinic Stay	
Including Normal Doctor Services	250/day
Including Complicated Healing Procedures	500/day
Intensive Care	750/day
Hospital Stay	
Including Normal Doctor Services	500/day
Including Complicated Healing Procedures	750/day
Intensive Care	1000/day