Bionics Alpha

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Foreword

Icar began in 1990 and has since grown and changed beyond all recognition of the original. The game grew from two statistics to eighteen and then back to five. Skills changed and grew on trees and guns went from hand drawn in pencil to fully 3D rendered models.

Icar is the creation of a single person, Rob Lang but much of the fuel for the energy that has kept the game going has come from a small group of dedicated players. I don't like to single out single people but it has to be said that this work would not have been as well completed without the assistance of **Andrew 'Byrnie' O'Byrne**. Also worth a mention are the following helpers:

Simon 'Fish' Aubury

Gideon 'Dwain' Moss

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No images
No pre-made suits

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Change List

First Alpha release, no changes

Introduction

For some, humanity is not near enough the top of the food chain. An extra step needs to be taken, beyond that which can be made by fitness regimes. Humanity can be augmented by technology. Any un-natural augmentation of a human is known in the group term **Bionics**, regardless whether they are biological based or machine based improvements. The person with the augmentation is referred to as an *Aug* (Augmented Human) in this section. Bionics is split into three distinct sections. **Borgware** involves completely replacing limbs such that the Aug looks like part of a machine. **Cyberware** goes under the skin, sometimes replacing limbs but normally such that the enhancement does not change the appearance of the Aug. **Bioware** produces flesh and nerves that is woven onto the body of the Aug. It can change the appearance of the Aug, but rarely does. A more detailed description of each is included at the start of each section.

Repair of Bionics is done using the **Bionics Systems** skill (Medical). Borgware can be repaired using a standard mech/tech kit whereas Cyberware and Bioware requires the same machine that was used to install the augmentation. It is is possible to fit different types of Bionic onto the same person, unless otherwise stated. A certain amount of common sense is required, if the Aug is a Full Borg with no skin left, then a skin tatoo is not possible. A failure of installation (failed Bionics Systems roll) leads to either a permenant Rehab or a longer Rehab time (GM choice).

Rehabilitation (Rehab) is what happens after you have been augmented. Normally, the larger the object or the greater its effect on the life of the Aug, the more drastic the Rehab is. Rehab is normally much like physiotherapy (like you would have after breaking a leg in the 21st Century), a number of physical workouts, monitored by a qualified doctor (normally a suitably trained human-like Automaton). It can be painful and is often frustrating. If Rehabilitation is not undertaken then the Aug may pick up neurosis and may never fully recover from the Augmentation process.

Once rehabilitation is finished correctly, then the Aug will never have any trouble again.

Starting out with Bionics

There is a replacement for every part of the human body and this can be quite complicated to deal with. When choosing Bionics you can either go with a **Suit**, which is a package of different parts ready to use or become augmented in pieces (called **Inremental**), finally ending with a player-custom suit. This is more complicated but allows the most freedom to choose. For Systematic upgrades, any given system will require others to already be installed.

Installation and Repair

Installing the body upgrades is different for each type of augmentation but it generally goes through the cycle of:

1. Go to hospital
2. Become unconscious
3. Placed in a machine
4. Body parts replaced
5. Wake up
6. Rehabilitate (see below)

Bionics and the Law

All Bionics are registered with Star Civilisation (SC) upon installation. It is possible to get Bionics fitted without this registration, but it is illegal and can lead to a hefty fine and the doctor performing the installation will lose their License to do medicine. If an Aug is found performing crimes, their bionics are removed, or in the case of a Borg, the Aug is given a vastly underpowered suit that is recognised by all Bionics doctors and is illegal to upgrade. For those Aug performing violent crimes and murder, their are hooked up to a life support system and then 'switched off' such that their brain is still awake and active but they cannot move or communicate with the outside world. Very few Borgs live more than a year in a switched off state.

Human Lifespan

All bionics extend lifespan in some form or another. However, the human brain will eventually run out of steam at approximately 220 years, after a 10 year period of senility. The better the Bionics and the more attention to detail when Rehabilitating the longer the lifespan. The downside to this is that many of the bionics that allow extended lifespan will lead to the Aug

becoming sterile at the age of around 50.

Social Effects

One of the largest drawbacks of having bionics is the social effects. The social prejudices of the human race move at a much slower pace than that of technology and people have difficulty adjusting to those who look different through technology. This social charactersitic is often manifested by fear, hatred or plain racism. Many systems have local laws that ban Bionics over a certain level or to have a separate registration. This restriction is often argued as a infringements of rights, but then for most, Bionics is a choice. One might choose a physical upgrade but you also choose the social ramifications that accompany it.

Borgs get the worst treatment as they look the least like humans and also that Borgs can no longer be a parent. This classes them lower in a society where keeping the human race going is the most important consideration. Those with Cyberware often appear as if they are underhanded and sneaky and thus not to be trusted. Most Bioware goes un-noticed, but then the enhancements it provides are minimal.

Bionics in Play

It is the responsibility of the player to remember what systems they have installed and remind the Gamesmaster (GM) at the appropriate time. With a team of 6 players, it can be very complicated for the GM to remember all the different systems that players have installed. If something happens in the game and the player forgets to use a system, it is taken as the character not being fully used to being anything but human and thus not using the system. Having lots of systems installed means that there is lots to remember and therefore, it's best to leave bionics for more experienced players.

Borgware

Of all the Bionics on offer, Borgware is the oldest and most understood. Bionics are favoured by many because of the longevity offered by replacing biological parts with easily serviced energy driven systems. Also, Borgware has the advantages of cost effective Augmentation and repair as well as a wide array of small systems that can upgrade a suit with little cost.

Combat Bionics

Some bionics have Combat features. On the most simple level, these could be targetting modifiers that help the Aug fire weapons more accurately. There are also systems that allow an Aug to have a bonus in close combat. In this case, the bionics system will come with a close combat combo with a Battle Statistic modifier. This combo may be used in addition to the 8 the character already has, however it can not be altered and must have the Battle Modifier taken into account. Also, the Combat Bionic combo may be longer than that allowed by the character's Battle. In this case, the player may still use the combat bionic combo because the bionic is designed specifically for combo given.

Bionics Sheet

As soon as a human character takes their first bionic augmentation (regardless how small), they should update their Human / Armour card to a bionics one. This should be used to copy the information onto and gives a feeling of change that should be echoed in the character.

** MENTION PRE-MADE BIONICS SUITS **

To Suit or Not To Suit

Borgs have a choice of becoming a Half Borg (Borg spine and a limb or two) or a Full Borg (full body replacement). Half Borgs are rare (Rarity: 80%) and tend only to be those people who have lost limbs through accident (or carelessness) and can not afford (or find) a Bioweave replacement.

Full Borgs are much more common and can be found in Industry, Sports and in Expeditionary teams (people who leave Human occupied space). Borgs are also widespread across the Imperium, especially in Star Fleet where human intelligence is required within the tough body of a machine. Thus, Borg suits can be classed as *Military*, *Expeditionary*, *Industrial* and *Sport*. Military suits can only be gained by active service in the Star Fleet and are not included here because of their rarity. All the others are readily available and their uses are listed below.

It is possible to add Borgware or Cyberware in stages (called Incremental Cyberware), allowing a gradual change from human to Augmented. The benefit of this is that there is less cost up front and also the chance of rejection is less. Furthermore, the rehabilitation time is spread out over a number of weeks so there is no need to take a month out. It does tend

to take longer than just being suited initially and you don't get all the bonuses at once but it might be more appropriate for a person's position in a team.

Expeditionary

The closest suit to a Military one, without actually being one. The expeditionary suit is intended for use *outside* of Imperium space: the Fringe and Lone Systems. Expeditionary suits tend to be fast, tough and well equipped for all environments. They are also the only suit that can come with weapons mounted as standard. Due to the high tolerances of construction, these suits are generally the most expensive.

Industrial

By far the most prevelant suit is the Industrial one. These suits are larger, stronger and equipped such that a person can do their job. Industrial suits are used in Star Docks, Space Ports and any hazardous environment where a human might need to wear an environment suit. The suits tend to be large and bulky. Due to the large numbers in which these suits are produced, they tend to be cost-effective.

Sports

The sports industry took hold of Borg and Cyberware as soon as it realised the athletes would do anything to get an edge on their sport. These suits come in all sorts of varients, mostly designed for a particular sport. There is a 'generic' sub-type. This is for those people who either like to think they are a true athlete or wish to have the longevity without the cost of an Expeditionary suit or the bulk of an Industrial. The cost of these suits tends to vary depending on the application they are put to use but they can be extermely expensive indeed.

Augmentation and Rehabilitation

The Augmentation for Borgware is done using a semi-automated laser surgeon where the brain is removed from the skull of the Aug while immersed in a biogenetic fluid. The brain is then laced with the Rayengine Link (Rink) and inserted into the Borg suit. Connections are then made with the suit and the Rehab process begins. The whole Augmentation process between the user becoming unconscious and being immersed in the fluid and then waking up as a Borg is 20 minutes. The process is a refined and well understood one. Thus it requires an **Easy** *Bionics Systems* to perform. Few people reject the Augmentation but if they do, they can be rejoined with their old body and the scarring removed.

Rehabilitation is the difficulty in the augmentation of Borgware. The Human brain does not react well to being put into an infamiliar host for the first time. The first 40 hours of consciousness normally involve convulsions and a fair amount of pain for the new Aug. From there, the Aug must learn to walk and other dexterous tasks. Different suits take different amounts of time to adjust to. The further from humanity the suit is the more time it takes to adust. After Rehab is finished, it is expected for there to be some additional training, which can be self-taught. Rehabilitation supervision requires a *Bionics Systems* check.

Repair and Upgrading

Borgware is most useful when it comes to upgrading or adding to the suit. It does not require a fully qualified medic and large amounts of equipment, like other Bionics.

Requirements for Repair or Upgrades:

Bionics Systems Roll (Easy)

Bionics Know Roll and Mechasys Systems Roll.

Thus, you do not have to be a qualified medic to be able to update Borg Systems.

Cyberware

The most desirable technology to come from the Aran War is Cyberware. Cyberware allows a person to become augmented to strengths equalling the Borgs without loosing humanity in the process. This is done by removing what is under the skin and replacing it with a technological substitute. Thus, Cyberware is a marriage between technology and biology, being able to create a machine that can symbiotically interacts with the host (the Aug). Unlike Borgware, a full suit Cyberware does not just keep the brain of the Aug alive but must also maintain skin / hair and any other organs alive.

Cyberware Classification

Cyberware can be split once again into different types. The main two are Hardwire and Wetwire. Hardwire Cyberware are those things that replace human systems. This can be in full (Full Body Replacement) or in part (an artificial liver). It is very rare for a person

to just replace a single limb. Wetwire Cybernetics tends to be additions to the human form, such as animated tatoos or a Rayengine Link. Wetwire tends to have much sorter (or even negligible) rehabilitation times, unlike Hardwire. There are places where crossover does occur, in this case they are counted as Hardwire. Due to cost, Hardwire Cyber is much less common than wetwire.

The types of Cyberware suit are *Military*, *Expeditionary*, *Industrial* and *Sports*. These classifications are exactly the same as in the Borgware section. Unlike Borgware, Industrial Cyberware is quite difficult to come by as a Cyberware suit is not as cost effective and versatile as a Borg one.

Augmentation

Augmentating the human inner without damaging the outer is a very difficult and complicated process. Although the technology is well developed and understand, there needs to be many more adjustments than in Borgware augmentation. Before augmentation, the suit or device needs to be configured to match the genetic code of the Aug. This requires the technology of the Cyberware to be much more carefully constructed and malleable to the demads of the Aug, such as height and build adjustment.

Cyberware augmentation requires two different processes, often happening concurrently. They are called the Cyber Razor Cut (CRC) machine and Nanobiogenetics (NBG). Sometimes only one of the two are required, depending on the Cyberware being used. CRC and NBG installation requires the right equipment and a successful *Bionics Systems* roll for each of the processes (if both are required).

Cyber Razor Cut (CRC)

This system is a chair in which the Aug sits. The chair is set in a very accurate beaming field. On another chair is the Cyberware (suit or device). The subject is made unconscious and the suit is beamed from its chair into the Aug while the internals of the Aug are beamed into a biotank for storage. These internals are often sold to offset the cost. The whole process takes approximately 5 minutes.

Nanobiogenetics (NBG)

This uses a special form of Nanobot which has specific instructions on the alteration of the Aug. NBG is used extensively in the joining of Cyber suit and Aug body (especially in linking up the suit and the skin). NBG is essentially hundreds of robots smaller than the human eye can see that are programmed to co-ordinate for a single purpose, the augmentation that they will install. Once the robots are complete, they shutdown and biodegrade within the host's blood system. NBG is applied by injection through a normal hypo. Any materials required for the creation of the structures are inserted using a CRC machine. The Aug must remain within a huge cylindrical sensor field while the NBG can do its work. Depending on the work, NBG can last between 5 minutes and 60 hours.

Usually, the CRC and NBG machines are combined together in a single facility. This single Cyberware facility is called a *Cybershock*.

Rehabilitation

Much like Borgware, the amount of Rehabilitation required for Cyberware depends on the extent to which the human has be augmented. Large changes in physical attributes (Stats) or persona (looks) will extend the time of Rehab. Rehab, much like Borgware, involves learning to walk and operate again. The first 40 hours is always the worst with convulsions and frequent bilious attacks and loss of consciousness.

Repair and Upgrading

Cyberware is generally under the skin and thus requires the same technology to repair and upgrade as was required for the original installation process. If CRC was required for augmentation, then it will be required for repair and upgrade. If large quantities of skin has been removed, then a Bioweave system (see Bioware) will be required to replace it. If the equipment is available then a successful **Bionics Systems** roll is required to repair or upgrade the augmentations. A failure of this could lead to rejection, other systems being damaged or extended rehabilitation times.

Upgrading a suit once fitted is a very rare thing to do because of the prohibitive cost of returning to the Cybershock. Mostly, all the augmentations required are listed and installed all at once. This also has the effect of reducing the Rehabilitation times.

Incremental Bionics

For most, the jump from humanity to full suited Aug is one that is too great to take in a single step. Taking a month out of life or the cost of suiting in one go makes going for a suit impossible. To

incrementally reach the same state as by going for a suit does cost more but the cost is spread over a long period of time.

The systems given here can be applied as upgrades to a pre-created suit. The Cyber and Borg suit sheets give the breakdown of systems and their effects, so it is easy to replace them if need be.

When upgrading incrementally, there is a piont where the Aug has to choose between keeping their humanity and trading everything for a metal casing. This choice is made at the last step, where the last vesitges of humanity are swapped for a heavy armoured shell. The systems installed up until this decision point have been placed under the skin so the resulting suit that the Aug will have will be of a similar size to their previous human form. Therefore, if you want to be bigger and a less-human form of Aug, then go with a suit.

As a general rule, it is wise to have a plan of what form of Aug you want to end-up as. This is so that you get the right type of bionics early on.

From Human to Aug

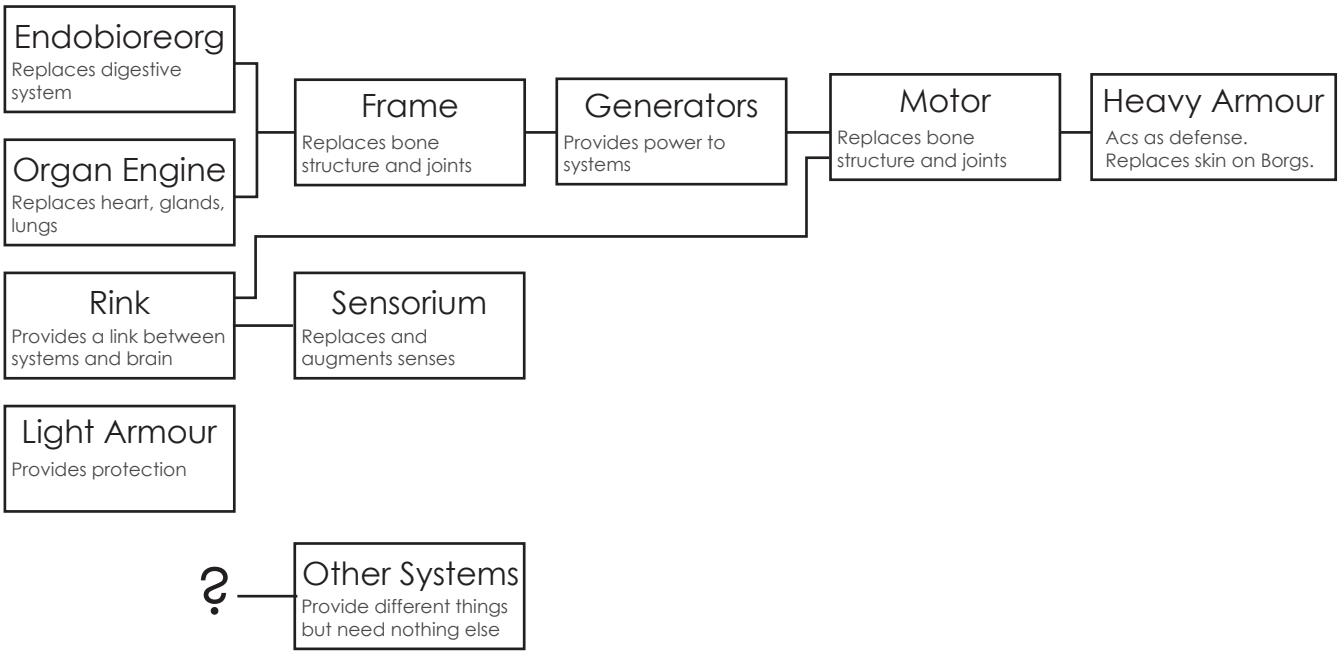
The core of Incremental augmentation are Augmentation Points. Augmentation points is a representation of how much 'space' you have left to install new systems. For any human, the starting level of Augmentation points is their Meat stat. If the Meat stat is then altered by an upgrade, the initial points are not modified.

Some systems use up Augmentation points (they take up space), such as the generators. Other systems provide more space (such as the frame).

Each system has a number of properties, which act as bonuses to game mechanic or narrative effets. For example, a Motor system gives bonuses to Shift and Meat state, which is a game mechanic effect. An internal Gaia card allows the user to access Gaia without needing a card, which is a useful narrative effect. If the system does not effect a certain area (such as Hit Points), then the area won't be listed.

Many systems also have a set of requirements. These requirements are systems that must already be preinstalled before the new system is put in. For example, you can't replace the human muscles with a Motor system without having the Generator system there to

Incremental Bionics major systems and their requirements



power it.

Understanding the Requirements

The chart above shows the requirements of all the major types of bionics. Systems on the left hand side (Endobioreorg, Organ Engine, Rink and Light Armour) do not have any requirements. All the others require the system that it is joined to on the left, for example the Frame requires Generators first.

For each major system, there are different manufacturers that provide system at different prices to fit whatever budget you have. The general descriptions of what the components do is given below. The list of systems that can be purchased is given later.

Endobioreorg

Requires: Nothing

Install Method: CRC and NBG

The Endobioreorg replaces the digestive system (Digestive, Lymphatic and Urinary). It takes food the Aug has swallowed and extracts nurtrients and energy from it. It also gets rid of waste, either through the typical human method or be breaking the solids to gas. This system is self-powering and self-regulating.

Rink

Requires: Nothing

Install Method: NBG and CRC

The Rink (Rayengine Link) is a link with a powerful Rayengine. The Rink is a very useful device that can be combined with other technologies to provide the Aug with extra abilities. The Rink is a tiny Ray Engine that is linked to the brain through over 10 billion synapses. Normally, it is used to consciously store information (data) for the user but can also be used to connect with other devices, such as other systems installed in the Aug.

The Rayengine is ubiquitous. If you're thinking of dabbling with bionics, then the Rink is very important. Although Rinks are manufactured by many different corporations, Rink are standard. The Rink can then be upgraded by installing Rink-specific additions. These are counted as small systems.

Typical Game Effect

- Allows further upgrades.

Organ Engine

Requires: Nothing

Install Method: CRC and NBG

The organ engine replaces breathing, circulation and is responsible for keeping the brain alive (Circulatory, Endocryne, Immune, Respiratory). The Organ Engine is a self regulating system that controls blood flow and regeneration, and supplies the body with nutrients from the digestive (or Endobioreorg).

Organ Engines are the second system that are usually taken by the elderly as it improves lifespan by replacing the heart and better providing the brain with the nutrients it can use.

Low Specification Organ Engines simply replaces the basic human systems and can provide a tougher immune system.

High Specification Organ Engines have internal oxygen storage to allow the Aug to live without the need to breath for long periods of time.

Typical Game Effect

- Consumes Augmentation points
- Allows survival without oxygen

The Endobioreord is normally the first augmentation that people take as it replaces many of the functions that fail first in old people. In most modern societies across the Imperiu, people over the age of 110 have a Endobioreorg and the implant process is seen as routine. The system can rarely be 'felt' by the Aug because it works silently. Only benefits, such as better digestion can really be detected.

Low specification Endobioreorgs replaces the digestive process with also the abilty to detect and disassemble some toxins such that the Aug isn't poisoned.

At higher specifications, the Endobioreorg can extract energy from a wide variety of substances and can be modified by an Aug's Rink to control bodily functions. Even nutrients can be sythesised from base plant matter that contains no nutrients at all.

Typical Game Effect

- Consumes Augmentation Points
- Abilty to resist poison
- Better survival on less food and water.

Frame

Requires: Endobioreorg, Organ Engine
Install Method: CRC machine

The frame replaces the human skeleton and its joints. The structure is normally personalised before installation. The Frame's primary purpose is to provide a solid structure upon which all the other systems can be mounted.

The Frame also provides the Aug with more protection from damage and allows the Aug to take more knocks before becoming knocked out (more Stun). However, the frame tends to be heavier than the human bones and so the Aug will feel a reduction in physical dexterity until the Motor system is installed.

At low specification, the Frame just replaces bones with a large effect on dexterity and little additional protection.

At high specification, the Frame provides a lot of protection and Augmentation points for little reduction in dexterity.

Typical Game Effect

- Provides more Augmentation points
- Provide more hit points
- Provides more stun
- Reduces Shift and Meat Stat

Generators

Requires: Endobioreorg, Organ Engine, Frame
Install Method: CRC Machine

Generators provide power for other Bionics systems. By taking generators, the Aug is really planning to take the next step as they do not provide any other beneft but to allow other system to be installed. The Generators need the Endobioreorg and Organ Engine to be installed first because they need space within the torso cavity.

At low specification, the generator provides little power for a large amount of Augmentation points and vice versa for high specification systems.

Typical Game Effect

- Consumes Augmentation points
- Provides Power points that are consumed by other systems.

Motor

Requires: Endobioreorg, Organ Engine, Frame, Generators, Rink
Install Method: CRC Machine

The motor system replaces the muscles of the human body with eno-mechanic actuators. This will feel like an enormous change for the Aug because they will feel stronger and faster as a result. Due to the enormous change that occurs, the rehab from the motor system is particuarly difficult.

A low specification, Motor systems give the Aug the same statistics as an average human. For those with massive limb damage, this is a cheap and worthy alternative.

At high specification, Motor systems can allow the Aug to leap long distances, run faster and be more dexterous than most humans.

Typical Game Effect

- Improved Meat and Shift
- Drop in Soul

Sensorium

Requires: Rink
Install Method: NBG and CRC

The Sensorium replaces and extends the five senses. Physically, the visual, olfactory (smell), auditory (sound), touch and taste are replaced. Most people find that the imrpovement in all these makes the world seem sharper. As the senses are extended, then the amount of reality that the Aug can sense is greatly improved. This either has the effect of disturbing the Aug or enlightening them. Rehabilitation is a very neccessary part of this system, to allow the Aug to make best use of the sharp and broad senses.

At low specification, the human senses are replaced with a sharper version.

At high specification, the full range of things that modern sensors can sense are placed in, giving the Aug an unparallel view of the world.

Typical Game Effect

- Provides better senses for viewing things

Light/Heavy Armour

Requires: None / Endobioreorg, Organ Engine, Frame, Generators, Rink, Motor
Install method: CRC

Armour provides additional protection to the systems of the Aug. Armour is split into two types, Light and Heavy. Light armours can be placed under the skin and provide protection to vital organs. A frame and motor are not required.

Heavy armour needs more space inside the body and a strong structure to attach to. Therefore, it needs the Frame and Motor units (and everything else that goes with it).

Low specification armours are heavy, encumber the individual and take up a lot of Augmentation points for very little gain.

High specification armours are light, take up few Augmentation points and provide excellent protection.

Borging

Some Heavy Armours are marked as Borging armours. If these are selected, then the skin of the Aug is removed and armour is replaced. At this point, the Aug is a Borg, not a Cyber and the last vestiges of humanity are removed. This includes genetalia.

Typical Game Effects

- Consumes Aug Points

Cost	This is the amount of credits the system costs to buy. Add the cost of each system together for the final suit.
Rarity	This is how rare the system is in percentage (%). Roll over this value to see if your local stockist has it. The rarity of the bionics suit is the rarity of the largest value.
Type	Either Cyber, Borg or Both. Some systems can only be used as a system under the skin (Cyber), some require the full body replacement to have happened (Borg) or some are good for both. A Suit can have a mix of Both and one of the other types.
Install	This is the time in hours the system takes to install. Add this number to the Install times of the other systems.

- Provides hit points and, armour rating
- Reducs Shift and Meat

Other Systems

Requires / Install: Depends on system

There are many more systems that can be installed by the Aug and they have their own properties and requirements. They are not standard augmentation systems and include their own descriptions. These systems range from Grav Packs to medicine injectors. The reason their types are not listed here is that they are not required to make a Bionics suit.

Properties of a System

A system is described by a number of different items, each one describes the effect it has on the game world. Here is a list of all of the items and the effects they have:

Item	Description
Manufacturer	This is the company that produces the item. Your GM might allow a price discount if you are well acquainted with the company.

Rehab	This is the time in hour that the Aug will need after installation to recover from the installation. Add this number to all the other rehabilitation times.
Interval	This is the time that must be waited before another system can be installed. If more than one system is installed in one go, take the largest value.
Machine Install	Denotes which machine is needed to install the system. Either CRC, NBG, Mechbay or a combination. Most bionics shops will have both, so this is less of a problem.
Augmentation Points	This is the space that the system uses in the suit. Some systems give Augmentation points (such as the Frame) where others use them up (Such as Generators). Add the Augmentation points together.

Power Consumption	This is the amount of generator power the system requires. Add the Power Consumptions together.
Stats (Battle, Meat, Shift, Soul, Wit)	These are your character statistics and systems will have an effect on them. To calculate these take your starting character statistics and then add the suit effects onto them.
Body - Armour Rating	Armour adds protection from the systems. The Armour Rating is dealt with slightly differently to the rest of the body. To work out the Armour Rating, take the highest Armour rating of all the systems.
Body - everything else	Hitpoints and stun denote how tough the Aug is. Add up the System effect of all the items.

Installation Example

For our example, we need an example character to install onto. Our character is called Andrew:

Item	Value	
Statistics		
Battle	7	
Meat	6	
Shift	5	
Soul	6	
Wit	4	
Body		
	Armour (AR)	Hit Points (HP)
Head	1	10
Left Arm	1	10
Torso	1	40
Right Arm	1	10
Left Leg	1	15
Right Leg	1	15
Stun	110	

Game Effect	This tells you what game effect the system might have. Things like resistence to disease or a weapon firing modifier. Just list these at the end of your suit.

Installation Instructions

The art of installing bionics is a matter of adding, subtacting and finding the biggest or smallest value. For each system you have, add up the numbers. Once you've isntalled, check that the following rules apply:

1. Augmentation Points and Power Consumption may not be negative.

2. Statistics must be larger than 0.

These rules apply once you've installed all of the systems, if they are broken during your installation then that's not a problem. You can't, however, have you character walking around with zero or negative statistics between separate installations.

Step 1: Endobioreorg

With Andrew, we're going to incrementally upgrade him, step by step. He starts with 6 hit points (the same as his Meat stat). Looking at the requirements diagram, we can begin with Endobioreorg, Organ Engine or Rink. We'll start with the most basic Endobioreorg called a Aero Digestion EBG1:

Area	Effect
System Name	Aero Digestion EBG1
Type	Endobioreorg
Manufacturer	Morgan
Cost	8000
Rarity	22
Type	Both
Install	20
Rehab	80
Interval	160
Machine Install	CRC/NBG
Augmentation Points	-1
Body - Torso Hit Points	15

Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human)

So, our new augmented character can be described as:

Item	Value	
Statistics		
Battle	7	
Meat	6	
Shift	5	
Soul	6	
Wit	4	
Body		
	Armour (AR)	Hit Points (HP)
Head	1	10
Left Arm	1	10
Torso	**1**	**55**
Right Arm	1	10
Left Leg	1	15
Right Leg	1	15

Type	Organ Engine
Manufacturer	Morgan
Cost	12000
Rarity	25
Type	Both
Install	26
Rehab	90
Interval	280
Machine Install	CRC/NBG
Augmentation Points	-1
Body - Torso Hit Points	10
Body - Stun	10
Game Effects	Resistant to disease.

Now we apply these systems to our suit and the character becomes (changed things are in bold):

Item	Value
Statistics	
Battle	7
Meat	6
Shift	5
Soul	6
Wit	4
Body	

	Armour (AR)	Hit Points (HP)
Head	1	10
Left Arm	1	10
Torso	**1**	**65**
Right Arm	1	10
Left Leg	1	15
Right Leg	1	15

Stun	**120**
Cost	**20 000**
Rarity	**25**
Type	Cyber
Install	**46**
Rehab	**170**
Interval	**440**
Augmentation Points	**4**

Stun	110
Cost	8000
Rarity	22
Type	Cyber
Install	20
Rehab	80
Interval	160
Augmentation Points	5 (6 from Meat of 6 and -1 due to the Endobioreorg)
Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human)
Systems Installed	Endobioreorg

Step 2: Organ Engine

The next best step is the Organ Engine, which is another step before getting the Frame installed. We're going to install the Surebeat OE1 organ engin (the base level one).

Area	Effect
System Name	Surebeat OE1

Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human) Resistant to disease.
Systems Installed	Endobioreorg, Organ Engine

Note that most of the values are added together. However, the rarity is not. As the 25% rarity of the Organ Engine is larger than the Endobioreorg's 22%, we take the higher value for rartirt.

So far, this suit is costing a lot of money and the benefits are minimal. To really get some benefit, you need to install Frame, Generators and Motor too.

Step 3: Frame

The frame provides Augmentation points to build other things into. We'll go witht the basic level one for Andy again.

Area	Effect
System Name	Powerline F1
Type	Frame
Manufacturer	Morgan

Wit	4	
Body		
	Armour (AR)	Hit Points (HP)
Head	**5**	**60**
Left Arm	**5**	**60**
Torso	**5**	**220**
Right Arm	**5**	**60**
Left Leg	**5**	**85**
Right Leg	**5**	**85**
Stun	**220**	
Cost	**60 000**	
Rarity	25	
Type	Cyber	
Install	**126**	
Rehab	**230**	
Interval	**600**	
Augmentation Points	**10**	

Cost	40000
Rarity	20
Type	Both
Install	80
Rehab	60
Interval	160
Machine Install	CRC
Augmentation Points	6
Body - Armour Rating	5
Body - H, LA, T, RA, LL, RL	50,50,150,50,70,70
Body - Stun	100
Stats - Battle, Meat, Shift, Soul, Wit	0, -1, -3, -1, 0

Now apply this to the character:

Item	Value
Statistics	
Battle	7
Meat	**5**
Shift	**2**
Soul	**5**

Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human) Resistant to disease.
Systems Installed	Endobioreorg, Organ Engine, Frame

At this point, there has been something of a hit on Andrew's statistics. This is because the bone matter has been replaced with a metal version and so he weighs more. This would feel weird and thus effects Andrew's humanity and mental stability.

Step 4: Generators

Before we put a new set of muscles (Motor) into Andrew, we need to add the power first. Quite often, the Generators and the Motor systems are added at the same time.

Area	Effect
System Name	Poraq ES100
Type	Generators
Manufacturer	Poraq
Cost	7000

Rarity	20
Type	Both
Install	20
Rehab	60
Interval	200
Machine Install	CRC
Augmentation Points	-3
Power Augmentation	10
Stats - Shift	-1

As you can see, the Generator is heavy and so reduces the Shift of Andrew. This reduces Andrew to:

Item	Value
Statistics	
Battle	7
Meat	5
Shift	**1**
Soul	5
Wit	4
Body	

Systems Installed	Endobioreorg, Organ Engine, Frame, Generators

As you can see, Andrew's Shift is now 1 - which is dangerously low. Having a motor system (step after next) will increase this to super-human levels!

Step 5: Rink

The Rink is generally a very useful device to have but it is required if you want the Motor system as it provides communication between the brain and the artificial muscles.

Area	Effect
System Name	Rink
Type	Rink
Manufacturer	Kryotek
Cost	8000
Rarity	20
Type	Both
Install	5
Rehab	20
Interval	200

	Armour (AR)	Hit Points (HP)
Head	5	60
Left Arm	5	60
Torso	5	220
Right Arm	5	60
Left Leg	5	85
Right Leg	5	85
Stun	220	
Cost	**67 000**	
Rarity	25	
Type	Cyber	
Install	**146**	
Rehab	**290**	
Interval	**800**	
Augmentation Points	**7**	
Power Remaining	**10**	
Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human) Resistant to disease.	

Machine Install	CRC/NBG

Installing this results in the following:

Item	Value	
Statistics		
Battle	7	
Meat	5	
Shift	1	
Soul	5	
Wit	4	
Body		
	Armour (AR)	Hit Points (HP)
Head	5	60
Left Arm	5	60
Torso	5	220
Right Arm	5	60
Left Leg	5	85
Right Leg	5	85
Stun	220	
Cost	**75 000**	
Rarity	25	

Type	Cyber
Install	**151**
Rehab	**310**
Interval	**1000**
Augmentation Points	7
Power Remaining	10
Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human) Resistant to disease.
Systems Installed	Endobioreorg, Organ Engine, Frame, Generators, Rink

The effects aren't great from the Rink but it is an essential part.

Step 6: Motor

This is where Andrew will feel a big change from normality. Super human strength and speed are the outcome of getting Motor installed. We'll go with the most basic version again.

Meat	**12**	
Shift	**10**	
Soul	**4**	
Wit	4	
Body		
	Armour (AR)	Hit Points (HP)
Head	5	60
Left Arm	5	60
Torso	5	220
Right Arm	5	60
Left Leg	5	85
Right Leg	5	85
Stun	220	
Cost	**83 000**	
Rarity	25	
Type	Cyber	
Install	**211**	
Rehab	**550**	
Interval	**1240**	
Augmentation Points	**5**	

Area	Effect
System Name	Torquedrive M4
Type	Motor
Manufacturer	Morgan
Cost	8000
Rarity	20
Type	Both
Install	60
Rehab	240
Interval	240
Machine Install	CRC/NBG
Augmentation Points	-2
Power Augmentation	-8
Stats - Meat, Shift, Soul	7, 9, -1

Applying this to Andrew will have the following effect:

Item	Value
Statistics	
Battle	**7**
Power Remaining	**2**
Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human) Resistant to disease.
Systems Installed	Endobioreorg, Organ Engine, Frame, Generators, Rink, Motor

Have a break!

At this point, we could leave the suit as it is and Andrew would have boosted statistics beyond the human norm. However, most characters would want to go two steps further with a Sensorium (improved senses) and Heavy Armour (better protection).

Step 7: Sensorium

Andrew will still be sensing the world through his normal 5 senses up until this point. An upgrade to the sensorium will take a little getting used to as the world will appear in much better clarity. Once again, we'll go with the basic model of Sensorium:

Area	Effect

System Name	Senseboost SB20
Type	Sensorium
Manufacturer	Morgan
Cost	10000
Rarity	20
Type	Both
Install	8
Rehab	70
Interval	100
Machine Install	CRC/NBG

Apply this to Andrew will have the following effects (mostly the addition of extended electromagnetic spectrum of senses, EM):

Item	Value
Statistics	
Battle	7
Meat	12
Shift	10
Soul	4
Wit	4

Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human) Resistant to disease. EM Sensors
Systems Installed	Endobioreorg, Organ Engine, Frame, Generators, Rink, Motor, Sensorium

Step 8: Heavy Armour

The final step for Andrew is to install some additional protection. We'll take the budget armour, which will add some more protection against firearms.

Area	Effect
System Name	Forceguard FG22
Type	Motor
Manufacturer	Morgan
Cost	22 000
Rarity	30
Type	Both
Install	40
Rehab	40

Body		
	Armour (AR)	Hit Points (HP)
Head	5	60
Left Arm	5	60
Torso	5	220
Right Arm	5	60
Left Leg	5	85
Right Leg	5	85
Stun	220	
Cost	**93 000**	
Rarity	25	
Type	Cyber	
Install	**219**	
Rehab	**620**	
Interval	**1340**	
Augmentation Points	5	
Power Remaining	2	

Interval	200
Machine Install	CRC/NBG
Augmentation Points	-5
Power Augmentation	0
Stats - Meat, Shift	-3, -4
Armour Rating	25
Hit Points: Head, Left Arm, Torso, Right Arm, Left Leg, Right Leg	1500,1000,2500,1000,1100,1100
Stun	100

This heavy addition to Andrew will yield our final suit:

Item	Value
Statistics	
Battle	7
Meat	12
Shift	10
Soul	4
Wit	4
Body	

	Armour (AR)	Hit Points (HP)
Head	**25**	**1560**
Left Arm	**25**	**1060**
Torso	**25**	**2720**
Right Arm	**25**	**1060**
Left Leg	**25**	**1185**
Right Leg	**25**	**1185**
Stun	**320**	
Cost	**115 000**	
Rarity	**30**	
Type	Cyber	
Install	**259**	
Rehab	**660**	
Interval	**1540**	
Augmentation Points	**0**	
Power Remaining	2	

Game Effects	Poison resistance. Aug can survive 3 days without food or water (normal human) Resistant to disease. EM Sensors. Metallic Ceramic Armour
Systems Installed	Endobioreorg, Organ Engine, Frame, Generators, Rink, Motor, Sensorium, Heay Armour

Bioware

Bioware is a relativly new technology. Although Star Sci have claimed that it has been in the public domain for hundreds of years, the common person would rarely meet anyone who has had any sort of Bioware augmentation. Bioware is the expensive option for those people who wish to remain human. By utilising flesh-generating technology the bioweave machine can create just about any organ within the human body, using the DNA of the Aug as a template. There are limitations to the extent of replacement: the brain and central nervous system are not replicatable yet. Given the right technology, this has taken medicine to a whole new level. Instead of generating synthetic organ replacements and adjusting them to the patient, the *Bioweave* machine can weave bio-matter like flesh together such that an almost identical (but defect free) organ can be created within the host. The largest problem with the bioware system is it rarity (94%). Very few bionics doctors are willing to go through the extensive training or buy the expensive machines. Also, bioware is not widely known about, so there is little demand for it. This drives the price up (the raw materials are expensive aswell), making it less attractive. This is indicitive of all new technology, though.

Bioware Classification

There are two very distinct types of Bioware. Firstly, there is **Regeneration Bioware** (Regen), which is Bioware that is replacing a faulty or missing part of the body. This can include failed hearts, collapsed lungs or missing limbs. After augmentation, the Aug is as human as they were before. Secondly, there is **Cut and Shut Bioware** (CAS). This sort of Bioware improves the Aug in some manner, altering the DNA and the physical make up. CAS bioware can improve the Aug beyond human maxima.

Augmentation

The Bioweave machine is essentially part beamer, part field manipulator and part Nanobiogenetics platform. The bioweave machine deeply scans the Aug before beginning, collecting information about the DNA and physical makeup before beginning the augmentation process. Next the NBG is injected to surround the area of interest and prepare for remove. A number of delicate Grav fields and locks are set up and a new organ is created. The Bioweave simultaneously beams the new organ in and then using its field and the NBG to weave the new organ into place. This is the most complex form of Bioware augmentation, scars and such can be removed quickly by reweaving the skin from the outside and no beaming is required. Bioweve can be used for replacing any flesh parts (even the skin covering Cyber).

A new skill is required for using the Bioweave.

Bionics: Bioweave

Requires: Bionics Systems (70%). Starting: Wit Wit.

This skill allows the user to use the bioweave machine to augment humans in either CAS or Regen operations. A failed roll means that the augmentation has

failed and the Aug may have to either go through more surgery or have longer rehab times.

Rehabilitation

Unlike other forms of bionics, Bioware doesn't always need a rehabilitation. If a limb is replaced then the brain will quite quickly forget that it was removed in the first place. If the Aug is to be improved beyond their original physical make up, then Rehab will be required in some form. In this case, the Rehab is nearly all supervised and can be an arduous process, Bioware is not as easy to recover from than other forms of Bionics.

Bioware Systems

Unlike Borgware and Cyberware, there are no 'suits' as such, but just a series of systems that augment the human form. The listing below is split up into the different forms of Bioware available. Essentially any part of the human form can be replaced with Bioware except the brain and the upper reaches of the spinal column.

Regeneration Bioware

Skin regeneration				
Cost: 50 000 per limb	**Rarity**: 82%	**Rehab**: Nil	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 4hrs per limb			**Visible**: Nil	**Repair**: None
Description: When skin has been damaged or burnt off, this will reweave the tissue correctly so it is undetectable as new skin. Also includes reweaving of skin over Cyberware and the removal of aging factors.				
Game Effect: The limb is returned to the skin complection of either the current Aug or early 20s (if desirable).				

Organ regeneration				
Cost: 140 000	**Rarity**: 76%	**Rehab**: Nil	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 2hrs per organ			**Visible**: Nil	**Repair**: None
Description: When liver, spleen, lung, eye, prostate or even heart fails, it can be rewoven and reinserted into the host without any fear of rejection as it is grwon from the original DNA pattern.				
Game Effect: The organ is replaced and immediately begins working once more. This is rarely used in game, but is included for completeness.				

Limb regeneration				
Cost: 750 000 per limb	**Rarity**: 86%	**Rehab**: Nil	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 8hrs per limb			**Visible**: Nil	**Repair**: None

Description: For those people who have lost an arm or leg, a new one can regenerated from the original DNA. Once the limb has been woven, it may be used immediately. The only side effect is a slight tingling which will soon disappear. Not really counted as rehabilitation and does not supervision, although the operation of dangerous machinery is not advisable while this chemical imbalance is happening.
Game Effect: For 2 hours after the regeneration, any skill is at -10%.

Cut and Shut Bioware

Appearance alteration				
Cost: 180 000	**Rarity**: 75%	**Rehab**: 10hrs	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 12-20hrs			**Visible**: Nil	**Repair**: None
Description: The most common form of Bioware is the appearance alteration. This can reduce the effects of aging or change how the person looks. This is almost impossible to detect, even on medical scans.				
Game Effect: Nil				

Hypernervous system A				
Cost: 800 000	**Rarity**: 90%	**Rehab**: 16 days	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 40 hrs (1 day)			**Visible**: Nil	**Repair**: None
Description: This upgrades the nervous system such that deficient neurons are removed from the Central Nervous System and spinal chord and connections to the brain are re-routed to provide a more efficient nervous system. Hypernervous System is not detectable.				
Game Effect: Shift + 2				

Hypernervous system B				
Cost: 1.8M	**Rarity**: 93%	**Rehab**: 18 days	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 44 hrs (1 day, 4hrs)			**Visible**: Nil	**Repair**: None
Description: This upgrades the nervous system such that deficient neurons are removed from the Central Nervous System and spinal chord and connections to the brain are re-routed to provide a more efficient nervous system. Neural accelerators are also added to provide further acceleration. Hypernervous System is not detectable.				
Game Effect: Shift + 2, Battle + 1 (but no larger than 10)				

Precision Tecnique				
Cost: 1.1M	**Rarity**: 93%	**Rehab**: 23 days	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 38 hrs			**Visible**: Nil	**Repair**: None
Description: This upgrades all the muscles and the nerves connecting them. The upshot of this is the user can move with more precision when at speed. The most practical use for this is in the use of skills where manual deterity is required.				
Game Effect: Battle + 1 (but no larger than 10). Task Skills +20%. Design Skills +10%. Surgery 20%. Hacking +10%.				

Neurostabiliser				
Cost: 250 000	**Rarity**: 87%	**Rehab**: 12 days	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 27 hrs			**Visible**: Nil	**Repair**: None
Description: This upgrade allows the Aug to suffer more pain and physical shock than before. The results are startling and the Aug is virtually impossible to knock unconscious.				
Game Effect: Meat + 1. Stun: 1000.				

Bioarmour

Cost: See Below	**Rarity**: 89%	**Rehab**: 4 days	**Maufacturer**: n/a	**Requires**: Nil
Augmentation: Bioweave 40 hrs (1 day)			**Visible**: Nil	**Repair**: None
Description: Alterations to muscle tone and bone marrow leads to resistance to damage and penetration. Also, skin hardening can be used such that the dermis hardens when an impact is felt. Armour is only detectable on deep medical scans and then the results will be unconclusive to those who are not used to seeing Bioweave systems. Bioarmour comes in different types, with different statistics (given below).				
Game Effect: Armour specification is: "*Name*: (Cost). Statistics" and then any notes. *Spline Plate*: (650k). H 15, 500. LA 15, 1200. T 15, 2000. RA 15, 1200. LL 15,1600. RL 15,1600 STUN: 300. *Multilayered Woven:* (880k) H: 35, 1200. LA: 35, 2000. T: 40, 4500. RA: 35, 2000. LL: 35, 2800. RL: 35, 2800. STUN: 350. *Cross Woven Protein Chain:* (2.2M) H: 50, 4000. LA: 50, 5600. T: 50, 8000. RA: 50, 5600. LL: 50, 6000. R: 50, 6000. STUN: 400.				

Endobioreorgs

Name	Manufacturer	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Aug Points	Body
					Install	Rehab	Interval			T
Aero Digestion EBG1	Morgan	8 000	22	Both	20	80	160	CRC/NBG	-1	20
Features		Poison resistance. Aug can survive 3 days without food or water (normal human)								
Aero Digestion EBG2	Morgan	20 000	45	Both	26	90	160	CRC/NBG	-2	30
Features		Poison resistance. Aug can survive 10 days without food or water								
BioForce D	Uo	25 000	62	Both	20	90	160	CRC/NBG	-1	20
Features		Poison resistence. Rink controlled bodily functions. Can surivive 12 days without food or water.								
Bioforce E (Expeditionary)	Uo	60 000	80	Both	26	100	160	CRC/NBG	-2	20
Features		Posion resistence. Rink controlled bodily functions. Can survive 20 days without food or water.								
Pinacle Digestion EBG3	Morgan	40 000	65	Borg	30	90	160	CRC/NBG	-1	15
Features		Poison resistance. Can reorganise most plant matter. Aug can survive for 8 days without food or water.								

Organ Engines

Name	Manufacturer	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Aug Points	Power	Body	
					Install	Rehab	Interval				T	Stun
Surebeat OE1	Morgan	12 000	25	Both	26	90	280	CRC/NBG	-1	0	10	10
Features		Resistant to disease.										
Surebeat OE2	Morgan	25 000	35	Both	26	90	280	CRC/NBG	-2	0	15	10
Features		Resistant to disease. Internal air supply 10 hours.										
Lifeblood N	Uo	35 000	50	Both	26	90	280	CRC/NBG	-1	0	10	10
Features		Resistant to disease. Internal air supply 80 hours.										
Lifeblood PX	Uo	40 000	70	Both	30	95	280	CRC/NBG	-2	0	20	10
Features		Resistant to disease. Internal air supply 400 hours and micro bioreorg can replenish supply from any Oxygen compound.										
Lifeblood Expeditionary	Uo	70 000	90	Borg	40	100	280	CRC/NBG	-8	-2	100	20
Features		Upgrade system. Resistant to disease. Internal air supply 8000 hours and micro Bioreorg can replenish supply from any Oxygen compound.										

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Frames

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Aug Points	Body							
					Install	Rehab	Interval			AR	H	LA	T	RA	LL	RL	Stun
Powerline F1	Morgan	40 000	20	Both	80	60	160	CRC	6	5	50	50	50	150	70	70	100
	Statistics	Meat	-1	Shift	-3	Soul	-1										
Powerline F4	Morgan	120 000	35	Both	85	60	160	CRC	9	10	100	100	500	100	100	100	100
	Statistics	Meat	-2	Shift	-4	Soul	-1										
Powerline F8	Morgan	150 000	55	Both	90	60	200	CRC	14	15	500	500	1000	500	700	700	700
	Statistics	Meat	-3	Shift	-5	Soul	-1										
PotentFabric E	Uo	160 000	50	Both	80	60	160	CRC	9	10	50	50	200	50	100	100	200
	Statistics	Meat	-1	Shift	-2	Soul	-1										
PotentFabric J	Uo	180 000	66	Both	80	60	160	CRC	12	10	100	100	500	100	150	150	200
	Statistics	Meat	-2	Shift	-4	Soul	-1										
PotentFabric N	Uo	200 000	70	Both	80	60	160	CRC	16	15	1000	700	1500	700	1000	1000	500
	Statistics	Meat	-2	Shift	-4	Soul	-1										
PotentFabric P	Uo	230 000	80	Both	80	60	160	CRC	24	15	1200	800	1800	800	1100	1100	500
	Statistics	Meat	-3	Shift	-5	Soul	-1										

Generators

Name	Manufacturer	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Aug Points	Power	Stats
					Install	Rehab	Interval				Shift
Poraq ES100	Poraq	7 000	10	Both	20	60	200	CRC	-3	10	-1
Poraq 2S20	Poraq	20 000	15	Both	20	60	200	CRC	-5	14	0
Poraq NX750	Poraq	30 000	17	Both	20	60	200	CRC	-6	20	0
Poraq US55	Poraq	50 000	22	Both	20	60	200	CRC	-8	40	0

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Rink

Name	Manufacturer	Cost	Rarity (%)	Type	Timings (hours)			Machine Install
					Install	Rehab	Interval	
Standard Rink	Kryotek	8 000	15	Both	5	20	200	CRC/NBG

Motor

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Aug Points	Power	Statistics			Body
					Install	Rehab	Interval				Meat	Shift	Soul	Stun
Torquedrive M4	Morgan	8 000	20	Both	60	240	240	CRC/NBG	-2	-8	7	9	-1	0
Torquedrive M6	Morgan	18 000	25	Both	60	250	260	CRC/NBG	-4	-12	15	20	-1	50
Torquedrive M10	Morgan	30 000	28	Both	60	250	280	CRC/NBG	-5	-20	18	24	-1	100
Dashkinetic E	Uo	20 000	35	Both	60	250	280	CRC/NBG	-4	-24	20	20	-1	50
Dashkinetic G	Uo	50 000	50	Both	70	255	280	CRC/NBG	-6	-28	24	24	-1	100
Dashkinetic H	Uo	80 000	60	Both	70	255	280	CRC/NBG	-8	-30	26	26	-1	150

Light Armour

Name	Manuf.	Cost	Rarity (%)		Timings (hours)			Machine Install	Aug Points	Body							
					Install	Rehab	Interval			AR	H	LA	T	RA	LL	RL	Stun
Forceguard FG12	Morgan	7 000	20	Both	40	20	200	CRC/NBG	-2	15	400	300	800	300	500	500	50
	Statistics	Shift	-1														
Forceguard FG18	Morgan	14 000	25	Both	40	30	200	CRC/NBG	-3	15	1200	800	2000	800	1000	1000	50
	Statistics	Meat	-1	Shift	-2												

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Heavy Armour

Name	Manuf.	Cost	Rarity (%)		Timings (hours)			Machine Install	Aug Points	Body							
					Install	Rehab	Interval			AR	H	LA	T	RA	LL	RL	Stun
Forceguard FG22	Morgan	22 000	30	Both	40	40	200	CRC/NBG	-5	25	1500	1000	2500	1000	1100	1100	100
	Statistics	Meat	-3	Shift	-4												
Forceguard FG28	Morgan	26 000	34	Both	40	40	200	CRC/NBG	-6	35	1800	1200	3500	1200	2000	2000	150
	Statistics	Meat	-5	Shift	-5												
Neoaegis D	Uo	25 000	50	Both	50	30	200	CRC/NBG	-4	30	1500	1200	3800	1200	1800	1800	200
	Statistics	Meat	-4	Shift	-5												
Neoaegis G	Uo	35 000	65	Both	50	40	200	CRC/NBG	-7	35	2000	1800	4500	1800	2500	2500	250
	Statistics	Meat	-5	Shift	-6												
Neoaegis H	Uo	50 000	70	Both	80	50	200	CRC/NBG	-10	40	5000	6000	9000	6000	7000	7000	300
	Statistics	Meat	-10	Shift	-12	Soul	-1										

Sensorium

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Additional Senses
					Install	Rehab	Interval		
Senseboost SB20	Morgan	10 000	20	Both	8	70	100	CRC/NBG	EM
Senseboost SB30	Morgan	18 000	22	Both	8	110	100	CRC/NBG	EM, MT 360 degrees 25m
Senseboost SB50	Morgan	24 000	26	Both	8	150	100	CRC/NBG	EM, MT 360 degrees 25m, TMS
Slickaura K	Uo	28 000	40	Both	8	150	100	CRC/NBG	EM, MT 360 degrees 40m, TMS, EG
Augmented Audio	Morgan	3 000	28	Both	1	10	5	CRC	Improved hearing sensitivity, frequency range. Noise limits. +2 to hearing things on Wit.

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Aesthetics

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Requires	Game Effect
					Install	Rehab	Interval			
Anicosmetics	Morgan	2 000	11	Cyber	10	2	5	NBG	Rink	Programmable pigment allows changing of skin colour. Animations and cosmetic enhancement possible.
Re-appearance	Uo	4 000	12	Cyber	40	2	5	NBG		Face shape is changed. Skin tone and hair pigmentation stay the same.
Thermal Soaker	Morgan	11 000	64	Both	80	10	20	CRC/NBG		Removes Aug's heat signature. If Rink is fitted, can be toggled on and off.
Glowderm	Morgan	5 000	22	Both	40	10	20	NBG	Rink	When on, Aug's skin glows. Shines through basic clothing. Switched on and off using Rink.

Communications

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Power	Requires	Game Effect
					Install	Rehab	Interval				
Rink Surface Port	Kryotek	1 200	22	Borg	2	0	0	Mechbay	0	Rink	Allows more software to be loaded to Rink through a direct cable connection, rather than using Gaia. Consciously opened.
Prospace Comms	Morgan	1 500	18	Both	2	0	0	CRC	0		Prospace comms with basic encoding. Range: same star system. Does not need Gaia.
Screamer Grip	Kryotek	3 600	40	Both	5	0	0	Mechbay	0	Rink	Allows access to Gaia system by gripping cable.
Internal Tanked Gaia Terminal	Kryotek	1 300	54	Both	1	5	3	CRC	0	Rink	Internal gaia terminal. Card can be unplugged at a flick of the wrist.
Rink Weapon Link	Kryotek	22 000	34	Both	1	2	0	CRC	0	Rink	Link to upgraded weapons. Can fire remotely. Extra weapons 220cr, weapon systems. +15% Light/Heavy firing skill.
Sensory Overloader	Napalm	130 000	80	Both	20	120	20	CRC	1		Allows sharing of senses between Augs on a team. Link cannot be hacked, but access can be gained by hanking a Rink.

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Gaia

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Requires	Game Effect
					Install	Rehab	Interval			
Gaia Link	Kryotek	18 000	75	Borg	1	1	1	CRC	Rink	Link to gaia in the mind's eye. Always on. Can be hacked, getting control of systems. +10% to computer Design. +20% to Hacking. +40% to hacking vs. a human using an immersive terminal.

Medical

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Aug. Points	Requires	Game Effect
					Install	Rehab	Interval				
Internal Medical Scanner	Sypher	9 000	26	Both	5	1	5	CRC/NBG	0	Rink	Sensor under the skin of one hand. +20% diagnosis, +10% surgery
Personal Life Support	Sypher	100 000	73	Both	10	5	10	CRC/NBG	-1	Rink	When vital signs stop, kicks in and keeps aug alive, but unconcious, for 400 hours.
Bioflush	Sypher	4 600	13	Both	20	40	20	CRC/NBG	0	Rink	Removes all toxins from bloodstream. Failed Meat roll causes nausia, critial fail unconciousness.
Clarity	Sypher	10 500	34	Both	30	30	30	CRC/NBG	0		Removes hormaones from system for a split second. May be fired once per day. Reroll one skill or Wit roll.
Fatigue Compressor	Sypher	14 000	44	Both	40	30	30	CRC/NBG	0		Increases waking span to 40+MTx10. If more than 40 is used, must sleep for 20 hours.
Nervous System Sink	Sypher	28 000	78	Both	20	60	30	CRC/NBG	0		Reduces nervous system activity to calm Aug. +4 Soul for 1 minute, then -2 until sleep. Use only once a day.
Neuroshock	Sypher	53 000	72	Both	30	40	30	CRC/NBG	0		Allows Aug to regain conciousness by reducing Stun to 100. If Aug is not in full suit dazed for 12 seconds. No skill can be used.
Reinforced bones (per limb)	Morgan	1 500	20	Cyber	60	20	0	NBG	0		Link cannot be broken with a 'break' Close Combat manouvre.
Internal Bloodstream Injector	Sypher	1 000	30	Cyber	5	2	30	CRC/NBG	0		A small device capable of hyperoxegenating the bloodstream. +2 to Battle, Meat, Shift for 6 seconds. 5 capsules. If used more than once in a minute, Meat roll or pass out. 500 and half an hour of bionics systems to refill. Easy to detect on med scanners.

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Oxygenated Blood Supply	Morgan	600	80	Cyber	20	1	2	CRC/NBG	0		A high pressure store of oxygenated blood is stored in the neck of the Aug. In addition, all limbs are fitted with bypass channels to reroute blood flow if the limb is lost. System can keep the aug alive in scenarios up to and including decapitation for 20 minutes.
Hardened neck	Uo	5 000	70	Cyber	15	25	0	CRC/NBG	0		A family of systems to make broken necks more survivable. Would include a toughened/armoured windpipe, carteroid and jugular and a toughened non-spinal neural pathway in case of spinal column damage.

Propulsion

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Aug. Points	Power	Requires	Game Effect
					Install	Rehab	Interval					
Grav Pack	Morgan	2 300	40	Borg	5	0	0	Mechbay	-3	-3	Heavy Armour	Allows flying. Speed 20, Acceleration 10.
Turbine Grav Pack	Morgan	4 600	55	Borg	8	0	0	Mechbay	-5	-5	Heavy Armour	Speed 60 Accel 30 Mano 10. Shows up on EM when in use.
Re-Entry Upgrade	Morgan	50 000	75	Borg	10	80	0	Mechbay	-6	-6	Heavy Armour	Speed 120 Accel 80 Mano 20. One heat shield. Shows up on EM when in use. Reentry training included. orbit -> surface 4 hours.

Technical

Name	Manuf.	Cost	Rarity (%)	Type	Timings (hours)			Machine Install	Aug. Points	Power	Requires	Game Effect
					Install	Rehab	Interval					
Mechkit Forearm	Shakespear	1 800	25	Borg	2	0	0	Mechbay	-2	0	Motor	Internal store including allotape, energy cutter, torque gun, allosealer.
Techkit Forearm	Shakespear	1 800	25	Borg	2	0	0	Mechbay	-2	0	Motor	Internal store containing allotape, screamer, poraq 400 generator, power knuckles, flux cable
Internal Carryall	Uo	4 000	45	Borg	5	0	0	Mechbay	-2	0	Motor	Aug can carry 2 enc of equipment internally.
External Power Port	Morgan	950	12	Borg	2	0	0	Mechbay	0	0	Generators	Allows aug to power external items with suit generators, or have suit powered from an external source.

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Micro Self Repair System	Morgan	120 000	89	Borg	80	400	40	Mechbay	-2	-4	Motor	(See Below)
Game Effect		Repairs locations with >50% HP at 1000HP an hour. Aug cannot do anything while in operation. Power requirement is to keep the system in standby. When in use, power requirement becomes 20, usually requiring several systems to be shut down in order to use. Aug must remain stationary regardless.										
Sprung Internal Holster	Shakes-pear	1 200	89	Borg	5	0	0	Mechbay	-1	0	Motor	On successful Wit roll, Aug can draw and fire a pistol in the same turn.
Internal Ammo Pod	Napalm	1 600	18	Borg	10	0	0	Mechbay	-10	0	Motor	Can carry 2000 rounds of 7.4 or 10 mags of 5.5 or 2.2.

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