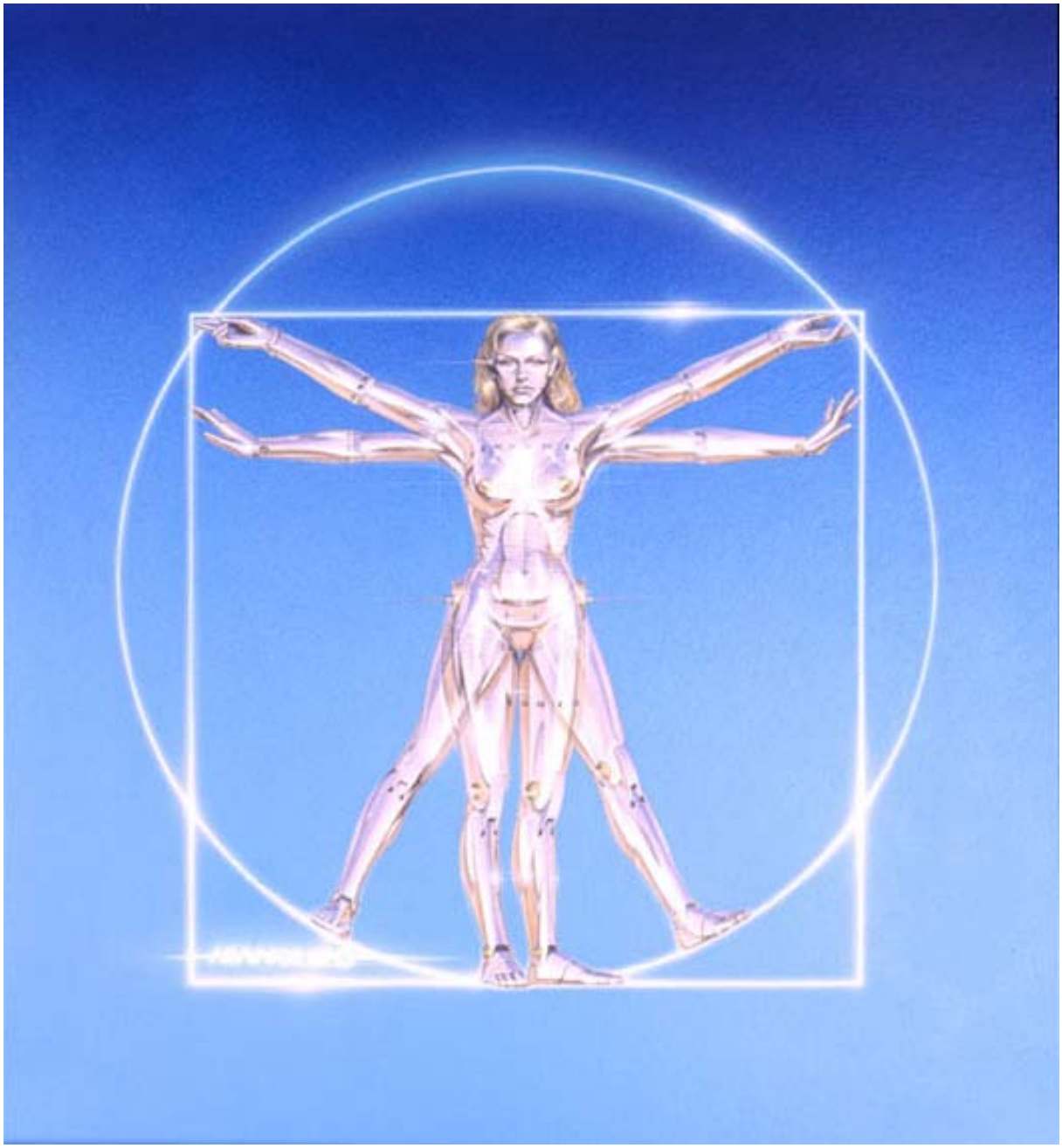
senior officer Mikael van Atta

Full Body Conversions
A new view



People do love machines – even well before 2029 AD.

Created at:

Views from the Edge
The cyberpunk forum

A Cyberpunk 2020 RPG unofficial guide to 'borgs
Aka "cheapFBC"
Revised & expanded, edition 2.8

Credits:
I would like to thank those who helped me in creating the original Cheap FBC material:

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Author of Refbook, without which my work would be taking thrice as much effort

- senior oficer Mikael van Atta

Contents:

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Disclaimer: The Home Shopping Network IS NOT responsible for any intentional vehicular accidents, maimings or other bodily harm to any potential customers, who may see this as the chance of their lifetime to gain an advantage, due to limited availability of the portrayed cybersystem."

- Snowtiger

Introduction

But what the heck are those „borgs"?

Well, I wrote this sourcebook assuming you knew that. They were introduced into CP2020 in the Chromebook 2, and a few more designs were published in Chromebook 3. Plus, of course, a whopping mass of combat models on the Net.

But let's assume you've never had any of these in your hands.

A 'borg (or Full [cybernetic] Body Conversion, FBC) is a human cyborgised to the level where there's little left. Usually, only the brain and a part of the spinal cord (exact amount of original tissue differs from setting to setting and from GM to GM). The rest is replaced with mechanical parts.

There are multiple reasons to become "full metal" – grievous injury, incurable disease, career choice, or simply the need to cyborgise oneself beyond what is considered necessary. It is an expensive way, but some people do choose it anyway.

And that's the book about them.

- senior officer Mikael van Atta

To my mind, Full Body Conversions are far too expensive to be popular. Of course, all the FBC types in the Chromebooks are built for specialist occupations, and thus don't have to come cheap – they are there to get the job done.

In the basic 2020 setting they are also unavailble for general public - their price is prohibitively high. Whether this is not a problem in our typical 2020 setting, it becomes less appropriate for in "later" settings, which have more advanced technology and should contain a higher number of 'borgs. I'm thinking about worlds like Ghost in the Shell, Appleseed, or Gunnm / Battle Angel Alita, where meeting a 'borg in the street is something that happens every minute.

The FBCs of 2020 are masterpieces of technology in this time, and surely they cannot come cheap. However, the advance of technology can allow making not only better things, but also make cheaper things, and even, make things simple and damn cheap. Maybe some of you remember how it was with quartz wristwatches in the eighties? They were quite big, clumsy, and while they worked great, they were not much better than normal clocks. But soon after that there were damn cheap far-eastern wristwatches that were also measuring time, but were quite fragile. And nobody minded it, because you could buy one with your spare change...

And I suppose similar thing would happen to FBCs.

The question is: why do people need to make themselves 'borgs? Except for the rare few willing to swap their natural, perfectly functioning bodies for metal ones better suited to their work, the rest are going to become FBCs due to medical reasons. See, sometimes even the wonders of 2020 AD - era medicine, laser surgery, nanotech, "magic balls", advanced chemistry and cloned organ transplantology are not enough to save somebody's life. Be it a victim of cancer, some other deadly and incurable disease, a terrible accident, or your run-off-the-mill severe lead poisoning / deceleration trauma, one sometimes has no other way than to go full-metal just to survive.

But all the FBCs in the books do not only cost fortune (my favourite way of showing relative costs is comparing the prices to your typical car, a family sedan in 2020, like Toyo-Chevrolet '17 Chevy, costs 10 k e$, whereas the most basic 'borg, Alpha class, is 40 k), but they also have numerous abilities being of little use for a normal human. Even the simplest one, Alpha, does have

At a local ripperdoc, a street borg is on the operating table. A lanky, unkempt-looking guy, clad in a dirty lab coat, and smelling of bad liquor is picking the insides of a small bullet hole in the armoured chest with a pair of tweezers. Suddenly the borg twitches and a squirt of blood hits the man's right eye. The man wipes his eyes and takes a swig of homebrew from a jug sitting on the top of the instrument cart.

Borg: *"You got it out yet?"*
Doc: *"No, it's still in. It slipped a bit out though."*
Borg: *"You sure."*
Doc: *"Yeah, this is not my blood I'm wearing for makeup."*
Borg: *"How long is this gonna take?"*
Doc: *"Depends."*
Borg: *"On what?"*
Doc: *"On whether that runs out of booze."* *points at the jug of homebrew* *"Or you run out of blood."*
Borg: *"Oh. Well, be fast, I think I'm going to pass out soon."*
Doc: *"Me too."*

- *Snowtiger*

Please note that what Snowtiger is talking about is rather a Partial Body Conversion. I give them a brief passage in this sourcebook.

- Mikael van Atta

superhuman strength and endurance, also having movement speed and general coordination equal to those of Olympic athletes. Sure, it is nice to be super-strong, nearly indestructible, and fast and with great reflexes, but tell me: do you need it in your everyday life? And, just by chance, does any of you possess such attributes?

This superhuman feeling is going to be highly destructive to human psyche (Humanity loss that is). And it also costs you damn high...

So here we are. I believe that if the technology allows raising FBC performance for a little extra cash, it could also allow saving some eurobucks by making 'borgs with lower performance. More over, I'd like to mark technological advance in FBC technology.

First generation (around year 2020) is just what we got used to in Chromebooks. Generally the technological level is the same as in the main rulebook.

Second generation is the technology of the 2024-25 era, comparable to what we can see in Firestorm books. Things are similar, yet more advanced than first generation.

Third generation are 'borgs of 2027+ era. Things you do often see in books, comic books, and movies. The best reference materials I've seen so far are Masamune Shirow's works. However I had no contact with Cybergeneration, so I cannot relate these data to CyberGen lines.

Of course, this is purely my idea, and is someone wants to trash that „generation babble", well, please do. These are purely guidelines for GM, but if you state that the entire tech is available in your regular 2020 AD campaign, then don't grumble – just do it.

Well, as I said in the very beginning, cheap FBCs are not a good thing in your regular CP2020 AD campaign. However, in stories taking place later, the FBCs would, I suppose, become more popular. Something an averagely wealthy person in a First World country could think about as a career choice or medical replacement.

Adventure hook:
If the cerebral spinal fluid can only be used for so long and the ubiquitous 'THEY' say that their new fluid is synthetic but it really is the nasty little trade of underground merchants of all colours of darkness and vileness...

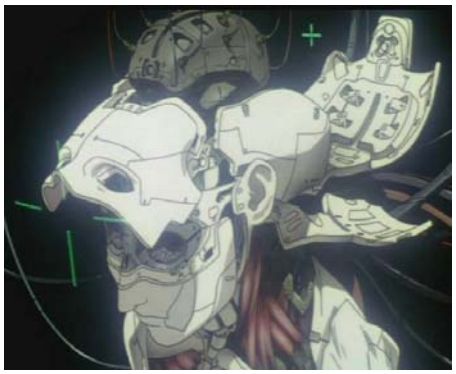
Another one:
When at first we find a process that is needed (RL insulin dependence w/o insulin production, IG: CSF use without a means of production) without a morally acceptable source (tailored pig IRL insulin, synthetic CSF as proposed) we use the real thing.

I know that this gets into organ letting and what I think of the Red Cross and their blood drives (I know, I'm just paranoid and they really do help people) but one could also donate Cerebral Spinal fluid at a price (see plasma donors for $ here in the States and other areas as well) and when there is a need that is great for an amount that is large (how much again, in a biopod? Yeah that is a lot!) One could see an artificial pool of eager donors that may be giving against their will ("beat the body, but don't touch the head" or "You paralysed them from the neck down? Good. (Looks at the poor unfortunate person on life-support Cha CHING!!!!!")

Oh the wicked possibilities!

- Joe Q. Public

A few notes on biopods:



A biopod is the system containing cyborg's brain, back brain, and, in old models, spine (in many new models, only some parts of spine are used, the rest being substituted by mechanical means). A brain is placed in highly durable shell, filled with shock-absorbing gel, and submerged in a pool of cerebral-spinal fluid, which acts as transfer medium between the brain itself and blood (for unmodified humans) or terminals of artificial „lungs" and feeding system. Both systems are built into biopod, too. There's also a set of filters to remove organic waste products from the liquid. It also can be used to filter a drug out of borg's system, although this has to be manually triggered (and results in major hangover).

To become a ‘borg, you need a surgical procedure of double Critical Level. This means you’d better do it in a hospital you really trust, ‘cause you have a fair chance of passing away for good. Basically, if a doc with a hangover screws a Critical operation when replacing your meat arm with a metal one, you get in shock and have a massive hemorrhage. But hey, this is a hospital; they have medicines for the shock, wound dressings, and blood bank to replenish your stock of the red stuff. Not very easy, not very cheap, and sure as hell messy, but they can save you. But if they botch removing your brain from your skull and putting it into an artificial shell… well, there’s no body to be resuscitated, so you are pretty likely to check what is on the “other side”. And, of course, this operation costs double the Critical cost.

A biopod on itself doesn’t have any HL listed. Not even an interchangeable one (in fact, every biopod is interchangeable. QCh biopods just make this easier and faster). What causes you to lose Humanity is the body shell you wear, and if you wear a lot of them, it hurts. Also, the cost of a typical biopod is included into the double Critical surgery. Of course, you can make it an additional expense if you feel it’ll help you maintaining balance in your game.

Swapping bodies

A replaceable biopod is just something alike to Quick-Change mount for limbs - here, you can just swap bodies in a moment, not mere limbs. Readjusting to another body takes about 5 minutes.

This doesn't mean, however, that you cannot move your brain from body to body if you don't have the interchangeable biopod. Sure you can, as you can have another limbs installed if you don't use quick-change mounts. This, anyway, requires about an hour (for a limb) of skilled technician’s work in a fully equipped workshop. For a whole body, adjusting your biosystem to new body (and vice versa) can take a day or two...

Technically, it’s pretty simple. Move the biopod from one body into another, reboot it, and voila. Now, there’s the psychological art of the problem to be handled. You see, changing bodies like gloves isn’t going to be without an effect. The more the bodies, the worse it gets. Changing bodies is disruptive to one's humanity. If you change your face, body & the rest often enough, you can forget how do you really look, and what you are really capable of. The kind of thing you could imagine on one of the covert types who do change their identities every few weeks. They become more like intellect with a set of quick-change identities. It is that frequent body change turns you into a kind of intellect without

FYI: The cerebral spinal fluid

The brain is surrounded and oxygenated by Cerebral Spinal Fluid, not blood itself but a blood product. This could be directly cleansed and oxygenated internally, and provided with the proper amounts of glucose and synthetic hormones via a replenishment system that the FBC character would have in their domicile of sorts or the nearest FBC friendly ripperdoc or clinic. The only issue would be when the FBC takes a Critical to the biopod itself, and then things could get real bad real quick.

The total volume of the fluid at any one time probably varies between 70-120 ml in different subjects and its rate of formation is about 0.35 ml per min. It is thus replaced several times each day. There is also known to be a constant process of dialysis with exchange of various chemical constituents between the CSF and the Blood across the ventricular empendyma, the perivascular spaces and the arachnoid membrane at all levels. Large molecules fail to enter the CSF from the blood because of the interposition of the vascular endothelium (the blood CSF barrier) but there is a rapid exchange of small molecular weight substances between the CSF and the extracellular fluid of the brain and cord. So is you had a detained 'donor' you could theoretically milk them for a slow outward flow to keep you in business or do the quick and nasty 'harvest' for a quick cash fix and a small glass of fluid, provided that you can get it to someone and spin the blood out of it in a centrifuge (really, it's not that bad, honestly)

And if we assume that a biopod would need about 1/2 a litre to add cushioning and floating potential as well as enough to run through the cyberliver / gills to keep it pure and full of brain loving goodness.

If it last for a month at a time this would create quite a need, wouldn't it?

- Joe Q.Public

If you where really lax on your morals (grin) - and this is cyberpunk after all - you could use brain dead people. Keep them on artificial respiration etc, and fit a tap to their skull and drain some of the fluid every day. Of course the question is how unique is human cerebral spinal fluid would pig or simian fluid work just as well or as a bulking agent...

- Freakboy6117

personality as well. Your "ghost" disappears.

Yes, it's Humanity what is affected.

For every new body (and it means a body of another type, not another specimen of something you're used to), you loose a 1d6 HL, no reductions. If it looks the same, and is equipped with roughly the same options (GM call), you are not subject to this rule, or the HL is reduced.

For example: I used Ego-class body, but got into trouble and was convicted to work as an Ilya. Lose 1d6 HL. After six months, my Ilya was badly damaged and replaced with another Ilya. No lose. Soon after, I was extracted by my friends. They've brought me an Adam. Lose 1d6 HL. They should have been brought an Ego, these lazy idiots.

If you merely swap between the bodies you're familiar with, it's another kettle of fish. First, you should roll HL for every body you're using, and keep it noted. Second, you should calculate the average HL for all of your bodies. This is the minimum Humanity Loss you may suffer.

When you're installed in one of your bodies, check for its HL. If it's lower than the average, use average. If the body's rating is higher, use the body's HL. The point is that while you're likely to be less sane in less human bodies, however, in a contrary situation HL wouldn't be that big. And yes, there's a point of having a very human body, even if your average HL rating keeps your Humanity pretty low: it's going to affect the average score. However, if you have just too many bodies, that 1d6's will be quickly accumulating…

Suggested period of disuse, required for a body to be dropped from the "frequently used" pool is 6 months, although details are up to GM. After all, psychological consulting is going to most likely shorten that.

"QCh" Quickchange Biopod (aka Interchangeable Biopod)

This is pretty a simple system – a set of links allowing a biopod to be quickly and easily moved from one body to another. Only a few bodies are being equipped with these as standard, as the cost of such a body is higher by 20'000e$, and the ability to quickly change bodies is useful only for a limited group of individuals. You can have a biopod with QCh interface installed in an unsuitable body, but this takes a lot of work, much more than with a regular biopod.

A QCh interfaced biopod can be ordered at no extra cost when the person is 'borged, but modifying an existing biopod to QCh standard costs 5'000e$.

QCh interface uses one torso option space

There's no additional HL cost.

- Mikael van Atta

Biopod carry case. Consists of a reinforced, EMP-shielded Arasaka Jetsetter - styled case, filled with shock absorbing foam. Basic optical and audio sensors, jacked via interface links are provided to provide rudimentary sensory input, along with a speaker for audio output. It is considered that the biopod will rely on its own breathing, power and nutritioning devices, however, custom made cases with built in "lungs", nutritive medium containers and batteries are available. A standard carry case does cost 3000e$, and is meant to allow transport of a biopod for no longer than 24 hours.

Technological advance

Let's face it: no piece of gear is the bleeding edge forever. The Murphy's Law for Computers says that the best, fastest, most powerful machine ever made becomes obsolete just in the moment you pay for it. And so it is with cybernetics. The technological advance is a problem often neglected in Role-Playing Games, and while within the fantasy genre, it isn't much of a problem. But in cyberpunk, when the new, revolutionary tech is one of the things it's all about, it becomes an issue. And then, it's supposed to go much faster than what I can see from my window.

Yesterday's bleeding edge is today's everyday use. Tomorrow it'll become so common you won't be able to imagine yourself living without it. In two days, a new, more advanced version will appear to take the market, and yesterday's marvel will become so cheap and common that they'll almost start adding it as a freebie to cornflakes. And in three days, you'll be able to find it only in a pawn shop, and nobody will be interested in buying it.

Sure, it doesn't go literally that fast, but that's the idea. We can't predict what will appear next on the cyberware market. What revolutionary changes will come, or when they will come. However, here you'll find a quick guideline. Use it as you prefer.

Wave	Description	Pricing
Anything **before** First Wave	Prototype created by start-up company	400%
First Wave product	Major corporate release until first major sales	300%
6 months after First Wave: **Second Wave**	Competition begins to emerge	200%
18 months after First Wave: **Third Wave**	Multiple, equally efficient brands on market	100%
3 years after the First Wave: **Fourth Wave**	More advanced modules on the pocket	75%
6 years after the First Wave: **Fifth Wave**	Company releases superior product to supersede this one	25%

Cyberpunk v3 Interface?

CheapFBC vs. Cee-Metal

As it has been stated in the Cyberpunk v3 handbook, Livemetal 'borgs of 203X and good old FBC of 2020 have little in common. One of the reasons is cheapFBC project was started when there were completely on evidence indicating v3 was ever to be published. All we had was Cyberpunk 2020, and our imagination. But I believe it served us well.

Weren't Mike Pondsmith serious about his 'borg ideas (among others) in v3, I'd have taken it as the funniest joke in the history of Cyberpunk series. LiveMetal? What is it meant to be?

As long as I remember, full body conversions were the ultimately mechanical blends of human and machine. But they are machines, definitely. And just some of them try to mimic humans.

Reconsider a few things. First, if you replace the body and most of the nervous system (as well as all the musculature), your previous physical strength and movement speed are going to be only an effect of the body's performance. The reflexes can be argued upon, as reaction speed and agility may well depend on natural predispositions, but anyone wearing the same shell is going to have the same muscle strength. Also, while you could probably turn a biopod into a "minibody" moving on its own, it'll have to contain a lot of devices that are of little use within a cyborg body, but do consume valuable space and energy.

We did never thought of cyborgs maintaining separate enclaves far away from other humans, rather seeing those groups mixing and merging in the same environment. If you intend to play v3 with Cee-Metal like it's portrayed in the book, you'll have little application for cheapFBC. It's more detailed, and thus less likely to be translated into v3 rules and mindset.

However, there are things that may be of use, mostly the Everyday Life Issues section.

The making of Cyborg

Basic parts

You need several parts to build a cyborg, apart from the biopod. The biopod is only what allows you to survive outside of your natural body. Then there come the basics you need to build a Full Body Conversion. Two arms, two legs, and a torso (this includes head). You should also throw in the sensors: two cybereyes, a cyberaudio module, and a voicebox (either Boxalter or NewThroat) to give the borg the ability to speak.

Pressure and heat sensors, responsible for the sense of touch, are built in cyberlimbs and torso, and chemical sense (that is, smell and taste) are built in into right places in the head. You can, of course, boost their sensitivity by installing Tactile Booster, Enhanced Smell and analogical modules.

Usually players are not concerned about the wide variety of market-available cyberlimbs. A cyberarm is a cyberarm, and it doesn't matter whether we're talking about Raven Microcyb model F-24, Arasaka Neotech Type 17, or IEC Cyberarm Advanced (or whatever the brand name is). But – as with modern day computers – cyberware is produced in numerous styles and technologies, limited only with prices and market demand on them.

Limbware interfaces

Limbware interfaces are something many people forget about. You have to remember that a cyberlimb module (arm, leg, partial arm / leg or independent hand) isn't just bolted onto your flesh and bone shoulder, hip, knee, and so on. It has to be bolted into a special socket for such appliance. Whether such a socket is installed on a live flesh or on another part of cyberware, this is another kettle of fish. More – your typical cyberlimb has two points with such interface sockets / links: one at shoulder (to allow the arm to be linked to the rest of the body, cyborg or flesh) and at the wrist, to allow a cyberhand to be installed.

These interface sockets do not have any apparent Humanity Loss assigned, as this relies on what would you attach to them. They have no apparent cost also, as this is included into an implantation cost of your metal limb. But nevertheless, they are there. Your arm can be disconnected and taken away in a matter of minutes, by a skilled cybertechnican (or in seconds by anyone, if you have quick change mounts), but that does not mean your bones and nerves do lay there bare and unprotected – the socket core, built around your bone, is still in place covering them.

-senior officer Mikael van Atta

By the way – didn't you ever wonder that all cyberlimbs do have the same damage resistance, and can house the very same number of additional modules (optionware)? Doesn't matter whether we're talking about a sleek, thin arm for a tiny lady, or a huge and „muscular" arm for a cybernetic body builder, all are alike...
And here we are.

First, the rule is that anybody buys him/herself a limb that matches his body type (BOD value). You can use another size of a limb, but this is pretty obvious for anyone observing you, and raises limb's HL by 50%. Superhuman-range (Body 11+) limbs are usually built on a special request only. Remember to add whole body's damage bonus to hits caused by cyberlimbs – the damage dealt is as well a matter of the limb's strength, as the strength of whole body.

Cyberware compatibility

So you have an IEC Cyberarm Advanced limb module, Arasaka Neotech ToolHand attached to it, with Tritech built-in TV, and cheap, no-name plastic cover, and you want it to work flawless?

Sure, no problem. And easier than someone could think. All the cybertech use the same standards and basic technology. Much like PC computers of the early 2000s – it doesn't matter what parts your computer did have inside. You could use parts made by a dozens of producers around the world, put together in a place you never heard about, and have a working computer. You don't have to install only Dell parts, or only IBM parts. And, because the technology used, and common standards, all that works together. Sure, some parts are better, others are not so brilliant, and some can be a complete waste of money. Good parts will give you better performance. They may be also less damage-prone, or last longer. But still, it works, and you can use the computer to do what you need it for – write texts, surf the Net, play games.
Simply, it worked together, because it was designed to.
And with cyberware, it goes along the same lines.

Including some unexplainable glitches, like the ones that used to ruin a day worth of your text writing in the early 2000s.

- senior officer Mikael van Atta

SDP rating for Cyberlimbs

The way I've dealt with cyberlimb SDP in the CheapFBC 2.5 (and previous editions as well) was simply a mechanical improvement of the original CP2020 rules. However, it bears several flaws – including the fact there's always a 10 point difference between "disabled" and "destroyed" status. It becomes especially visible when we get into the realm of high-SDP cyberlimbs. Thanks to the Taking Damage rules, introduced in 2.5 ed., we can now rule that Disabled level is 66% of the total SDP of a cyberlimb.

So, just to be clear: the SDP ratings in the tables below are total SDP, i.e. "to destroy". In most cases, "to damage" value is 10 points less, if you prefer to use the old system.

- Mikael van Atta

Nota bene: the following tables deal with both full limbs and other replacement limb-ware, if I can use such a word. However, only full cyberlimbs are useful in constructing FBCs. The rest is included for completeness sake only.

As you can clearly see, SDP and amount of option slots do vary depending on arm's size. A typical CP2020 value is listed as Average – sized cyberware, with book price matching it. There's also an additional column with 'ware prices, listed as „Cheap cybertech". Well, as the whole article was meant to help creating more affordable FBCs, the prices for parts have been to be seriously reduced. However, a BOD 12 part will cost as much as a standard such piece of cyberware right from the main book (please remember that, according to CP2020 supplements, cyberlimbs are equivalent of BOD 12).

Independent cyberhand: (wrist-down) can use 4 cyberfingers or a single cyberarm option (GM's call, most cyberweapons are too big). Almost any cyberhand variant is available (+50% price). Typical 1d10 crush damage (as it uses only its own myomars, not these of a full arm), 1d6 HL.

BOD	Body type	SDP	Price	
			Regular CP2020	Cheap cybertech
2	v. weak	8	550e$	225e$
3-4	Weak	9	650e$	265r$
5-7	Average	10	750e$	335e$
8-9	Strong	11	850e$	425e$
10	v.strong	12	950e$	550e$
11+	Superhuman	+1 for every BOD point over 10	+150e$	+100e$
			for every BOD point over 10	

Cyberarm: Typical 1d6 punch, 2d6 crush damage, 2d6 HL,

BOD	Body type	SDP	spaces	Price

				Regular CP2020	Cheap cybertech
2	v. weak	22	2	2000e$	1000e$
3-4	Weak	26	3	2500e$	1250e$
5-7	Average	30	4	3000e$	1500e$
8-9	Strong	34	5	3500e$	1750e$
10	v. strong	38	6	4000e$	2000e$
11+	Superhuman	+1 for every BOD point over 10	+1 per every 2 BOD > 10	+700e$	+500e$
				for every BOD point over 10	

Cyberleg: same as for arm, but 2d6 kick damage. Note: a cyberleg has to be equipped with some kind of a cyberfoot, which takes 1 slot (only very rare models use 2 slots). A foot option space is not included in the following data (i.e. Average Body cyberleg has 3 free slots, and 1 reserved for cyberfoot)

BOD	Body Type	SDP	Spaces	Price	
				Regular CP2020	Cheap cybertech
2	v. weak	22	2	1200e$	600e$
3-4	Weak	26	2,5	1600e$	750e$
5-7	Average	30	3	2000e$	900e$
8-9	Strong	34	3,5	2400e$	1050e$
10	v. strong	38	4	2800e$	1200e$
11+	Superhuman	+1 for every BOD point over 10	+0,5 per every 2 BOD > 10	+500e$	+400e$
				for every BOD point over 10	

Partial cyberarm (down elbow): crush 1d10, punch 1d6-2, HL 1d6+3

BOD	Body type	SDP	Spaces	Price	
				Regular CP2020	Cheap cybertech
2	v.weak	16	1	1000e$	500e$
3-4	Weak	18	1,5	1250e$	625e$
5-7	Average	20	2	1500e$	750e$
8-9	Strong	22	2,5	1750e$	875e$
10	v. strong	24	3	2000e$	1000e$
11+	Superhuman	+1 for every 2 BOD points over 10	+1 per every 4 BOD > 10	+350e$	+250e$
				for every BOD point over 10	

Partial cyberleg (knee down) cannot use Movement Enhancing options, nor can't it enhance Jump value. Kick damage is as normal kick with meat leg +2, HL 1d6+3. Same as cyberleg, there's always 1 extra slot for cyberfoot installation.

BOD	Body Type	SDP	Spaces	Price	
				Regular CP2020	Cheap cybertech
2	v. weak	16	0	600e$	300e$
3-4	weak	18	0,5	800e$	375e$
5-7	average	20	1	1000e$	450e$
8-9	strong	22	1,5	1200e$	525e$
10	v. strong	24	2	1400e$	600e$
11+	superhuman	+1 for every 2 BOD points over 10	+1 per every 4 BOD > 10	+250e$	+200e$
				for every BOD point over 10	

Cyborg replacement torso - Biopod, neural processor and a single set of interface plugs are built-in (although neither not included in HL nor cash costs). Typical HL is 8d6.

BOD	Body type	SDP	spaces	Price	
				Regular CP2020	Cheap cybertech
2	v. weak	34	2	14'000e$	7'000e$
3-4	Weak	36	3	18'000e$	8'700e$
5-7	Average	40	4	20'000e$	10'500e$
8-9	Strong	44	5	24'000e$	12,500e$
10	v. strong	48	6	28'000e$	14'000e$
11	Superhuman	50	7	32'000e$	17'000e$
12	Superhuman	52	8	36'000e$	20'000e$

13+	Superhuman	+2 per every BOD over 12	+1 per every BOD over 12	+5'000e$	+2'000e$
				per every BOD over 12	

Cyberlimb variants and technologies

In the books, most tech is being made in "standard technology". I mean, cyberlimbs generally don't differ from one another. Only a few different models do stick out like sore thumbs. Russian cyberware in Solo of Fortune 1 (and Chromebook 3), Orbital arm in Chrome 1, "Enable" series in Chrome 3... Not much. And no coherency here… Using the technologies invented by R.Tal (as well as some found on the Net… and a few invented by myself, I made the following listing. And now, 'borgs from all over the world can be created, and be somewhat more unique…

Note: I'm working on a similar table that you could use to apply to other cyberware parts, like optics, audio and the like. Since it's going to be more complicated, it'll surely take me a lot of time… but well, you can always use the following as guidelines…

Head SDP

Since I did never explained that in appropriate way… and, frack, even treated it a bit loosely in more than a few cases… Here's the answer for Mort's expressed question (and numerous questions from other people that I suppose simply never made it to my ears:

SDP of a borg's head is equal to SDP of a full cyberlimb of the same BOD.

- Mike van Atta

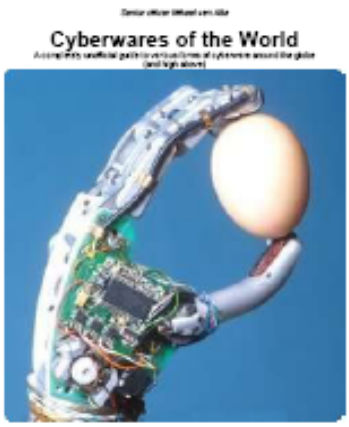
Cyberlimbs of the world:

Clumsy limbs

Some types of cyberlimb technology create equipment that fails to meet standards. However, modifiers caused by these are not simply cumulative. E.g. If you have a Chinese cyberarm, you are at –1 Ref and –3 tech to all actions involving this arm. If you have a Chinese cyberbody, you still are on –1 Ref and –3 Tech, just now this applies to all actions performed with your body (driving a cyberlinked vehicle, for example, is usually unaffected).

Standard cyberware - That's what we are used to, typical 2020-era cyberware, right out of the Cyberpunk 2020 handbook. This is what everyone does compare other styles to. Standard cyberware is being produced around the world.

Skeletal cyberware - This form of cyberware is very basic and robotic in appearance, all servos and mechanics are clearly visible (for an example, a skeletal cybereye will clearly have a camera-type look). It's clearly obvious that the cyberware is not human in appearance.



Cyberwares of the World

This is a companion book for the ChapFBC, detailing various technologies for making cyberlimbs, optics, audio, vocoboxes and so on. Whereas not as big as this book, it covers many issues omitted here.

Brazilian cyberware - Brazilian cybernetics are conceptually close to European: they try to appear as human as possible. However, they do not keep up the raw power output of standard and European style cybernetics (this originates from the fact that in Brazil, superhuman-strength cyberlimbs are outlawed), and not as durable. Still, for everyday use they're absolutely okay. They're replacements, not replace-and-upgrade technology, and if you accept this idea, they'll suit you just fine. And they come with a nice price tag, making them quite popular around the world.

Chinese cyberwares - "Chinese cybertech" became a synonym of cheap, unreliable cyberware. Not that it comes only from China (Malaysia, Indonesia, India and some other countries have their share in this sector of market as well) or that Chinese can't manufacture quality stuff (they do). But the proverbial "Chinese take-away" suffers from the effects of inferior materials, manufacturing, and lack of adequate quality control, when trying to match performance of the standard cyberware with a much lower price tag. These tend to be always flawed with some problems. But hey, they're cheap, and you get what you've paid for.

NuTek cyberware - This is a completely new idea. NuTek is something in-between cyberware and bioware: implants build of carefully blended cloned flesh and nano-build electronics. Whereas not necessary the best of both worlds, it does combine a number of advantages, including easier implantation, lower Humanity Loss,

and the real feel of living tissue. Note: NuTek can't be used for FBC construction.

Russian cyberware - This is a generic term – most of these cyberwares does come from Russia (and post-Soviet republics), but also from Eastern Europe, and there's at least one company in North America (Mexican Metals) that makes cyberware classified as "Russian". These cyberwares see to be quite primitive compared to Western standards, but if you can see past their brutish look, they're marvels of technology. Behind the former Iron Curtain, they do not jump to the newest materials, and they do not peel off safety margins to squeeze out a bit of extra performance. Instead, they do miracles with what they already know. Sure, this gives out crude cybernetics, and optional equipment may be limited, but Russian cyberwares are like AK-47: they do not fail. No matter what you do and where, they remain as tough and reliable, if somewhat clumsy.

Outdated technology - These cyberwares are pre-2013 era replacements and augmentations. Big, obvious and clumsy, they tend to combine flaws of several modern styles. However, they are quite tough, and can sometimes have various interesting solutions and ideas utilized, that weren't however used in later models. They're generally not produced any longer, and most of these are available only thorough second-hand market. Of course, custom manufacturing can make a difference, but then you should expect sky-high prices.

Orbital cyberware - The pinnacle of modern cybertech. Using exotic and durable materials developed solely on orbital installations, the durability and sensory data quality of these masterpieces is staggering but the downside is that the costs are tripled. Only available on special order, but you tend to get what you paid for (now you know where that spoiled corporate brat got his totally chilly orbital crystal plated cyberoptics). Can be made almost indistinguishable from a normal human body part, but usually plated with materials not normally available on the open market. Also, several other types of cyberware can be made in Orbital technology, linking great design with superior materials. Also, orbital cyberwares are quite often equipped with EMP shielding, for safety reasons when in orbit.

EuroCyberware - It is, generally, perfectly suited for hiding as a part of real body, undistinguishable from it. Generally, it requires 1 level higher Awareness to spot it with a naked eye, and as they are so non-obvious, Humanity Loss is lower – so it comes with a healthy price tag. Most of these are German, Swiss or Scandinavian models renowed for their durability, although French, Spanish and Italian have gained popularity thanks to better prices and clever marketing.

Japanese cyberware - This cybernetics are marvels of micromachine engineering. Whatever you do, Japanese can make more advanced and smaller. And the processors in their cyberwares are much more advanced, allowing them to handle more peripheral equipment. It differs from series to series, but most Japanese cyberwares can handle 25% more options, and some even 50% more than their Western equivalents. Of course, said peripherals and options have to be Japanese tech as well, and are priced accordingly. They do come mostly from Japan, but the term is as generic as any – there are Korean companies that make this type of stuff as well, and at least one Chinese producer keeps within these standards.

Cyberlimb variants and technologies

Model	SDP	HL	Damage dealt	spaces	price	Notes
Standard	100%	100%	100%	100%	100%	Plain vanilla from the basic book
Skeletal	100%	+1 per die	100%	100%	66%	No realskinning, no superior myomars, but can use hydraulics without losing a space. Obviously, cannot be made to look human-like.
Brazilian	50%	50%, +1 per die	50%	100%	75%	Strength as meat limb of that BOD, and cannot be upgraded
Chinese	100%	100%	100%	100%	50%	Poor precise movement control (-1 to ranged weapon attacks, -3 Tech). Only arms. GM's call: legs are –1 MA and –3 to attack rolls (in close combat)
NuTek	50%	75%	75%	-1	60%	Cannot use cover (they come RealSkinned), neither use quick-change mounts, extra arms, hydraulics nor advanced myomars. All surgery costs are 1 level less serious.
Russian	133%	125%	150%	75%	40%	5% failure when overstressed comes equipped with hydraulics. (Solo of Fortune 1 / Chromebook 4)
Outdated	110%	150%	100%	100%	25%	Hard to get, and cannot work with most modern options (only these from the main book). Hard to repair (2005-2011 era cybertech) (Chromebook 3) Arms are –1 REF, legs –1 REF and –1 MA (-2 MA if both legs)

Orbital	250%	100%	100%	100%	300%	Orbital-made materials: composites, crystalline titanium, of superb endurance. For special orders, also European, Skeletal & Japanese models are made in this technology (choose the better characteristic, add prices). (Chromebook 1)
European	100%	-1 per die	100%	100%	150%	Especially suited for RealSkinning. Mostly German or Swiss made.
Japanese	100%	100%	100%	125%	200%	The very best, most technologically advanced design.
Japanese Hi-tech	100%	100%	100%	150%	300%	Mostly micro-machined (nanotech built), they need special, Japanese optionware (2x-3x price) to utilise the extra spaces. Repairs are also more expensive – and you may have to wait until they get the parts...

Additional SDP:

Within the limits of particular technology, a cyberlimb can be produced with better quality standards, using better grade (and thus more resistant) materials, or just with sturdier construction. An additional 10% SDP costs 20% of the part's cost. However, you cannot go for more than 50% SDP this way. Cheap cybertech, made with poor quality control, and with your generic materials, is of course cheaper – every 10% less SDP gives you 5% cost save. Again, it cannot be less than –50% SDP total if the limb has to be working. Yup, even among Chinese cyberarms you can find sturdier models, and really cheap trash...

Skeleton cost:

This is a cost of cyborg's basic parts – torso, arms, and legs (feet and hands included, although here we count that standard models are used) with given BODY (including extra cost caused by BOD increase due to tightened myomars, additional second generation myomars or hydraulics. For example, if you take a BOD 6 set with a +5 strength boost, which would cost +50% on the parts, you don't calculate Skeleton Cost for a BOD 11 borg, but a BOD 6, +50% extra). However, costs of additional SDP and technology modifiers are not included into skeleton cost. Skeleton cost is used to calculate costs of various additional control systems.

Humanity Cost for increased MA and BOD

This is a tricky question. One could say that, comparing to other statistics increasing BOD and MA is not a big issue, and thus can be ignored as neglible. This is the theory that was applied to Cheap FBC when this material was edited for the first time.

Another opinion is that there should be still some Humanity Loss. Now, you can use any formula, as there were a few suggested:

- 2 HL per every level of this characteristic above basic value (as in Chromebook 2)
- 1d6 per every point of this characteristic above your natural Body's Value (as for Muscle Grafts in CP2020)
- The same formula that is applied to ATTR changes.

Now, my idea is that the feeling of being superior to your former self, due to metal applied to your body, is what makes you feel not only something other than human, but also a better than human, is what makes you loose your sanity. A simple prosthetic replacement would be quite neutral. A replacement that you can use to outrun a car or punch holes in concrete walls, now that another story. Thus, HL for extra MA or BOD should depend on how much stronger / faster you are now, comparing to how strong / fast you were before you were 'borged.

- *senior officer Mikael van Atta*

Cyborg BODY:

Cyborg has the BOD value you've chosen for it. A BOD 2 cyborg is going to be Very Weak - well, it is still built like a kid or a lady about 1,45 meter tall, little over 30 kilogram weight. It is damn light, so it is to be weak. Yup, you're right; it is also a damn rare model. However, you can build a body having great size, and great strength (HUGE Body value). An ACPA - sized 'borg, a thing often seen in various movies, isn't impossible - however, it is useful only in some (and even there - limited) military applications, as ACPA - sized body tends to be of ACPA - class weight.... Most common people tend to buy bodies within normal human range (usually STR 5 to 10).

However, body's strength can be boosted without enlarging the body itself. **Tighter myomars** (total BOD stat bought as optional: enhanced

performance, 10% of the arms, legs and torso's cost per BOD point) will do the job. You cannot, however, raise the strength this way more than 8 points over your BODY. And this trick doesn't use option spaces. And well, there's not much point in upping strength in your arms only...

Second generation myomars (strengthened myomars from the main book) can be also used. However, they are much bulkier (eat a 25% of total slots on the body part in question – this is a change comparing to 2.5 rules, back then it was a simply 1 space per limb and 2 on torso), and their cost is 40% of the body (i.e.: if I buy a body - torso, four limbs and STR upgrade for 100'000e$ total, no other options added, then equipping it with 2gen Myomars is 40%). This trick doubles body's strength.

Movement Ability cost			
MA	Skeleton cost multiplier		
	Standard	2nd Generation Myomar	Hydraulics
3	-	-	*free*
4	-	*free*	5%
5	*free*	5%	10%
6	5%	10%	15%
7	10%	15%	20%
8	15%	20%	25%
9	20%	25%	30%
10	25%	30%	35%
11	35%	40%	*impossible*
12	45%	50%	*impossible*
13	55%	60%	*impossible*
14	65%	70%	*impossible*
15	75%	*impossible*	*impossible*
16	85%	*impossible*	*impossible*
17	95%	*impossible*	*impossible*
18	105%	*impossible*	*impossible*
19	115%	*impossible*	*impossible*
20	125%	*impossible*	*impossible*

Hydraulics can be used for the same price and space requirements, but there's no way such a body could be made to look human. The body's strength is tripled (sic!).

Movement Ability:

It goes much the same way as for REF. Your basic myomar system can propel you with speed of MA 5, advanced myomar MA 4 (they are tougher, and somewhat more difficult to control) and hydraulics MA 3 (boy, these are powerful, but slow). Of course, you can buy a set of "muscles" that work faster, no problem. The price is overall 5% skeleton cost per level added, 10% in Superhuman Mobility range (MA 11+). Upper limit for hydraulics is MA 10, second generation myomars MA 15, whereas first generation myomars can propel you up to MA 20 (and some say that even faster... but that is still under development, as well as faster moving 2nd Gen.).

FBC weight:

Human-sized cyborgs tend to be fitting in human weight range. There are purposes for that:

- they usually live among humans, in normal, everyday urban environment, so they shouldn't for example, destroy chairs by just sitting on them,
- many of them look like humans, and weighting much more than you look for isn't handy,

Anyway, that is not such a problem – composites, carbon fibre, glass fibre, lightweight metal alloys, even the old favourite, aviation-grade aluminium, are quite sturdy and acceptably light.

However, if you go into heavy-duty range, these are mostly military or industrial cyborgs, and there no one is too concerned about their weight (it makes only logistical problem when one has to transport them), just sturdiness and damage resistance.

Basic calculations are: BOD 2 'borg weights 30kg, then +10 kg per every +1 BOD up to 110 kg at BOD 10. Every BOD point over 10 weights 15kg. These are the calculations made for male bodies, or bodies with undetermined sex characteristics. Female bodies are often made lighter, although it takes extra money. This costs 2% skeleton cost per every 5% of weight missing (however, not more than -25% weight, I suggest). Remember, this applies to sheer weight only, not overall look. With enough lead ballast you can look like filigree ballerina, and still weight over 150kg… and vice versa.

If your borg has more than 2 arms, a tail, or some other weird stuff, add +10% weight for every extra limb (or a tail). It's a rough guideline, but should do.

An ACPA – sized FBC is going to have ACPA-like weight, anyway! Remember to add Heavy Armour's weight to this. Now, as 'borgs don't go fat, a cyborg can be made weighting up to 50% more than the weight listed above (sometimes it's an effect of using sturdier construction, sometimes just built-in ballast to fulfil

Ready, steady... Go!

If you are concerned with the weight of your borg for the purpose of airmobile operations, be careful.

First, a human-sized borg can use a human-sized parachute, glider or whatever. There's isn't a reason why it couldn't. As for heavy ones, e.g. ACPA-sized borgs, you simply need a bigger 'chute. Damn, we can airdrop tanks nowadays… In fact we can airdrop anything we manage to get into air. As for airlift – just keep the weight down to the limits of a fleshie trooper, and there will be no problem. Otherwise… how often do you see a helicopter-transported MBT?

- Mike van Atta

purchaser's requirements) without adverse effect to its performance nor extra cost. However, this is GM's call.

And what about height?

How to translate BOD into height? Honestly? Do not. BOD hasn't much to do with height, weight nor overall broadness when we talk about normal humans. One of the reasons why BOD was divided into 3 stats in the Fuzion system…

To quote Mort: "I know a little tawny guy's that 1.50 meters and hits like a bus, and I know a 2.03 guy that couldn't punch his way out of a wet paper bag."

So, here's my "rule of thumb":

Borgs that are in human range of BOD are usually made in human size (one of the reasons why Hero-series borgs are kept in BOD 8 and given 2nd gen. myomars, even though it eats down spaces and in emergency situations extra strength is always a bonus, is that they simply must be able to fit where a human does fit, use human-sized tools, equipment and vehicles. A BOD 12 Attila would have a tough time trying to fit into cockpit of many vehicles... and impossible with some of them). I.e. 150-190 cm, with most bodies being 170-180 cm (a universal height would be 175 cm, enough to make a tall woman or not so high man).

Of course, nothing is going to stop you from making a BOD 2, 210cm high one, but it wouldn't look proportional, unless given extra ballast.

Borgs with BOD of 11+ can easily have 200-220 cm, and ACPA-borgs even 250-280. Hey, these are ACPA-sized...

Attractiveness

RealSkinned, ExoDermed and TrueSkinned FBCs, as well as SuperChromed (and even plastic covered) models can be made physically attractive. The price is to be paid for every point of ATTR. The beginning point is 0. You can be made of any ethnic type for no extra cost (if you still do have ethnic type...).

Surgery cost (and effect) varies due to quality - poor quality is 50% cheaper (but you look like your generic surfer, and it is Average to spot), then you have more advanced variants (difficult is 100% more expensive, very difficult 300%, and impossible 500%).

ATTR can be made over 10 (yes!) - such FBCs are usually referred to as artbodies (artistic bodies - projected by artists to be of superhuman beauty). However, nothing comes free - a body that is more slender than whatever the Nature approved does not work well, and tend to have difficulties with stability and motoric control. Reduce REF on 1 to 1 basis (-1 REF for every ATTR point over 10).

I'd suggest limiting ATTR to the max value of 12. However, if one wants to allow even more radical beauty, the cost suggested would be to increase by 10'000e$ per point, e.g. ATTR 13 would be 20'000e$ / point, ATTR 14 – 30'000e$ per point, and so on. Still, I have trouble with imagining myself an ATTR 12 person, let alone an ATTR 16 one…

ATTR	Price per point
1-6	600e$
7	900e$
8	1'200e$
9	1'500e$
10	2'000e$
11	5'000e$
12	10'000e$

There's a question on how increased beauty would affect one's humanity (look at the famous people who had changed their appearance a lot, and tell me that Michael Jackson is sane). If you look again (roughly) as you've looked before becoming FBC, there's no HL on that.

New face, prettier face...

There's nothing to stop you from changing your look (and Attractiveness) when you feel in mood – if you can afford it. However, you cannot „resell" your former look nor store it anywhere – all the covers are tailored to a specified borg, and cannot be used on another, thus if you choose to change your look, the money you've invested in the previous one are lost. As for HL, a new face costs you 1d6 HL, of course being an FBC reduces this to a simple 1. ATTR changes make you loose ATTR if this was upping ATTR only, as it was when you were converted.

- *Mikael van Atta*

However, **additional** ATTR is as many d6 HL as ATTR points, less one (so +1 ATR is d3 HL, +2 ATR is 1d6, +3 is 2d6 and so on). Of course this is reduced as for all HL when you're a FBC, so it is not so awful. There's no additional HL for having new face (if you already have new body, having new face is not any longer an issue).

On the other hand, if you look like a human, it's good for your mental health. With a face made well enough you can even watch yourself in the bathroom mirror in the morning and not be able to remind yourself whether you are a fleshie, or a 'borg. And you have a fair chance of finding a sexual partner, which is very important to humans, canned or not...

Reflex:

Your cyborg body has nerves that transmit signals much faster than biological ones. Your brain is capable of processing signals faster, than your biological body was ever able to execute them. There's just one problem that lies between you and superhuman body coordination. The interface computer. A cheap, average model gives you coordination comparable to lower average human range. Of course, you can use better processor, and if you want to become a military combat cyborg (and survive) you have to. A basic model is built into body, for no extra cost.

However, better processors do cost. In Average Human range, it's 10 % of the skeleton's cost per level (REF 5 being 10%, REF 6 - 20% and REF 7 - 30%), Human High Reflex 15% per level (REF 8 is 60%, REF 9 - 75%), and Human Top Grade 20% (120% skeleton cost for REF 10 processor). Superhuman Grade Reflex is affordable for the wealthiest only, like military, corporations and other high-echelon players (raise cost by 5% per every level over 10, beginning with REF 11 costing 25% per level, thus 7 levels, 175% skeleton cost total).

Reflex cost table	
REF	Skeleton Cost multiplier
4	*free*
5	10%
6	20% (10%x2)
7	30% (10%x3)
8	60% (15%x4)
9	75% (15%x5)
10	120% (20%x6)
11	175% (25%x7)
12	240% (30%x8)
13	315% (35%x9)
14	400% (40%x10)

You can buy a cheap processor for the beginning, and then upgrade your body buying a new one. However, it is just that: you buy a new processor, for the full cost. As the processors are built for that particular model and BOD size (it has to be pre-programmed for cyborg's general weight), a second-hand market for such equipment is almost nonexistent. More FBCs keep their old processors as conversation pieces than are actually able to make any money from selling it.

Humanity loss is dealt with in a very similar way to ATTR raising: as long as your FBC REF is equal or lower than your old, meat body's REF, there's no HL. For every point between your 'borg REF and meat REF, HL is 2d6 up to REF 10. Every Superhuman Grade REF point is 3d6 (naturally, FBC creation rules break it down into simple 2 and 3, that can be even broken down further in some situations).

Upper limit for REF augmentation on full cyborgs is up to GM. I would suggest keeping the power level of processors within 10-12 for commercially available models, with 12-14 REF processors being available to corporations (or thorough damn high bribes) and 15 being a level for top-notch military borgs, and other superpowerful organisations. Anything over that is probably still under development in the most advanced cyborg science laboratories (and thus makes a potential adventure hook)

Superhuman reflexes aren't always good

This is a fact: if you want to hide your superhuman performance, or try to pass as a regular human / cheap 'borg, then moving with inhuman speed and insanely short reaction time isn't a good thing. However, it's not a much problem: usually you move at your top-edge only if you have to. There's not much point in keeping your reflexes low when you're already in combat, right? If you're even more concerned with it, you can go for specialised software that will block your REF on a pre-set level (usually 6-8) and let it go on full power when issued a mental command. Such software can cost up to 500e$.

- Mikael van Atta

Environmental adaptation

Full Body Conversions are very resistant. In fact, they can survive in numerous situations where a human being would die almost instantly (or even in the very moment). But to be really able to not only survive, but also work efficiently under adverse conditions, a cyborg has to be properly modified. Extra heat shielding for high-temperature work, like fire fighting. Heating and insulation for arctic or space conditions (even myomars and micro-hydraulics can fall prey of extremely low temperatures and humidity – stiffen, block, or work in a way not designed to), and the cold would eventually penetrate the biosystem of an inadequately equipped borg, killing the brain. Water-resistant and marine composites for deep-sea borgs. Modified air filters allowing breathing in an atmosphere that has a limited amount of oxygen (like Mars or Venus). Extra brain protection for high-G cyborg pilots (the line started by famous Wingman). Radiation and contamination shielding for HazMat

models. All these are environmental adaptation. Of course, if you want a human-replica body just for everyday life, you don't need any of these... Generally, if a human can do in given conditions, a borg can do even better. For example, a human can survive in 30 C heat, although not necessarily comfortable (he'd prefer to have air conditioning or at least a fan nearby, and some cool drinks at hand. However, a longer exposure without adequate equipment can be dangerous or even fatal - in the example above, dehydration can be dangerous, but it won't be a big problem very soon). Borgs are perfectly comfortable in such conditions.

The realm of serious modifications are conditions that would kill an unprepared human very quickly (like: Sahara desert without enough water), but not necessary instantly. However, they can be crippling. Unprepared borgs are going to work in such conditions for some time, although with limited efficiency. Long-time exposure would cause discomfort and malfunction, death being quite possible.

Extreme conditions tend to kill humans instantly, and unprepared 'borgs - within minutes. course, adequately prepared 'borgs feel perfectly okay in extreme conditions.

Condition	Moderate	Serious	Extreme
Water (pressure)	Fin & snorkel depth	SCUBA depth	hardsuit depth
Vacuum (pressure – lack of)	Mount Everest	Low-pressure atmosphere (Mars)	No atmosphere (Moon)
Gravity (acceleration)	motorbike	helicopter (or typical prop-job plane / osprey)	jet fighter / aerobatics plane
Cold (Temperature)	moderate climate winter	Arctic winter	open space cold
Heat (Temperature)	moderate climate summer	Sahara desert in summer	building on fire
Acid / base (corrosives)	acid rain	Typical corrosives	industrial, concentrated corrosives

Note: radiation protection is included into EMP hardening, so it's not included here.

Costs (percentage of skeleton cost):
Moderate: all borgs come prepared to withstand moderate conditions. You could use sub-standard materials to save some cash, but nobody really does it, as such parts don't sell.
Raven Microcyb attempted to build a Martian 'borg saving on the stainless steel parts, since on Mars its usually dry like nowhere else. Luckily, the design team was stopped by company's chief projectant. No one would want such an expensive cyborg with such an obvious flaw, would they?
***Serious*:** every Serious environmental adaptation costs **20%.**
***Extreme*:** cost for Extreme conditions adaptations is **50%.**

Note: it would be fully justified to require your players to pay these few hundred percent of the total 'borgs cost, since many systems do have to be modified to withstand adverse conditions. This applies especially to Extreme adaptations, as for many Serious ones an adequately modified cover would do well enough. Yet in some cases even fairly advanced upgrades can be pretty cheap. To sort it out in a quick, playable and not-too-unrealistic way I've decided to go for skeleton cost share, and that's what I'm using in sample FBC models created for this material.

- senior officer Mikael van Atta

EMP hardening

A standard cyberware (FBC included) are not shielded against EMP, microwaves and similar unpleasantness. Such shielding can be obtained and included into the wares, although this is expensive. I'm going to use FID's EMP rules here:

Level 0 is just that: no hardening. And this is free.
Level 1 are electronics hardened for use in heavy EMP environments, loads of radio transmissions, and such (industrial grade or expensive cybertech can be provided with this upgrade built in). It costs about +100% of the cyberware (or equipment, as this applies there too) cost, no spaces. It stops up to 200 rads.
Level 2 are LEO-certified cybernetics (they can be safely used in space). Cost is about +200%, and this can stop up to 500 rads.
Level 3 is military grade, EMP-hardened cyberware. The cost is +800%, or even more - and it depends on where exactly did you managed to get it. It can stop even up to 1000 rads (the technologies used there were invented during the Cold War, to save own electronics in times of nuclear world war).
Note: level 4 hardening exists as well, but it's not presented here, since it's too bulky to be used on cyberlimbs

Covering the body

You can leave your cyberlimbs uncovered, but that's not a wise move. They would be unprotected from elements. Would you want to electrocute yourself under a shower, because of your cyberarm short-circuiting? True, I do exaggerate. Safety will jack in, and kill all the electricity in the said arm. Still, it isn't a welcomed solution. Better have it covered. The cover can be transparent if you wish, so internal mechanisms will be visible. Some techno-freaks do like it. And don't worry about loosing the look of your skeletal cyberlimb. Covering of your chosen style will be applied to it, and it will fit like second skin… or rather, like second layer of varnish.

Plastic cover – just plastic panels covering your cyberlimbs. For 1 e$, these are dull, pale basic colours. Nothing interesting. More expensive variants are painted, sculpted, made in numerous lifelike colours or transparent. Whatever you wish. As most simple covers, plastic cover does not take option spaces, as it is simply bolted on the external part of the cyberlimb. It also, as all the covers, provides basic waterproofing, so taking a shower won't short-circuit you. However, don't try swimming pool (dynamic pressure during jumps or swimming can reach the level of a serious diving depth for a split of a second) or sauna (loads of steam that can penetrate membranes, which are capable of stopping liquid water) with a cheap model – it can hurt you. The more expensive ones don't have such flaws.

Borg body cover and realism

You've probably noticed that an "unit" of covering material does cost the same money, whether it's used to cover a BOD 2, or BOD 12 limb. I admit - it's not overtly realistic. But on the other hand, a model makes sense only as long as it's less detailed than the thing it is to represent. After all, ACPA covers (see Maximum Metal) do cost for the SP value, not for the size of the ACPA that uses them. So let's give it a break.

However, if someone's so obsessed with realism, I'd suggest dividing the price of a cover by 6 (average BOD of a human), then multiplying it by the actual BOD of whatever body part you're going to apply it on. The effect should be pretty realistic…

Myself, I won't trouble my mind with it: the system that exists so far is detailed enough for my needs.

- Mikael van Atta

Cyberlimb Coverings			
Cover	HL	Spaces	Cost
Plastic cover	1	0	1-200e$
SP 20 ballistic nylon	2	0	200e$
Superchrome	3	0	200e$
RealSkin	-25%	0	300e$
ExoDerm	-30%	0,5	500e$
TrueSkin	-40%	1	1000e$
Heavy Armour	13 (whole body)	0	Varies

Notes: all data are for single limb. A torso and head will need 250% of the given cash, HL, and space requirements, a partial limb 75%, and an independent cyberhand 50%. The only exception is heavy armour, which is bought as a single homogenous shell, and thus the values for it are for complete body cover (but see the description anyway).

All covers, except for Ballistic Nylon and Heavy Armour (as it would be of no effect on them) can be armoured, using a derivative Graded SkinWeave technology, with the same cost and HL values as Graded SkinWeave itself.

SP 20 ballistic nylon – the basic armour for cyberlimbs, known almost as long as the cyberlimbs themselves. These are panels of rigid and elastic (on the joints) ballistic nylon, usually with ceramic scales buried deep inside for added protection. It is usually black, but you could also get a camo variant, if you'd really look for it.

Superchrome – cover made of light metal alloys, covered with chrome, nickel, or something similar and shiny (bootleg editions use just shiny paint). Precious metals, like gold, silver, and platinum and so on can also be used, although this causes price to go sky-high. Retro style is also fashionable these times, using copper or brass covers. It offers you similar protection as plastic cover, but every variant of Superchrome requires lot of work to keep it clean and shiny.

RealSkin – the early „skin" technology, it was in 2013 already in the streets. This imitates human skin, with small scars, hair, discolourments, and so on. A *difficult awareness* roll is required to tell it from human skin on casual inspection. However, a more detailed check always unveils its nature. RealSkin has temperature of surroundings, and if cut, it's just a very, very good latex imitation of skin.

ExoDerm – nicknamed also WarmSkin, this is a late first generation upgrade of RealSkin, invented first for the original Raven Microcyb's „Gemini" FBC. ExoDerm contains tiny wire mesh and its own power source, thus it is heated up to around 36,6 degree Celsius (normal temperature of the human body – on some body parts it's a bit lower). Thanks to this you not only look human, but are as well warm as human (RealSkin has the temperature of surroundings, so on longer contact or when checked via some form of thermovision it will surely unveil it's nature).

TrueSkin – this is definitely second generation technology (and some may consider it's even more advanced, third generation tech), TrueSkin is just a step behind a real (or cloned) human skin.

First, it is warm like real skin (similar effect as with ExoDerm). Each limb contains also a nanoid tank. The nanoids make the skin grow hair (a default setting is all the hair growing in the places where a live human has them, but this is often tuned into custom settings if you don't want to shave yourself every day for example. The colour and type of hair can be set also). They are artificial, acrylic fibres, but they look like real, and feel like real. And yes, you still have to visit a barber. Unless you set it otherwise (the hair are woven from stocks of raw acrylic material by specialised nanomachines replacing normal human's hair growing cells). They also carry synthetic pheromones and sweat to the places where such should emerge from your skin (again, these uses replenished storages, and can be used for various custom settings). Your fingernails also grow and have to be regularly cut.

They act as blood if your skin is punctured / cut / torn (purely for aesthetic reasons, but the nanoid mix looks, smells and tastes like blood. However, a simple optical microscope - or cybereye with microvision ability - is enough to identify it as artificial. Same goes for hair, sweat and so on). And also "heal" punctured skin as well as your natural body heals itself (no, it cannot restore internal SDP of a limb. Only the skin heals!).

You have to visit a licensed cybertechnican to replenish material stocks and tune up nanoids (if you want to change your hair colour for example). This costs 100e$ per limb (twice for torso) and should be done once a month. However, if you use this system a lot (like heavy sweating or losing significant amounts of "blood" due to injuries) it has to be performed more often, usually once a week (such maintenance takes one hour).

And you have to comfort your TrueSkin's need for one more element: water. The supplies are heavily concentrated, and need loads of water to dissolute and function properly. If you have just a TrueSkinned limb, this is not a problem - the system will filter the necessary water out of your organism, so the only difference is that you might be drinking a bit more liquids.

FBCs have, however, to remember that they should drink about 2-3 litres per day. Distilled water is best, although the system has filters allowing you to drink tea, coffee, beer and so on for the same effect (almost. The filters are routinely replaced when visiting a cybertech, and they grumble about your filters much the way doc used to grumble about your lungs when you were still fleshy and smoking)

How do built-in options emerge from a limb, without damaging the cover?

First, not all of the built-ins have to be easily accessible. Quite a number of them need to be reached for maintenance purposes only, which isn't a problem, if you consider specialized tools cybertechnicans do use.

A number of options, however, need to emerge from the limb - built-in weapons are one of the most classical examples. These are placed within appropriately-prepared chambers, which keep the required environmental rigors, thorough access panels in the cover.

Whereas access panels in most covers are easy to imagine (however, please remember they are usually made to not be visible when not in use), it goes more difficult when there are Realskinned limbs on the agenda (not to mention more advanced Skins). How is it done? By a "flesh" seal, very similar to the one used in subdermal pockets. However, unlike a subdermal pocket, it doesn't have to be pressure-sensitive, and easily openable form the outside. The main book calls for Diff 20 to detect a subdermal pocket - and since cyberlimb popup accessory covers are even better, I'd call for Diff 25 here... if you know what you're looking for first!

- Mike van Atta

But that means a Heavy Armor – clad is going weight close to an ACPA!

Sure thing. You want it to be armored like a tank, it will be. And it will weight as much as one too. What do you expect?

Sure, you can use any kind of technobabble to justify armors that are lighter, but just as strong. But the thing is that if it is available for 'borgs, then it is available for ACPA as well and probably for personal armor as well. So, if you really are in a "munchkin mode", you can say that, for example, there are orbital-made armors that are 10% lighter, but 20% more expensive. Or apply the Universal Effectiveness Rule (CotW) in some other nasty way. Personally, I'd discourage even that 10% for 20% thing…

- Mikael van Atta

However, quick-change mounts for limbs cannot be used, and pop-up accessories do not work perfectly well with TrueSkin.

Heavy Armour: a full 'borg can be equipped with heavy military armour equal to MetalGear or even better – an ACPA – grade defences. SP, cost and weight for such plating can be found in ACPA construction rules, in the Maximum Metal book. Remember that, like ACPA, a 'borg cannot use plating with SP bigger than twice his strength. Heavily armoured 'borgs are prone to the same weight problems as regular ACPA. Since sometimes it may be needed to buy heavy armour for a single cyberlimb (for example, a quick-change one), the rules for getting partial heavy armour are: each arm is 10% of total armour's cost, each leg is 20%. The body is the remaining 40%. Add 5% more, if you're buying only parts of the armour, not a complete set.

A note on FBC armouring:

FBC can use both Body Plating (total body plating, torso plate, faceplate, and cowl) and subdermal body plating in the same way as fleshies. They are, however, a subject to the same REF, MA and ATTR restrictions as humans. Thus subdermal armour is only medicorely popular, and heavier external armours are very, very rarely seen, as almost all 'borgs who need this level of protection tend to use Ballistic Nylon cover or Heavy Armours anyway.

Non-homogeneous body covers

Sometimes, you wish to apply different types of cover to various parts of your borg. Usually, this takes a form of an armored body, with RealSkin head. How to deal with that?

Head is considered to require 1 unit of cover. While it has smaller area to cover than, say, an arm, it's by far more complicated, so it cancels out in most cases.

In most cases, you simply calculate different type of cover into the cost and HL of it into the total for the body's cover. However, in case of using a Skin series cover, there comes the issue of HL modifier… Bad news here: unless at least 50% of the body's cover is homogeneous Skin, you aren't entitled to any HL reductions, and when it is, you get only a fraction of it, equal to the body's coverage share (said 50% RealSkin cover would be worth 12,5% knockoff of the total HL for the body). If there's less of it, simply note HL for that body part's cover as 0. Still, a RealSkinned face can be made pretty attractive, so it might give you the HL 5% reduction because of that.

- Mikael van Atta

A sample HL calculation:
2x cybereye, 4d6 HL
Cyberaudio, 2d6 HL
2x cyberarm, 4d6 HL
2x cyberleg, 4d6 HL
cyborg torso, 8d6 HL
neural processor 1d6 HL
interface plugs 1d6 HL
BoxAlter vocobox 1d6+2 HL
Total: 25d6+3 HL
Halved into: 12d6+1d3+1 HL

Options:
2 sets of wolvers, 6d6 HL
ballistic nylon cover, full body 13 HL
Total: 6d6+13 HL,
Applying minimal HL rule and d6 disruption: 6+13=19 / 6 = 3d6+1 HL

Complete body's HL: 15d6+1d3+2

Humanity loss

The rules for humanity loss are not much changed, comparing to what you're used to. Every cyberware mounted on a FBC does only minimal HL possible for it (i.e. A set of wolvers, with nominal 3d6 HL, does only 3 HL). In the time of initial implantation, that is: when the borg is made, all such minimal losses are accumulated, and every full 6 points are changed into a single d6 of Humanity Loss.

However, this does not apply to the very basic elements of a 'borg. Arms, legs, cyborg torso, eyes, audio and vocobox (yes, this is an addition to standard Chromebook 2 rules. When they were creating the rules for first FBC they didn't knew about BoxAlters and NewThroats), plus neural processor and one set of interface I/O plugs. However, no armour – the armour is another kettle of fish, and it is not mandatory for FBCs any longer. You just summarise the die of theses basic system's HL, and add half of them into the dice pool of the FBC.

Then the dice are rolled.

After that, apply overall reduction, caused by cover (and possibly other attributes). Now, the conversion process is complete.

FBC cost round up

No one is going to calculate the price down to every e-cent. At least not when we do have in mind a 'borg worth his name. So the prices are rounded up. The table below comes right from Maximum Metal book, but it applies to FBC as well.

Cost	Round-up
Less than 20k	Up to full 100 up
20-50k	Up to full 1k up
50-250k	Up to full 5k up
250-500k	Up to full 10k up
Over 500k	Up to full 50k up.

Discounts:

20% it is a mass produced model. Everyone knows it, it's drawbacks and limitations, and it is available only in a very few finish variants (i.e. a "gemini" available with only one male, one female face, two hair colours, ATTR is set dead, and you have to go to after-market cybershop to do any customisations). No Superhuman range performance is available in this model (except for military combat 'borgs)

10% it is still mass-produced, but an average variety of finishes is available, however it is still sold "stock". It is still recognisable as a standard model and most people will know its limitations.

5% are popular models, which can have over a hundred of finishes available on catalogue basis. Only experts on the FBC field would recognise them at first glance, and many customisations may be ordered from the factory.

'Borg tuning

Yup, that's an interesting idea. While you could simply swap for a new body, or change the parts (like Reflex processor) for a better one, some users could try fiddling and jury-rigging with whatever they already have installed for better performance. Usually this involves exceeding the manufacturer's safety limits, and squeezing some extra performance out of the existing parts – with maybe a few more tune-ups.

There's no way full rules could be provided for it without using a volume several pages thick, and having more effort put in it than it's actually worth, as it would demand – among others – that an extensive catalog of spare parts to be created. The below are just guidelines.

Of all the stats, only MA and BOD can be quite easily upgraded without much parts being changed. Since those two characteristic do rely on myomar musculature (or hydraulic pistons), you could make them move above the producer's specifications. With myomar it's quite simple - they constrict when electrical impulse is fed into them. Add a bit more electricity, and they'll start constricting faster and stronger.
Hydraulics is trickier, but here the trick lies in careful manipulation with pressure of the hydraulic liquid, or changing it for one with different compression characteristics.

A rule of thumb calls for 1% of the skeleton cost as a price of new safety fuses, adjustments and other necessary parts 'n' programs, per every 10% of the tuned-up performance in either MA or BOD. However, when the tuned-up characteristic is being used with full power, it can fail due to overstressing (after all, your BOD 10 myomar musculature was designed to stand up to BOD 10 safety limits, and if you rigged it to work at BOD 12, it's your own risk!), and this usually goes really messy.

The chance of a mishap is 10% per every 10% of tune-up. Sure, there's a chance that tuned-up body would fail during routine operations, but it's neglible.

Even the most hardcore tuning enthusiasts rarely go above 30% boosting.

REF boosting: as it has been said elsewhere, 'borg REF depends on the processing capability of a computer chip, which translates neural impulses of the brain into computer signals for the body. The better processor, the better reaction speed.

Danger: exceeding the producer's specs!

Every time the boost is used (that is, your body is stressed to go on all-out, with its tuned-up performance), there's a chance something would get bad - equal to the percentile value of your boosting. If that happens, roll a d6 and add +1 per every 10% boost (or part of it) you have installed:

d6+boost level:	
2	The boost fails; the body part in question continues to operate at standard performance level. Reboot system to get the boosted stat value back on line.
3	The boost fails and is damaged. The body part continues to operate at 75% standard performance level. Rebooting the system will bring the performance to the 100% standard. The boost requires repair.
4	The boost fails, and is damaged. The body part in question switches off. Rebooting will bring it to 50% standard value. Everything above that has to be repaired.
5	Partial system crash. The body falls down, and switches motoric functions off (sensors and biopod still operational, as they're not connected to the REF processor, nor myomar / hydraulic musculature). Rebooting brings back 25% of functions.
6	Partial system crash. As above, except no reboot will help you above the level of an octogenarian with advanced Parkinson (REF) and a crawling baby. Repair required.
7	As above, but sensors go dead as well, and you need a workshop-assisted reboot. Sensory deprivation may cause madness.
8	Electric arc / overstressing does 1d6 damage to the body part in question per every 10% boost (or part of it), for MA and BOD boosts. REF: the brain gets electric shock, which is comparable to the effects of Zombie program.
9+	Electricity / stress cause a mechanical failure. Myomar muscles melt down, hydraulic pistons do shatter, and fragments of either of them clog up the rest of the system. Programming goes crazy, sending the borg into epileptic twitches around the scene, completely out of control of the user (who would scream of pain, had he a vocobox still functioning), before the body shuts down as in 7. The parts have to be replaced. REF: the biopod shuts down. Only a quick rescue by qualified paramedics (Trauma Team unit, equipped for borg rescue) within 5 minutes will keep you alive. However, not necessary sane, given the sensory deprivation.

ATR nor SP can't be improved by jury rigging, right?

[1]Costs & Rules of the tuning:

1% of skeleton cost per 10% upgrade of BOD & MA, or part thereof.

Only up to 20% are the parts (can be randomly determined by 2d10 roll), the rest is cybertechnican's pay. However, this requires specialized tools, computer programs and a lot of knowledge.

REF upgrades do count double their value for the purposes of cost and difficulty (so a +20% REF boost is going to cost as much as +40% MA boost, and be as difficult to do).

Cybertech Difficulty:

Average	up to +10% boost
Difficult	up to +20% boost
Very difficult	up to +30% boost
Near Impossible	up to +40% boost.

Every 10% or part thereof requires an additional Near Impossible roll (so, a +60% boost will require 3 rolls at diff 30).

Initiative boosts are possible. They are worked along the cost and difficulty lines of MA / BOD boosts, but they do count as ref boosts when a mishap happens.
They are based on the borg's REF, naturally.

Theoretically, no boost can be more than +60% for MA / BOD, or +20% for REF. Hardly anyone does try to exceed half of these values... not that it stops some fools from trying it.

[1] The picture is actually the only original one made for CheapFBC, an early concept of PlasticMan 'borg. Thank you, Mina ☺

The Ghostline
An interview with Carson Ballantyne

Carson Ballantyne, the head of Ballantyne Enterprises, a multi-purpose group of edgerunners, who can take on almost any kind of operations, from acquisition of goods to grey ops, is here for an interview. He is tall, about 6'6", weighs about 400lbs and the stylized black marble plating makes him look like a statue made of black marble. The most notable feature in his frame are the softly glowing blue optics he has. We're going to ask him about his decision to become an FBC.

Ghostline: Well, Carson, tell us, how did you become an FBC?

Carson Ballantyne: I was a perfectly normal young-and-cocky edgerunner back then. Having more mouth than brains seemed to have the desired effect on the other edgerunners, they got steamed up pretty much, slapping me off a little now-and-then. In between I got to have some friends and enemies as well, some of them proving to be a little more fatal to me than others. Once I was on a roll, when someone ran me over with a car. I got really busted up, my legs got broken in five places, my left arm almost ripped off and mangled half-way to nothing, my face was busted up and my skull cracked. A couple of ribs pierced my left lung, my spleen was like it'd been put through a meat grinder. I had two choices then, either the doctors would pull the plug on me, or I could have myself a new body, you probably can see which option took on.

GL: How did you come up with the Alpha Class frame of yours?

CB: The frame was state of the art then, IEC just needed a suitable test-subject to run it, and they got me. The whole thing was completely free for me, they even paid me to do it. For the first five years I was stuck with the gleaming chrome finish and white optics. I was running up a plethora of test ranges then, explosives, live ammo, the real stuff and all I had in hand at the end of the day was a big paycheck and some routine maintenance. At the end of the fifth year, they decided to put me on field duty in their security division, and gave me a new plating job, this time, it was swat-black, to me it seemed to suck all the light out a room I was in, no matter how brightly it was lit. They knew that I was more than muscle, I was a smart guy, although a little rowdy sometimes, so they didn't treat me like a bundle of muscle. Although my job was a physical one, they seemed to like my tactical insight on the job, and so I was free to use my own discretion on the missions I had. I was on their payroll for fifteen years more, and when I wanted out, they seemed a little sad, but let me go nevertheless. About a year afterwards I was back on the streets, having paid for my latest upgrades, I now had a dark chrome plating job and smoldering red optics.

GL: So when did you get the look you have now?

CB: I got this about a year ago. I'm old, almost fifty now, and got bored with that flashy young-gun-look I had on, so I upgraded it into this. I've got Raven's new CO-6000i-series optics now, they're nice, much better than any of the previous ones.

GL: So you're old, how does it feel to be almost fifty, and to be able to outrun a car and lift about a half-a-ton?

CB: Well, my body doesn't age, wear or tear as much as a normal human body does, so it pretty much feels like it always did, amazing, but I've grown used to it as I've done it more than half my life. Sure, I've matured a lot, I've begun to like being alone now and then, but there's nothing that might sway me off some dirty work, because of my age, like some of the other old guys out there.

GL: How about your friends then, how do they see you?

CB: They respect me in a way that I like, I'm the closest one to a boss in Ballantyne Enterprises, while there isn't literally a "boss" in the group. I'm serving as a suitable constant to their lives, as I've always been like this to them. I'm older and wiser, and they respect that too. I'm sure that they see the man inside this frame, not just the surface, the worst thing they have labeled me is a "bowling ball", because the back of my head resembles one from a distance. I've started to take it as an inside joke rather than a derogatory name.

GL: So you don't have anything against normal humans?

CB: No, I don't see them as a "lower" stage of human life. I see them as equals, I know they have their weaknesses, but so do I. You don't have to be eight-feet-tall and bullet-proof to qualify as a human being, you know. I just wish more FBC hosts would agree with me.

- Snowtiger

Everyday life issues of a Full Body Conversion

Adaptation

So you've awakened in your new cyborg body, feeling like a young god, with a little help from a physician you've stand up from your bed, made a first step into your new future...

And have fallen like a dead body.

Changing bodies isn't a piece of a cake, smartboy. Your sense of touch, balance and coordination are at least as good as they were before. Most probably even better. But they aren't the same. You catch the difference? Good.

You have a great, new body, guaranteed to work brilliant. But you have to learn how to use it. Things that you've learned as a baby – how to stand, walk, run, jump. How to hold, how to manipulate things. You know that sometimes it takes a month to learn how to grab an egg and not crush it? And as you can crush a hand when greeting someone, adjusting to your artificial sense of touch is an important matter. Same goes to skills.

So how do you deal with this? How does it look in the rules?

Just after awakening your REF, MA and TECH are non-existent, and you cannot apply any skill based on these stats.

You need one day's worth of exercise to regain one point of an attribute, and one day to regain two skill points. Yes, re-training to use all your REF, MA and TECH points can take you a long time (often over a month, if your new body has Superhuman - grade performance), and adjusting all your skills to your new body takes usually much longer.

Lifespan

So how long can you expect to live? Of course, most full borgs cease to function because of hostile actions by third parties (that

You drift slowly into consciousness, first there's only bright white light and white noise, then the world takes the shape of a messy tech lab. You find yourself staring at the dusty grey ceiling with rows acoustic baffling laid on it, every detail of it is shown in perfect detail and colour, your sensitive hearing picks up the faint humming of the air recyclers even when there are several computers and other electronics humming, bleeping and whirring around you. Something stinks of industrial lubricants, topped over with a sweet smell of something organic. You feel the rough imitation leather of an oversized dentist's chair under you, when a female face with long red hair, brown eyes and fair skin floats into view from the left.

"Good morning, Mr Armitage," she says. "I didn't notice you were awake. How do you feel?"

You open your mouth to speak, but only burst of garbled digital noise comes out. Her face disappears from your sight and you hear the crackle of a computer keyboard. There is a whine of electric servomotors as the seat lifts you into a sitting position. She returns to your view, you see that she is clad in a long, white lab coat.

"You can try to speak now," she says.
"I feel fine," you reply; your voice is strong and deep, like a male lion's growl.
"Good, can you stand up for me?"

You try stand up, almost falling back onto the seat, as you abruptly notice that you have gained almost a foot in length and quite a bit on weight, leading you to overcompensate for balance. Still swaying you start to get a hang on staying upright. The swaying subsides rapidly as you get used to the weight of your new body on your brand new legs, and the onboard gyroscopes adjust to the change in posture. The girl makes a few notes onto a notepad in her hand.

"Can you walk for me?" She says, walking across the floor to a rail on the wall.

Carefully, you hobble towards her, almost falling on your face a few times. With each wobbly step you take, you gain more confidence and experience on how to walk on your new legs. For you it feels like walking on stilts the first time, when you get into the right rhythm, you feel like you could walk for miles on end. When you reach the rail on the wall, you put your hand on it, trying not to squeeze it. You know that you could easily rip out a section of the wooden rail without much effort, and you don't want to do it. The girl hands you a tennis ball and you take it. There is a muffled *shup* as you overestimate the strength of your new arms and the ball caves in, ripping from the seams. The girl makes another note on the notepad and cracks a slight smile.

"I'm Doctor Emma Thompson, Mr Armitage," She says. "Your cyber-therapist."

- Snowtiger

is: murder) or simply accidents. But if none of the things happen to them, how long are you going to live?

You don't have a body any longer, so most diseases that are nightmares of modern society do not affect you. No heatstroke, no cancer, neither a number of other unpleasantinesses. The same goes for bacterial and viral diseases – your filters are really good, if something is able to pass thorough them, you're probably the last live being around, anyway. The only thing that limits your lifespan is the longevity of your brain, and its degeneration. Y'know, Parkinson and such.

So, how long? Well, if you don't have genetic predisposition for brain diseases, you can expect at least 80 years, most probably 100. Theoretical evaluations say that a 'borg should be able to live up to 120 years without any problem, although no one is sure if he will reach this ripe age fully operational (as for clearance of his mind). Everything over 120 is pure hazard. Hey, in some countries average lifespan is still about 30 years!

The famous Longevity Module is meant to triple this amount. Of course, nobody has proved it so far...

Breathing

The cybernetic lungs of an FBC are small, but highly effective. Anyway, they don't have to provide much more oxygen than required by the brain itself. They are also equipped with high-grade toxin filters. In the effect, an FBC is not affected by almost any combat chemical and biological agents, and can comfort itself with just a single breath every 8 hours. Some models, especially those designed to be used in environment lacking oxygen, have doubled or even tripled oxygen storage cells. Aquatic models are often refitted with gills for prolonged underwater operations. FBC built for space exploration can also be equipped with filters, allowing them filtering oxygen out of the local atmosphere (provided oxygen is there...). This is a fairly common solution among Martian cyborgs.

Eating

The mechanical bodies do need power (either replaceable fuel cells or reloadable batteries) and a routine maintenance from time to time. But biopod's load needs water, carbohydrates, vitamins, protein and so on.

Early FBCs just use nutrient modules - plug it in (something like half-a-litre bottle - sized) into the right slot, and replace it regularly (about once per 4 weeks), and you're ok. (this is also one of the few ways to poison a 'borg – tamper with his food supply. However beware, as specialised companies produce these). Many 'borgs, maybe except for pure combat models do have ability to eat and drink like humans also - purely for psychological and social reasons, as they have no functioning digestive systems. This is, however, true for 2020-era technology. Later models, particularly those of third generation, are going to have micromachine "stomach" where food and drink are

Additional nutrient canisters

As for the nutrient canisters, I'd think that one canister of nutrient sludge (or "baby food" as they dubbed it in RoboCop), would be good for at least a month, I don't see ending up without nutrients a problem. The host just starts to get drowsy, edgy and hungry when the nutrient supply starts to dwindle. And when it goes out totally, he's probably on his way to replace the canister already, because he cannot think clearly and ends up in everybody's face more often than normal. Here's what I suggest:

- A Normal canister (good for a month) takes 1 space and costs about 500€$.
- A medium canister (good for two weeks) takes 0.5 spaces and costs about 250€$.
- A small canister (good for a week) takes 0.25 spaces and costs 100€$.
- An emergency canister (good for three days) takes no spaces and costs about 50€$.

- Snowtiger

A female cyberdoc wakes up in the middle of the night and decides to take a walk, and while at it comes across a path of open doors. She follows it and finds the project subject in a room-sized cooler in the middle of several dozen emptied diet supplement containers. The metallic face of the subject is covered by several smudges of reddish yellow goo, and it holds out a pair of fingers covered in the stuff, just midway to its mouth.

"What the hell are you doing? You're supposed to be offline and resting, mister."

"Oh, sorry, I had a case of midnight munchies. Didn't want to wake you up by busting up a vending machine and you've told me not to go out at night, so I came here."

"Yeah, that's pretty obvious. Do you know how much a container of the stuff we feed you costs?"

"No, but you can probably get the same stuff for 25 cents a jar from the K-mart at the corner just outside the facility. This is banana-watermelon-pineapple mash, isn't it?"

- Snowtiger

disassembled (to pure carbohydrates, protein, and so on) by nanoids, then absorbed into cerebral spinal fluid to keep biological component alive. Sure, during the second generation it is going to use special "cyborg food" that looks and tastes like real thing, although is specially made for micromachine disassembly, but more advanced models are probably going to be able to feed on the same kibble as you and me.

The nutrient modules are also equipped with pre - programmed „menu" of tastes, which turn the right centres in the cyborg's brain with a simulated experience of eating whenever he wants.

More futuristic prognosis say that biological reactors will be invented, able to turn human food into electrical power, needed to run 'borgs. This is, however, kind of science fiction still. If it's going to happen, it is anyway not to be seen for many years. And that only if it's going to happen.

Using the toilet

Organic waste products have to be removed, that's true. Generally, it is done in the same way as for feeding: there's a removable waste container built into body, and it should be replaced monthly. Most 'borgs find this more comfortable than the alternative. In fact, only a few specialised espionage Geminis can urinate and defecate like humans.

Power supply:

Let's face it: an FBC is a power hog, even without additional modules built in. And it isn't going to run on wishful thinking. It needs electric power. And a lot of it. Most 'borg models use 6 energy cells, and these can be of various types. One in each limb and 2 in the torso are a standard layout, making it 6 batteries total (you can use a lesser number; it'll proportionally reduce your power time). An additional battery is able to power biopod for 72 hours, thus keeping it alive (this is standard equipment on all biopods, and is meant as backup system). All the limbs come with space for 1 power source (torso with two) of one given type (if you bought hydrogen-powered arm, you cannot use batteries). Additional power cells can be built in, each taking ½ space and no HL cost. Those additional energy sources can be of different type (it's quite common on more adventurous 'borgs: they use batteries as a regular, day-to-day power source, but have also a hydracell or two built-in and kept as reserve).

Big 'borgs have energy requirements increased by 10% for every BOD point over 10. Thus, a BOD 20 'borg would need either a double number of power cells, or suffer 50% reduction of operational time.

Note that the lasting power time for the power cells is given with normal amounts of activity, which is medicorely active life in city limits, with a rather low amounts of intensive movement (like sports). Some times of activity use a lot of energy (fighting, running) and can wear down the power source much quicker (often to as low as 25% normal activity time). On the other hand, if you do almost nothing except lying down in your bed and reading books, your batteries will last much longer (often to as much as 200% normal activity time).

There are two main ways of dealing with the problem:

1. Compressed hydrogen fuel cells used as energy source. A 'borg needs 6 of them a month to function (each costs 100e$), considering average energy output / activity. Military 'borgs usually run on these, but as they use to engage in high-energy using activities (like combat or running) a lot, they have to replace hydrogen cells every week, or sometimes even more often. When the hydrogen runs off, there is no longer electricity to power the 'borg, and it falls like a marionette with cut strings. This method of powering is also quite expensive (600e$ a month minimum for the power only). A side effect of using hydrogen fuel cells is that they produce water vapour. However, the amounts of the vapour from such small cells are negligible.

2. Rechargeable, advanced Nickel-metal hydride batteries, heavy-duty models (only the very old cyberware uses now-obsolete Lithium-ion batteries), they have almost no „memory effect". Their cost is comparable to fuel cells, but don't need replacing so often. As they wear down, they should be replaced once a year, but some borgs use theirs for 2-3 years and feel okay (although they're known to have "short breath", i.e. low amounts of energy available, as the battery's capacity eventually degrades). However, they are reloadable - a 'borg hooks up to power line, and recharges his batteries. It takes 4 hours with 220V current (6 with 110V), but the favourite are "fuel stations" used for loading electric cars - 5 minutes with such a thing, and borg's batteries are full and happy (480V industrial power line does pay the bills). A full load in the batteries is enough for 72 hours of normal activity. Next 72 hours the FBC remains active, but gradually losing power, which leads to loosing

> Batteries lose about 14,5% capacity per year, or about 1,2% per month. However, it is not likely to affect gameplay.
>
> *- Mike van Atta*

performance (reduce REF, MA and Body appropriately). Used mostly by civilian models. Each one costs 100 e$ as well.

3. Nuclear batteries (or N-cells, from hereon). These old-fashioned microminiaturised thermonuclear power cores are about the size of a normal D-Cell battery, but are known to keep 'borgs in functional condition for several years on end. Because of a built-in radiation shielding (a thin layer of lead-and-gold sheets just under the outer shell of the cell, with an RSP of 25*), they have a minimal radiation signature even in normal usage, yet the dosage of radiation in this case is not powerful enough to cause any actual damage to neither organic or any kind of electronic systems. However, if an N-Cell is damaged enough for the shielding to be punctured, a 10 millirad (1/1000th of a rad, according to *Deep Space* a human can safely cope up to 50 rads without adverse effects) radiation dosage per minute is inflicted to any being within one meter of the punctured N-cell, including the 'borg(an FBC can cope up to 100 rads without adverse effects, unless it's shielded from radiation) itself. This damage stops as soon as the N-Cell is disposed of or removed from the vicinity of the affected beings. Because of the potential radiation hazard, N-Cells are not recommended to be used as the backup batteries for the 'borg's biopod. These do cost 2500e$ apiece, and are usually replaced every 5 years.

* Radiation rules in *Deep Space*, have been used there so an RSP 25 means that the shielding will cut down 25 rads per turn, which is well enough to protect even an unshielded person from radiation effects, when working with N-Cells. If the cell becomes punctured, the shielding will not work.

Note: as there was a long dispute about nuclear – powered 'borgs, and most of opinions stated that such things are well above of what is usually considered reasonable tech level for 2020 (or even 2030) campaign. The N-Cells are presented here only for completeness ' sake, and as such are absolutely optional thing.

Swimming

How do the borgs and water go along?

Floater. This is a backpack buoyancy tank, resembling Scuba breath tanks used by humans. It's used to either provide the borg with a neutral buoyancy or allow it to control diving and surfacing at will. It does, however, not function as a breathing device. Floater is controlled by a neural interface as a standard, but manual controls are included as well (placed at the suspenders). The device weights 6 kg, and can be used by any borg of BOD 10 or less (bigger versions are available for special requests). Cost is 2000e$. The producer advises not to dive below 100m deep with this unit.

- Mikael van Atta

Well, as for water itself, all borg covers are waterproof, and thus will keep the user safe to a certain depth. An environmental adaptation can be applied to allow deep dives, if necessary.

But what happens if we drop a 'borg into a lake? This depends on the model. If it was a 'borg meant for underwater work, it's not a problem – it will have appropriate equipment on board, including some form of mobility (a hydrojet, most likely) and construction, allowing for neutral buoyancy.

A heavy 'borg, like a seriously – armored ACPA-borg would sink like a stone – it has no

displacement to counter its weight. That's why military 'borgs involved into sea operations are equipped with backpack-mounted hydrojets – both to propel them, and to keep them afloat thanks to raw engine power.

As for geminis, they're not much heavier than humans, so they can swim like them. They have enough muscle power to compensate for balance problems, and their far greater stamina gives them an advantage over non-augmented humans. Still, they tend to use backpack-style floaters when swimming.

And if the water is shallow and the shore's nearby, why not to sink and have a walk on the bottom?

Emergency buoyancy bladder

Cost: 200e$ / space, size: ½ space per 50kg of the borg's weight (or part thereof), HL 0,5. Can be built into torso or upper arms (shoulders). Can be installed as separate, 0,5 space-sized units as long as the total displacement of the set meets the requirements.

This was meant as an emergency floatation device, that – when deployed – forms a collar around the borg's neck, keeping its head above the surface for almost infinity. It consists of carefully packed floatation bladder and a compressed gas cartridge. After use, the bag has to be checked for wear & tear, carefully repacked and fitted with a fresh gas cartridge (this procedure costs circa 20e$).

- Mikael van Atta

Routine maintenance

Rebooting the system

This is a maintenance procedure involving a complete shutdown of the borg's systems, and restarting them again. Its length can be anything from 30 seconds (a regular reboot and it can be made even faster for performing this in combat situations) to several minutes (workshop-assisted reboot, especially if the biopod has been moved to a new body, which is being adjusted. Borgs do like it in a way most people treat visiting their dentist – unpleasant (if not outrightly painful), but necessary. They tend to do it as rarely as possible.

- Mikael van Atta

Apart from repair and replacement of broken parts, and occasional tune-up, your body requires regular maintenance. Well, it wears down, and some parts will – in time – become malfunction-prone. Spare servos, safety switches, joint lubricants and so on will cost you 1d10% of your FBC catalogue price, per year. It's suggested to visit a cybertechnican for this maintenance every half a year. If you can do it yourself, it's great, but usually you have to visit a specialist, who charges 100-150% over the parts value.

Using drugs

Sometimes there's a need to give the 'borg some medicine. Although his mechanic body requires rather repairs and reprogramming than healing, sometimes the brain just needs some help.

Every borg has a medical substance access port, where a capsule, containing the medicine has to be inserted. This is never mounted on the outside (so forget about putting a dose of neurotoxin there when in close combat), but can be easily accessed by borg himself (or a trained physician). One warning – most doses are measured for a normal or slightly augmented human (body mass to dosage ratio is important here). As the borg has nothing more than the brain itself, a normal dose of any drug would most probably cause an overdose and death. In fact, they use really tiny amounts of drugs.

Every good pharmacy and chemist's store do offer „borg doses" in one-use capsules. Fixers, dealing with FBCs can also provide you adequately prepared doses of recreational (or any other) pharmaceuticals. This also means that injected (in a traditional way, that is: by syringe) or derm-applied drugs are of no use on 'borgs, and inhaled or ingested ones aren't really helpful as well.

Drugs, stimulating physical characteristics (REF, MA, and BOD) are of little use for 'borgs. BOD and MA are purely artificial, and cannot be enhanced by any pharmaceutical means. As for REF, it is a bit different. Although the nervous system has been replaced with wires (unaffected by drugs), reaction time is still, at least partially, dependent on the brain. A general speed of movement and hand-eye coordination cannot be improved by drugs, but reaction time can be lowered (all REF boosting drugs boost Initiative instead). Same is for cyberware and bioware the now-cyborg had before going metal.

Autoinjector

Due to the fact FBCs use only minimal doses of drugs, the autoinjector (Chromebook 3), FBC variant, holds not 5 doses of different drugs, but 10 doses of each of 5 (possibly various) drugs (50 total).

- senior officer Mikael van Atta

Skill boosting drugs (except for Endurance and Strength Feat boosters), hallucinogens, sedatives and so on work as normal.

Borgosis

'Borg humanity loss / personality disorders

Borgosis – *a complex of mental disorders observed mostly among people undergone Full Cybernetic Body Conversion ("borgs"). Said to be similar, yet not the same as the earlier diagnosed cyberpsychosis.* (Webster English Dictionary, 2021 Ed.)

Note: the rules for specific mental disorders below are suggested only. You are encouraged to role-play them rather than simply apply skill modifiers. The system was inspired by the cyberpsychosis rules presented in the Dark Metropolis sourcebook, form Ianus Games. It has, however, to be written in a quite different way, to suit it for 'borg needs.

Borgosis level table	
0 - 10 points	Normal
11 – 25 points	Almost Sane
26 - 35 points	Slightly Edgy
36 - 45 points	Definitely Eccentric
46 - 60 points	Generally Crazy
61-75 points	Mad like the Hatter
76+ points	Absolutely Insane

Borgosis random table, part 1	
D100	Level 1: Almost Sane
01-11	Dorian Grey syndrome
12-22	Pyromania
23-33	Hyperactivity
34-44	Narcissism
45-56	Borg Superiority complex
57-67	Split personality
68-78	Inferiority complex
79-89	Phobia
90-00	Stutter
D100	Level 2: Slightly Edgy
01-11	Dorian Grey syndrome
12-22	Pyromania
23-33	Hyperactivity
34-44	Narcissism
45-56	Borg Superiority complex
57-67	Split personality
68-78	Inferiority complex
79-89	Phobia
90-00	Nightmare disorder
D100	Level 3: Definitely Eccentric
01-08	Dorian Grey syndrome
09-16	Pyromania
17-24	Hyperactivity
25-32	Narcissism
33-44	Borg Superiority complex
45-52	Split personality
53-60	Inferiority complex
61-68	Phobia
69-76	Severe addiction
77-84	Depersonalization disorder
85-92	Narcolepsy
93-00	Light delusion

Note: new levels of a disorder include the previous.

As you can see to the left, the brackets for several levels of borgosis are wider than in original rules. This was intended. Remember that, however the person may show no symptoms of borgosis, the Humanity level, and thus Empathy, will be affected. Humanity loss caused by cyborgisation prior to full body conversion isn't taken into account when calculating 'borgosis effect. However, mental disorders caused by drugs or earlier cyborgisations aren't discarded – they are simply being counted separately.

A GM may apply negative modifiers in situations likely to go along the disorder. Suggested value of the modifier is the level of the 'borgosis.

How many disorders? Every time a character goes into a new 'borgosis threshold level, a roll for a disorder table should be made (of course, the disorder can be also chosen, up to GM's discretion, by the player or GM himself). If the effect is a disorder the character had gained earlier, he merely adjusts it to the current level. If it's something he hadn't yet the (dubious) pleasure to suffer, he gains a new disorder, starting with the current 'borgosis level, in addition to all the mental problems he gained before.

Example:

I've added a few tricks to my Adam body, moving me from the Slightly Edgy status into Definitely Eccentric group. I was lucky so far – got Narcissist at level 1, and Nightmares at level 2 – unpleasant, but bearable things. Nightmares can't go any worse, but if I get Narcissist again, I'll jump straight to level 3 in it. Bad perspective... I take a die and roll: Split Personality. Although never had it before, it starts at level 3. Fuck. At least Narcissism stays at 1... *We're great. Both of us.* - dammit.

Level: 0: Normal.

No distinctive symptoms.

Level: 1: Almost Sane

Dorian Grey syndrome: *Take a chance? No, thanks. Waste not, want not as they say. And believe me, gambling is a thing for fools*. You dislike putting yourself at risk, trying to stay

out of dangerous places (which, in a cyberpunk world is rather hard)

Pyromania *Fire's cool. Haven't ever seen those guys at rock concerts, waving their lighters? Cool, ain't it? And candle light is so lovely...* You like fire, often lighting small fire's for the sake of doing it. A finger lighter is a given, probably you have a lot of candles where you live as well. (Think Pyro from the x-men movie)

Phobia: *Ugh, I've told you, I don't like spiders, they're disgusting...* You can force yourself to face the object of your phobia, but you prefer not to. You feel serious discomfort doing so, thus in most of the situations you won't even close. **Note**: phobia is a strong, non-rational fear against something. It can be something that ordinary people don't consider frightening, or something that is not dangerous or frightening at all.

Light Hyperactivity: *You weren't made to sit still for hours! Nor to waste time waiting! You're a man of action! C'mon, let's do it!* The character feels jumpy and edgy, have problems sitting still. Etc. A negative modifier can be applied to all tests where patience is required.

Lightly narcissistic: *Thank you, thank you, you're too kind. You don't have to praise me, I do know I'm good.* The character thinks about himself as somebody better than the people around. He's good-looking, intelligent, well-behaved, and knows it. This may be not well taken by other beings, but on a jet-set party it's likely to go unnoticed...

Stutter: *Y-yes, I-I'm interr...rrested. O-of course.* The character stutters and stumbles when speaking, especially if he feels the matter being discussed is important in some way. This may seriously hinder communication and interpersonal relations.

Borgosis random table, part 2	
D100	Level 4: Generally Crazy
01-08	Dorian Grey syndrome
09-16	Pyromania
17-24	Hyperactivity
25-32	Narcissism
33-44	Borg Superiority complex
45-52	Split personality
53-60	Inferiority complex
61-68	Phobia
69-76	Near death addiction
77-84	Serious delusion
85-92	Imminent explosive behavior
93-00	Antisocial personal disorder
D100	Level 5: Mad like the Hatter
01-10	Dorian Grey syndrome
11-20	Pyromania
21-30	Hyperactivity
31-40	Narcissism
41-50	Borg Superiority complex
51-60	Split personality
61-70	Inferiority complex
71-80	Phobia
81-90	Borderline personality disorder
91-00	Obsessive-compulsive personality disorder
D100	Level 6: Absolutely Insane
01-12	Dorian Grey syndrome
13-24	Pyromania
25-36	Hyperactivity
37-48	Narcissism
49-64	Borg Superiority complex
65-76	Split personality
77-88	Inferiority complex
89-00	Phobia

Note: new levels of a disorder include the previous.

Superiority complex: *Metal is better than meat. You have anything to say? C'mon down here and say it again, sucker!* You often find yourself questioning the authority of fleshies, and often start thinking that you are superior to "regular" humans. You seldom act on it. Different from narcisstic that you see Borgs as superior, not you. You tend to be brass, bold and cocky.

Emerging split personality: *Yes, my precious. We'll go there, and have this issue solved...* The character talks or mumbles to himself, often not noticing. Again, not something other people take well.

Inferiority complex: *I'll do as you say, I'm sure you do know better.* You think being a borg makes you "less" worth, often following orders without thinking about it. Your personality is often a shy one.

Level 2: Slightly Edgy

Dorian Grey syndrome: *Listen, with my longevity module, I can live well over two hundred years. By your standards, this means I'm immortal. You want me to risk my immortality just to prove this bastard I'm better? Calm down. He'll overdose within less than ten years. I'll be there for over a hundred to piss on his grave.* You are what most people would call a coward, backing down from challenges that might hurt you.

Pyromania: *There's something mystical in fire. Modern heating can warm your body, but only a real, live flame could warm your soul. I think I really have to get a fireplace for my apartment...* The fire's start getting bigger (bonfire big)

Phobia: *Yuck... eat a snake? But the guys will laugh at me if I don't... SpecForces type who's afraid of snakes... ok, man, take a deep breath, and imagine it's a chicken...* You will not face the object of your phobia, unless your social status (or life, or health) depends on it. Most of the cases, you just back off.

Hyperactivity: *So what if I'm drumming with my fingers? You didn't liked when I whistled tunes, you didn't liked me singing, didn't like me walking around the room, didn't like me playing with matches... What should I do to please you, lay dead in a coffin?* You are tense and have problem relaxing. If confined in a room you tend to pace, drum with your fingers and similar things. Sitting still starts to be a mental challenge.

Narcissistic: *Hmmph! You couldn't've recognized a*

masterpiece, even if it did jumped out of the forest and kicked your ass! The graffiti I made is perfect! You are what most people call egoistic, always put yourself in first hand and so on.

Nightmare Disorder: *Aieeee! No, leave me at peace! ... ugh... a nightmare again, darling. God... good it wasn't real...* you have nasty nightmares, often waking in the middle of the night (the second part of the sleep period, to be precise). Needless to say, you don't wake up rested after that.

Superiority complex: *You want to tell me what I should, and what I shouldn't do, officer? Don't make me laugh. Metal is better than meat. Let me show you: I'll get into that blazing building and bring that shiny bit back.* (a minute later) *See? And all I need is some cleaning.* You start referring to fleshies as meatbags, squshies or similar. You don't dislike humans, just look down on them, perhaps you tease your partner about his weakness (come on, I'm barely jogging, can't you run at 30 km/h?)

Split personality: *Shouldn't have done that, my precious. Shouldn't have taken interest in pharmacy... No, but why not? It'll get you good, my precious...* you often second-guess yourself. Light moodswings and new interests start to appear.

Inferiority complex: *Would that be good? Or now, maybe it's better? No, no, I really want to hear your opinion...* You want to please others, generally appearing as a considerate person.

Level 3: Definitely Eccentric

Dorian Grey syndrome: *Ok, I'll take a desk job, boss. No, no more any risky assignments. You want to fire me then? Shheeesh... Okay.* Fieldwork isn't for you; you leave that up to the stupid muscle. You're more content with sitting in your apartment, watching and planning.

Pyromania *Flames.... they're beautiful. Similar, yet different every time... I can stare at them for hours...* Fire's might mesmerize and distract you (if they are big enough).

Phobia: *Aieee! A spider! Sergeant, kill it, quick! This is an order!* Even compromising yourself in the eyes of the people won't make you face the object of your phobia. Most of the cases, you just freak out completely, and run away screaming – no matter who's looking.

Hyperactivity: *Why do you want me to stop? I tell you, I'll get crazy if I stop doing something. I'm not a lazy type like you.* You have problems staying in the same place for long, feeling increasingly nervous and caged if you can't do something physical (yes, if you're thinking about sex, it counts). You start getting shaky, having problem holding things still.

Narcissistic: *Hello, hello, I'm glad to see you too, ladies and gentlemen. Hey, I'M HERE. NOT OVER THERE!! Aww. Fuck. Just like the president of the US is such a big thing.* You have problems when you're not the center of attention, unable to see the interest in anything not relating to you, low self-esteem is a problem.

Severe addiction: *I can't stand it any longer... Please, give me... at least a little bit so I could stand for the big thing later... Don't be cruel, I really need it...*You are addicted to something, like sex, booze or drugs. Note: this is a heavy addiction, like alcoholism and nymphomania / satyriasis. And since you're a 'borg, getting the rush might be hard, because no matter how much you drink, you won't get drunk.

Depersonalization Disorder: *Jesus Christ, why? Why are my hands doing that? Where I'm going?* You start thinking about yourself in third person, often leading to the fear that you're not in total control of your own body.

Light delusion: *"Don't speak, write me notes. The whole house is tapped." So, would you like a cup of coffee?* You believe in something that's not real. This has to be a non-bizarre illusion that is something that could really happen - like your partner is cheating, somebody bugged your house, and you were an adopted child. Stuff like that.

Phobia list:

1. Autophobia: fear of being alone¨
2. Bacteriophobia: fear of bacteria
3. Achluophobia: fear of darkness
4. Thanatophobia: fear of dying
5. Pyrophobia: fear of fire
6. Arachnophobia: fear of spiders
7. Herpetophobia: fear of reptiles
8. Anthropophobia: fear of people
9. Heliophobia: fear of sunlight
10. Agoraphobia: fear of open spaces

Please keep in mind that this is just a sample – there are hundreds, if not thousands, of various phobias, and virtually anything could be an object of one.

Narcolepsy: *"Yawn... Must get some stimulants, or I'll fall right here. I know it's a very important meeting... Sorry, just I can't stand it, gentlemen."* You often feel sleepy, leading to lapses in concentration or perhaps even falling asleep at inappropriate times. This usually wears of in about 10 minutes.

Borg superiority complex: *Get outta my way, you fleshbag! I'm gonna park my car here, so take your wimpy ass-wagon where it belongs – while it's still able to move on its own! Along with yourself! You can't stand it, then get outta here! If I see you around next month, meathead, I'll whack you with your fuckin' car!* You start to be an asshole to humans, seeing them as weaklings and losers. You often refuse fleshies just for being fleshies. You don't tend to have

non-augmented friends, except in a professional capacity.

Split personality: *C'mon, let Alvin deal with them. I'll kill them quick and sure. Trust Alvin, Adam, my precious...I'll end the fight.* A second personality starts to appear under stress. It has great similarities to you, sharing your memories and goals.

Inferiority complex: *I'm no good here... I'm no good anywhere. I'll better get out to not disturb you...* You feel bad for being you, go out of your way to help others, self-critical.

Level 4: Generally Crazy

Dorian Grey syndrome: *Home sweet home? Nope. My home is my castle! I'm not going anywhere. No, sure I can. I simply do not want to, clear?* Getting out of your apartment start's to become a mental challenge, you start to become agoraphobic.

Pyromania *There's nothing like the smell of napalm in the morning... I love it.* You start using fire as a weapon (if you aren't already), carrying around a can of flammable liquid of some sort. If you're a techie, you might make some rather fascinating weapons...

Phobia: *How did I got both my arms broken? Well, you see, a spider came on me, out of nowhere, and I had no other way than to jump out of the running car...*You'll do almost anything to avoid the object of your phobia, including risking serious injury.

Near death addiction: *Yeah, that's it. That makes me feel the life. There's nothing like a little walk on a breast of a window, 50 floors above busy streets in the rush hours.* You need to put yourself of the edge, brushing with death to feel alive, often perceiving the normal world as incredibly boring and dull. You're brash and wild, participating in different extreme sports to get your rush - for example: no rules fighting, street racing and base jumping.

Intermittent Explosive Disorder: *Have this, motherfucker! And this, and this! I'll kill you, you filth... ... ...Jesus Christ, what I've done! Hey, are you okay? Give me a mark! Bro', forgive me... forgive me, I really didn't wanted it!* You have episodes of violence, feeling an overwhelming urge to cause damage, such as smashing furniture. these episodes might last for hours, but you do feel bad about it afterwards.

Antisocial Personal Disorder: *De facto, there's only one person in the world you're concerned with: yourself. Your life, your health, your welfare, your fun. You want to do something, you do it. No matter whether it's against their puny laws, or something. You want a lollipop, you rip it from the kid on the street. And yeah, break his leg in the process. See, the kid's screaming, trying to run away on his broken legs. Damn, it looks so funny! You should do it again.* The character becomes a sociopath. No legal, social, moral or ethical restrictions do bind him, as he goes for whatever he wants. However, a show of deadly force can still warn him off... for a time.

Delusion: *"You must be either stupid or crazy to not believe me! There is a conspiracy behind the scenes, the reality is manipulated from outside! I tell you, we have to kill all the bearded men in glasses – they are the agents of the Unspeakable Horrors!"* This is the bizarre variety; you might believe that your parent's are a bunch of aliens, that a mutated rat wants to kill you so it can use your energy's to power a cd of death, or anything else that's suitably unrealistic.

Incompatible disorders:

There are a number of mental problems that are mutually exclusive. For example, you can't be both narcissist and have inferiority syndrome.

The mutually exclusive list includes:

Narcissistic vs. Inferiority syndrome,
Borg Supremacy syndrome vs. Inferiority syndrome,
Near death vs. Dorian Grey syndrome,
Narcolepsy vs. Hyperactivity

Some phobias can exclude some disorders (like, a person suffering from a pyrophobia – a fear against fire – won't get pyromaniac), but this has to be handled on individual basis.

Please note that if the person has split personality, there are no incompatibilities mentioned above (we assume that one personality will be, for example, shy and suffer from inferiority, while the other is brash, narcissistic borg supremacist).

If a roll indicates a disorder that would conflict with one you already have, gain a level in the disorder you already have (or reroll, if that's impossible).

Hyperactivity: *I know, I know, pill-time. The damned Breakfast Of The Champions. I'll take them, and maybe I'll be able to lie down and take some sleep. If I don't spill these pills around again...* You're a freaking energizer bunny! you are unable to stay in one place for more than a few seconds, more than likely you are using some sort of sedatives to keep it in check. You suffer from severe performance loss in motoric functions.

Narcissistic: *"We'll part the money in the right way, guys. I take one half, you can split the other half between yourselves. Why are you looking at me like that? You want to deny me my rightfully earned part, you greedy, greasy swine?"* You're greedy, egocentric and an all-around self-centered asshole, unable to even relate to other people.

Borg superiority complex: *So what? Taking advantage of a fleshling ain't sin. I'm*

higher evolved than he. Would you call outsmarting a chimpanzee a sin? You dislike humans, similar to racist behavior: you might rob a man, steal his car, but physical violence is still kept in check. Usually.

Split personality: *Hey, Adam... I know you're a pacifist, but let's face it – either we beat them, or they'll nail us. Trust me, I'm with you for all the time. But Albin, you're going to harm them! Can't make an omelet without crushing eggs, Adam. Would you prefer ourselves to be harmed?* Your other personality starts to change, becoming more unlike you, getting slightly different goals; it also starts to emerge easier.

Inferiority complex: *Maybe i should walk to work. Yeah, maybe the inquisition will shoot at me...*You actively punish yourself in different ways, often trying to make yourself as miserable as possible.

Level: 5: Mad like the Hatter

Pyromania: *Burn, baby, burn, flames will get higher!* Arson, pure and simple.

Dorian Grey syndrome: *Please don't hurt me! And these people... I want them to go away, please!* You are an agrophobic (phobia against crowds) and even the threat of bodily harm can make you sing like a bird.

Phobia: *Stay where you are or I'll jump! And fuck the altitude!* You'll do literally everything to avoid the object of your phobia, including risking your life in an almost certainly deadly way.

Borderline personality disorder: *There is no grey zone. Nothing in the middle. There's only good and evil, black, and white. Anyone stating anything different is just a liar, trying to abuse you. If they aren't with you, then they are against you. Even your family and relatives. You do love them, but they are wrong.* Characterized by extreme "black and white" thinking, mood swings, emotional reasoning, disrupted relationships and difficulty in functioning in a way society accepts as normal.

Obsessive-Compulsive Personality Disorder: *The fork is not placed right. No, really. This is important. Let me check. See? It's half a degree to the left. I can't accept it... It should be placed in the right way! What were you saying, darling?* You have problems showing and feeling emotions. perfectionism and indecisiveness are some of the symptoms. Essentially, everything must be right.

Hyperactivity: *If they make me wait here longer than fifteen seconds, I think I'm going to kill somebody. Frack, how long they can make me wait?* You can't function in normal society, you must do something all-the-time, and you must do it fast. If you've ever seen somebody on stimulant drugs (amphetamine, ecstasy and the like) this is it – well, five times as much.

Narcissistic: *I'm out! If you can't respect my genius, then you're not worthy of my company!* You lock yourself away from the people who can't understand the greatness that is you. You can't see why people don't bow down to your superiority, making you confused.

Borg Superiority complex: *How do you like that, you worm? Huh? That's for walking the same side of the road! This is for looking at me! This is for...for...DIE!*You start with physical violence, beating and hurting humans.

Split personality: *But stealing is wrong, and i don't even want it! But i do, so come on, for me? No! Please? Okay, but just this once.* your personality is going wild, often acting in direct opposite to your wishes, your control can slip at anytime.

Inferiority complex: *Yes master, right away master, would you like to hit me? Ofcourse master. Now i'm gonna go shoot myself in the foot. If that is alright with you master?* You start to seriously hurt yourself, implanting yourself with slavechips and similar, as well as removing your ability to filer out pain.

Level: 6: Absolutely Insane

Dorian Grey syndrome: *No, mum. I won't come to see you. See, it's too risky; the city is so dangerous these days. No, I don't want you to come here as well. What if you get some terrible disease in the street and come here with it?* You can't even leave your apartment, you won't see anybody (they might want to kill you) and you have food and such delivered to you door. You at most might trust

Medication:

It is possible to suppress symptoms of most mental disorders by the right drugs.

Psychoactive drugs are the right way to do it. These are specialized medicaments are generally available a prescription only, from specialized chemists stores, and even they don't keep them in stock (must be specially ordered). If using Altered States drug rules, such drugs do have x4 modifier, and can suppress a disorder by 1 lever for every 2 strength points. They are also designed against each disorder separately, and tend to have a number of unpleasant side-effects as well.

Ordinary drugs, mostly sedatives, can be used to suppress symptoms of a few disorders as well. However, they are much less effective: 1 level per 3 levels of strength in the said effect, plus they do have all the listed effects (main, side and after) as well. However, they may be bought readily, sometimes even from vending machines.

your cyberdoc. Maybe.

Pyromania *And so does Lord speak: take the heathen like dead wood, and put them into fire. And flame will clean all impurity... Burn!* Fire is glorious, a tool of god(s). And it's your job to spread its divine beauty everywhere, engulfing the entire world in its cleansing beauty.

Phobia: *Yep, Max was a really tough fella. Good friend, too, and a real help in a fight. We've lost him to a practical joke: we knew he was afraid of spiders, so one of the guys bought a huge, hairy rubber spider at a joke shop and dropped it on Max out of surprise. Poor Max is a human vegetable now...* You can't stand to the object of your phobia. If confronted with it, you fall into comatose (for how long, it's up to GM. Quite possibly for the rest of your life).

Hyperactivity: *Can't stop. No, really. You can afford to be lazy, but I have all these things to do. Not a second to waste. Rest? C'mon, I'll rest in my grave, once I'm dead. Until then, I have things to do...* You are essentially so charged that you "burn out" causing brain damage as your brain overloads itself. Until then, it's like you're hyped up on combat drugs.

Narcissistic: *You're the best of the best, the most worthy being in the Known Reality. You can't go wrong. You're the Master, the God. Everybody should submit to your will – or be destroyed if they don't. They want to oppose? You'll kill them. All of them. They submit? Good. You can start recruiting followers – finally, you'll show the world who is the boss.* The character automatically attacks anyone who does not admire him, or does criticize or simply do not bow to his whims. Often starts plotting a plan for "world domination".

Borg Superiority complex: *Homo Sapiens Cyberneticus. This is what we are. The next step in the ladder of evolution. And as the Darwin's Rule says, we will drive out the inferior species. The so-called Homo Sapiens Sapiens. The dreaded fleshlings. We'll make the world free of them – the next link of evolution has arrived!* The more intelligent ones do sometimes stay in the shadows, planning and plotting, but as often they just waltz out for a destruction derby.

Split personality: *Yes! NO! Let's kill them! No, it would be wrong, it would make us evil! Yes, nobody would ever know anything! But I can't... Yes, yes, you can... or let me do the dirty job...* You're like Two Face, constantly battling over your own body. You tend to lose.

Inferiority complex: *You're worthless, not a human, and not a machine. You can't do anything right. You're so clumsy in your actions that there is no chance for you to ever improve. There's only one way you can go to end this misery: end your own pity by yourself.* The character tries to commit suicide, most likely in some quick, if brutal way. The attempts will be repeated until successful.

Therapy

CYBERPSYCHOSIS IS NOT A NEUROSIS, MANIA OR FLAW.

IT IS A LACK OF HUMAN WEAKNESS.

JOIN US. OR DIE.*

(*of unspecified causes containing, but not limited to, natural death due to limited biological warranty, sudden shock loadings in excess of the maximum rating of biological structural elements, or cascading systems failures caused by failure of non-redundant system-critical components.)

- Malek77

What actually is cyberpsychosis? And what exactly does cause it? Well, hordes of experts do still squabble and argue over this, and they can't conclude to an acceptable definition. So we can't say either.

Some things are certain, though:

1. It is a mental condition.
2. It is generally perceived as an unwanted one.
3. It is somehow linked to cyberware, most likely to the process of obtaining it, and most probably has to do with the process of adapting one's psyche to it (or rather – lack of such adaptation and acceptation – this would explain why kids, being naturally more adaptable than adults, are affected by cyberpsychosis in a much lesser degree.).

So, while we don't know what it exactly is, and we have only a vague idea of what does cause it, we have found a few ways to counter this problem. And some of them do seem to actually work. Psychiatry is a funny science…

Adaptation therapy

The experts have created a therapy concept, based overcoming the adaptation stress they perceive as the most destructive to human personality in the whole experience of getting wired. The thing is, the therapy has to take place immediately after implantation, (or, if that's possible, begin even some time before it) to counter the causes, not the effects.

Game mechanics: if the therapy is started immediately after implantation, then the overall amount of Humanity lost due to that (and only that!) implant is reduced by the percentile amount

depending on the therapy chosen. Please keep in mind that the reduction is applied to HL after all other reductions – due to technology used, cover material and others – have been applied, and dice rolled.

The adaptation therapy has to take place right after the surgery. It can reduce HL caused only by that implantation, by allowing the subject to adapt into his new existence more smoothly. It uses traditional consulting, VR simulations, psychoactive chemicals, hypnosis (along with post-hypnotic suggestion), personality conditioning, subliminal suggestion and whatever more the modern cyberpsychiatry finds effective – or at least promising…

There are three levels of this therapy:

- Standard. Provides a 25% reduction to Humanity Loss. Since it takes 4 hours a day, the subject can keep re-training to use his skills and stats at ½ normal rate. This therapy is fairly commonly available, and the subject doesn't have to live in the hospital for the duration – he can just visit it every day for a 4-hour session of therapy. The cost is 1'000e$ per week.
- Intensive. Provides a 33% reduction of HL. However, it takes a lot of time – in fact, the subject is participating in therapy 24/7, although not all this time is taken by actual counseling and training – for example, when the subject is performing other tasks, he is targeted by music carrying subliminal suggestions for his subconsciousness. The cost is 5'000e4 per week.
- Special. This rare, expensive (and still somewhat experimental) therapy provides a whopping 50% reduction of HL. It is ran in non-stop VR immersion, leaving absolutely no time for anything else – including maintaining contact with the outside world. VR, drugs, subliminal suggestions and hypnosis supervised by a team of highly trained psychiatrists do allow for amazing effects. However, the procedure is costly, available only in a few most advanced hospitals (usually university clinics ran by the best medical universities in the world). And even if there's a hospital that could handle it, some countries legislations forbid such therapy as "unethical".

  Also, if you have anything to hide, you'd better avoid this option. Whereas every contact with a psychologist could lead to spilling your secrets to him, undergoing the special therapy means your doctors will know everything about you. Probably more than yourself. Sure, it's hard to shock a psychiatrist, but that's not the point. The point is, they are only human… and they can spill your secrets further, to people who could be possibly very interested in such… the cops, your enemies, or simply the media. Some of them won't be interested in anything less than a full-sized skeleton in a closet, but for the others (especially if you're a public figure) even petty sins could be a precious catch. Even if it's only gossip about them… So, how much do you trust your therapists? Costs 10'000e$ per week.

- Chief, you ever question the ethics of the neural surgeons who monkey around inside your brain?
- They undergo psychiatric evaluations, especially those in security. There's object to stringent screening of their personal lives. Of course, those who check…hm... are only humans.
- I guess once you start doubting, there is no end to it.

(Batou and chief Aramaki, *Ghost in the Shell* movie)

What if I break a therapy?

For example, I have signed for a 16-week Standard therapy (25% HL reduction) after going full metal. But after 8 weeks I had to leave the hospital to help my friends. What then?

Since you've done 8 out of 16 weeks, i.e. 50%. Thus, for simplicity's sake, you're entitled to 50% of its effects, i.e. 12,5% HL reduction total. Of course, your money is gone and no refunds will be made.

Can I come back and resume the therapy?

I was needed only for a few days, now I'm back and I want to continue.

Well, since you had place and time booked for a pre-set period, so if there's any time left of it, you're welcomed back. However, if you want to get a full effect of the therapy, you'll have to make up for the days abandoned, and the later, the more difficult it becomes. For every day skipped, you'll need two extra days. And yes, you have to pay for these. Should you skip once again, then every skipped day will require two more days – even if that rule was applied before! A hint: it's easier, faster and cheaper to not skip your therapy time.

- Mike van Atta

Calculating therapy's length

We keep to the Chromebook 2 rules here: you need 1 week for a Neglible surgery, 2 for a Standard, 4 for a serious and 8 for Critical. A borg's therapy requires 16 weeks (2xCR). All the fee has to be paid in advance. For simplicity's sake, 4 Neglible surgeries equal 1 Standard, 2 Standard = 1 Serious, 2 serious = 1 Critical, when you've undergone a major implantation and want to adapt to it in bulk.

Note: please keep in mind that those rules – especially when combined with HL reduction due to other factors (especially cover material) can knock

HL to as low as 25% of the rolled value (i.e. 50% off a TrueSkinned 'borg with all the bells and whistles, then next 50% of what's left due to "special" therapy). While this is intentional, while it is intentional, this may also have a potentially destabilizing effect on game balance, severely weakening the major anti-cyberware safety of Cyberpunk game mechanics – EMP reduction and the menace of cyberpsychosis. However, the cost is high, especially with the more advanced therapies, which is going to limit their popularity. The same problem stops the governments from making a therapy mandatory for every cyborg – such regulation would be simply impossible to enforce.

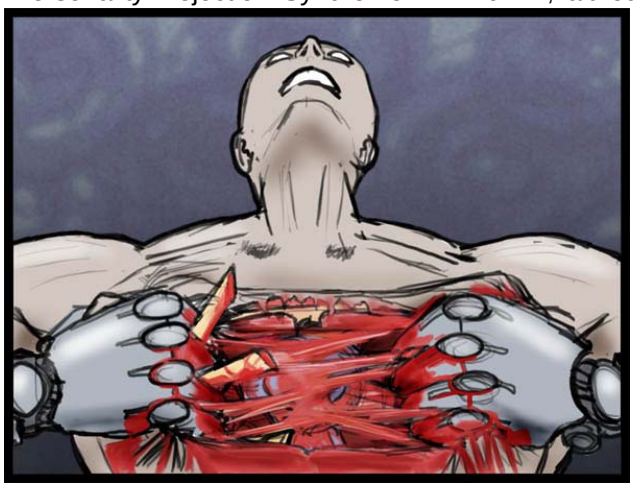
Obviously, only a single adaptation therapy can be taken for every implantation. For simplicity's sake, a new 'borg shell is always counted as a 2xCR surgery, no matter how many options are crammed into it. Having that in mind, an adaptation therapy can be taken along with every extra shell, to determine HL level for it, as for the rules in "swapping bodies" paragraph.

Other methods

Okay, your adaptation therapy is already over and you're back to everyday life. What else can be done to help your mental health?

- you may try to suppress particular symptoms with right medication. This won't help your social skills (EMP), but can make your company bearable. Or, in some cases – survivable.
- You might make yourself more sociable and easy-going with right chips (for example, Stress Chip from Chrome 1). It won't help against your psychoses; it would effectively boost your EMP for the purpose of social situations.
- You can use behavioral chipware, aka moddies. Some of them would make you only more sociable, but the really good ones are going to overlay a complete personality over your psychoses and social skills. And some personalities are truly gregarious…
- Social skills can be also boosted with some drugs. Of course, mining them with other drugs could be harmful…

Of all these methods, most do have some drawbacks. Meds are okay, but they tend to have unpleasant side effects, plus you have to be wary of what do you mix them with. The drugs are usually illegal, and this means their quality may be not the same as for those Ministry of Health – approved stuff you get from your chemist's. Behavioral chipware can be worn for about 24 hours before Artificial Personality Rejection Syndrome will kick in, although this time varies from person to person. Yet APRS is always a nasty bitch. Besides, some of us just don't like the feeling of not being yourself. Ordinary chips are okay, but their effect is pretty limited.



So what else you can do?

Well, the good news is that, although we aren't exactly sure what cyberpsychosis is, we can try to cure it. Some methods invented to cure other mental problems have proven effective in some cases of cyberpsychosis. And the psychiatry had made a few steps forward – we aren't limited to the tricks Freud and Jung used in the dawn of this trade – we have hypnosis, VR sims, braindance... and more than enough drugs to back that up.

Ongoing counseling / therapy:

The therapy is, in essence, applying an outside pressure on someone's psyche to change it. And, like all other ways of making one's change his mind its difficulty is based on the person's mental resilience. Or, game-wise speaking, Cool rating. As it has been said in the "Wildside" sourcebook, difficulty for such task is obtained by multiplying one's Cool by x2,5 – thus giving a factor named Stability. It is up to GM to decide what the tools are needed, but I suggest applying negative modifiers due to exhaustion and the like apply to both therapist and patient – when you are half asleep, you aren't very receptive. nor very persuasive. The only exception is for some psychoactive drugs, which may lower the patient's Stability by their Strength.

The amount of Humanity restored is equal to the number by which the therapist's skill roll has beaten the patient's stability. However, it cannot be greater than patient's current EMP value. Well, counseling doesn't work well on true psychos. A botched roll is likely to actually cause a further loss of Humanity (I suggest a 1d10 loss).

A therapy roll could be made every counseling session. However, a session can't be more frequent than twice a week, and less frequent than once a month, should the therapy be considered "continuous". However, to make it take longer, GM can chose an option to apply an average result once per every 4 sessions of therapy. Therapy does need time – not only for the counseling itself, but to let the ideas and suggestions root themselves into patients mind… Yes, it is a lengthy business.

How to use this with a HL system like the Ianus' or Blackhammer's? I.e. one having the Humanity Loss broken down into several separate psychoses? Then the only thing you have to is declare which psychosis is being cured this time, and then reduce it by the amount rolled. Once you get above the threshold level for a certain effect, it ceases to apply to your character (however, should you drive a particular psychosis down to zero and below, all excess points will be lost). It works the same with the 'borgosis rules presented in this book: once you drop from the HL level, a symptom is considered cured (although should you cyber yourself more, it will most likely reappear).

Now, if your EMP has dropped to 0 or below, you can't use this path. To be honest, people who are completely mad, insane beyond the point where they can be allowed to live on their own, are difficult to cure, and simply attending weekly consultations isn't likely to help them. However, I suggest that the people who still have a few points of Humanity left (technically leaving them on the very edge of cyberpsychosis – below EMP 1, but still above the complete zero) should be able to regain a fraction of an Humanity point (as the rules would indicate, i.e. a character with EMP 0,4 – 4 Humanity points – can retrieve maximum 0,4 Humanity per roll) until they climb back to the EMP 1.

Note that – according to Ianus and Blackhammer rules – anyone with starting EMP lower than 10 gets some points to distribute among his psychoses even before the game starts. I suppose it is to represent all those little phobias, egocentrisms and the like most of use seem to have – to some degree. But –in game mechanics terms – these rules do allow to help those little problems as well, thus bringing the "initial" HL to zero, and your humanity to 100. And I find this okay. But once your Humanity can best the original score, a question arises: what happens to your EMP then?

It would be all too easy to say that since 10 Humanity = 1 EMP, then 100 Humanity = 10 EMP, period. However, we touch a problem here that wasn't addressed in the Cyberpunk sourcebooks: raising character statistics (it was declared nonexistent, however, there are examples of characters having their stats raised in various sources – for example, Santiago in "Never Fade Away" story / scenario in the main book has Int 5, in NeoTribes the same character – if 7 years later – has Int 7). Anyway, I don't think it should be as easy as I pointed in the beginning. My call (and I've been using this rule for some time now) is to allow a character to have more Humanity than their EMP indicates. These excess points won't unbalance the game – maybe I have Humanity at nice round 100 level, but since my starting EMP was 7, not ever being brought back from the Edge by modern cyberpsychiatry is going to make me more sociable than my "sane" state, i.e. EMP 7. These extra points will form a buffer that would be depleted by further implants before they start taking their toll on EMP itself. And by allowing these therapy rules to be used you agree that the Damocles' Sword of cyberpsychosis isn't needed any longer, anyway. Sure, the cyberpsychosis is a problem to be considered and be wary of, but it becomes curable.

Advancing one's stats

This is a topic too important and wide to cover it in this book. However, I'd like to present a simple yet elegant system used by a GM I played once with – and with good effect, even if it lacks finer detail.

For every game session survived, the character receives a single stat improvement point. Raising a stat by one point requires the stat's value in points. Every statistic can be upgraded only once this way, and it can't reach superhuman values (11 or more).

- Mike van Atta

Costs of therapy

When allowing my players to undergo therapy, I used to charge them the standard 200e$ a visit (the sum listed in CP2020 as the cost of medical counseling). Feel free to adjust the cost, especially, if the psychiatrist is an expensive (that probably means "good", and surely "popular" one), and you want to limit the therapy's availability. However, keep in mind that the listed cost for a day in hospital in 300e$, and intensive care is 1'000e$ a day.

An average cyberpsychiatrist

Int 7-8 (generally all the guys monkeying around with one's mind are quite bright)

Revealent skill at 5-6 (professional level).

The skill can be either Psychological Counseling or Cyberpsychiatry (literally, GM's call, since no skills were described in the rules…) Better specialists are likely to charge substantially more for their time.

- Mike van Atta

The tools of the trade

There are numerous techniques that can be used in dealing with cyberpsychosis, and they need the use of various equipment. Here, I can merely suggest what can be useful… and what effect would it have.

- basic counseling – no equipment needed and no modifiers applied.
- Full VR - +3 to therapist's roll, however, GM may require a separate VR to be created for every patient (which is going to drive the price quite high).
- Drugs. Add medicine's Str to the roll. Cost – at least one dose must be used per session.

Spontaneous remission (optional rule)

In medical slang, "remission" means recovery. "Spontaneous" – God only knows what caused it. There are known cases of people recovering from serious illnesses and grievous, theoretically mortal wounds, reasons unknown. Ordinary folk do call it "a miracle".

And yes, there are cases known of "spontaneous remission" from cyberpsychosis. But, as with any kind of miracle, this is extremely rare.

So, if you want to check whether your character is that much lucky, simply test your luck against any obscene difficulty your GM's whim sets. Myself, I suppose that Diff 40 should be appropriate if the person is staying in a nice, calm place that is meant to improve his mental health (like a hospital). If he's being kept in a psycho-block, Diff 50 would be suggested. The roll shouldn't be made more often than once every 6 months, but if GM states that the character can try this only once in a lifetime, it's ok as well. As I've said, it's a miracle after all.

If you are lucky, you regain 1d10 EMP (i.e. 1d10x10 Humanity) at once. Boom. Spontaneous remission.

There's a catch, however. Such rapid improvement usually causes major shock to one's psyche, as you realize what you've done while being nuts… and how evil it was. Which commonly results in a depression, and suicide attempts aren't unknown.

- Mike van Atta

Okay, so I've gone cyberpsycho… what now?

The first question is: how would anyone notice? Ok, now seriously – would anybody mind? Not all cyberpsychos are the ravaging cybermonsters the media show us. If you're just an anti-social, solitary (yet harmless) type, you are pretty likely to be left to yourself. You won't bother them, they won't bother you. If you are a rampaging monstrosity going to mash all squishies into a pulp by the end of the week, you're most likely to be shot by Psychosquad. And since they aren't the type of guys famous for taking prisoners, you should consider that as "shot to pieces". If you are sentenced for some serious crime, and found to be a cyberpsycho (or, in fact, mentally ill in some other way that would make you not adequately responsible for your actions), you are going to be put into PsychoBlock until you get better (read: for the duration, given the fact there's no real therapy being undertaken in 97% of psychoblocks). The court can, of course, judge as well that you are merely pretending to be insane, trying to avoid punishment – and sentence you to death (see "Protect & Serve" sourcebook). Not an healthy option, right?

However, if you have caring friends, family, or a very expensive medical insurance, you might be put into an asylum or mental hospital (however, if you are of legal age, either your consent agreement or court sentence is required to keep you there!). Sure, you can also apply by yourself, but here we touch one of the real problems with insanities: the majority of affected people do not think of themselves as ill and needing treatment.

Dropping the Chrome

Now, as for asylums, psycho-blocks and the like – the first thing they are going to do is removing as much cyber as they can. If we're talking about a nice, well-paid private mental hospital, they'll do to great lengths to provide you with organic replacements for the parts removed (okay, if you are a 'borg, this becomes a real problem). Of course, you'll have to pay extra for these, but hey- those poor crazies in PsychoBlocks aren't even that lucky. In a PsychoBlock, the personnel will rip away everything you can live without (legs, arms, eyes…) – not more, because having you constantly hooked up to the life-support machinery would be too expensive. And yes, they are going to sell your cyber to the highest

"Too unstable to accept any meat transplants"

I'm not a medic, so I'd suggest a simple rule here: test your luck vs. Diff 10. If you're unlucky, your body won't accept body-bank replacements. If you haven't met Diff 6, even cloned ones will be rejected.

Of course, body bank parts are readily available, and – unless you have a full set of "spare parts" waiting somewhere – providing cloned ones can take quite a while.

The "instability", resulting in transplant rejection could be probably cured. However, it would take several years of therapy, and a lot of specialized (and expensive) drugs, which tend to have nasty side effects. To sum it up, it isn't an option one would consider in game terms, although not impossible fluff-wise.

- Mike van Atta

bidder to help paying for your upkeep in a governmental penal facility.

If you're lucky, or famous, the penal system might be showing mercy – i.e. providing you with organic transplants. Very few prisons make this a routine procedure, due to costs. And even then, if you are unlucky, your body might be destabilized by Metal so far it will reject organic transplants. However, the real problem is with 'borgs – they are often reduced to merely a brain with a set o interface plugs, floating in a life-support tank…

Okay, so you have dropped all the cyber you could, received (or not…) organic replacements and you want to know what that was for. The answer is "cold cyborg", by analogy to "cold turkey", a method used in drug addiction therapy. The points are to get you rid off cyber and show you that you can live without it. Of course, some rudimentary therapeutic procedures are applied, so are drugs – even in a PsychoBlock (unless, of course, the guy who runs it is more corrupted than he should, and he finds better uses for the money he receives for curing the inmates…). The "cold cyborg" period takes between 6 months and 2 years (4+2d10 months), and effects in regaining a certain amount Humanity.

To calculate it, take all the cyber removed from your body and calculate the minimal HL for it (i.e. a basic cyberarm module has HL of 2d6, so the minimal HL will be 2). Once the "cold cyborg" is over, you will regain half of that sum.

The point isn't to give you all your humanity back – this is simply impossible (and stupid, game-wise speaking). The point is to give you a chance of being pushed over the edge of sanity – in the right direction, this time. Once you obtain a Humanity value that is above zero, not below it, you can undertake regular counseling to regain your Humanity in the ordinary way. Well, the point is to not make dropping all the cyber a quick and easy way of regaining all the HL lost. Still, removing the cause of your problems definitely will help your sanity, and if you remove all of it, you're likely to be back among those moderately sane.

Also, keep in mind that this system favors characters that had high starting EMP than those who always had problems with themselves.

Former cyberpsychos and implantations

You've surely heard that former alcoholics or drug junkies, if cured, shouldn't take even a single dose of their poison ever, because it is likely to ruin all the therapy and turn them into addicts again? And ex-cyberpsychos aren't unlike that. Sure, I'm exaggerating a bit, but that's how it generally is. While implanting a skinwatch isn't going to push you over the Edge, any cybernetics installed on a character that was brought from the depths of cyberpsychosis is going to have a double effect on said character's Humanity. No matter he had exactly the same cyber before. If a SkinWatch has a nominal HL of 0,5, a former cyberpsycho will lose 1 HL for it.

So, be careful, cat. Be very, but very, careful. You have been warned.

- Mike van Atta

How to apply these rules when using the 4-psychosis system?

Yes, these rules have been invented with either CheapFBC's Borgosis rules, or standard HL system. But if you're using the Ianus Games' 4-psychosis rules (or the Blackhammer's variant), you can follow one of these ways:

1. If you were noting which cyborgisations caused what type of Humanity Loss (not to mention value…), it's easy. Simply remove it from where it was added.
2. If you weren't tracking it (well, nobody's perfect…), then simple reversing becomes impossible. If so, I'd suggest consulting the table covering the connections between particular types of psychosis and classes of cyberware. Removing the cyber should effect in removing HL points from the psychosis marked as the most probable for this type of cyber. Once there's no points left, switch for the next one in the possibility queue.

For example, the queue for NeuralWare is: Alienation, Obsession, Paranoia, and Egotism. So,

removing my neuralware, I should remove points from Alienation, as long as there are any. Once there are none left, I should remove them from Obsession. And so on.

The abstract of the rules

These rules are somewhat abstract – I feel I've said that a few times in this chapter, and I'll surely say it again. However, I couldn't have gone more specific without defining the cyberpsychosis itself. And my personal opinion on it is just that: my personal opinion. On the VftE forum we've spent a lot of time and effort discussing its nature, and weren't able to reach a consensus.

Therefore, if you're looking for detailed rules for therapy, I'd suggest you to consult some other sources. The "Call of Cthulhu" RPG (by Chaosium) seems to be one of the beret choices. After all, they deal a lot with madness there… and methods of curing it as well. The "Sanity" in CoC matches Cyberpunk Humanity closely enough to allow for 1 to 1 conversion for the sake of therapy. And – in case you haven't known – there was a full set of Cyberpunk 2020 to Call of Cthulhu and back again conversion rules, published in Interface 2.2 (among other sources).

- Mike van Atta

Dressing

A FBC doesn't generally have to dress. Their shell is capable of keeping them alive and well in most conditions that happen in human-hospitable regions. Only during really cold winter some additional insulation is required, and even that only for the models that weren't adapted for such environment and conditions. Of course walking nude isn't the best option either, if there's a possibility of being arrested for immoral behaviour.

However, most 'borgs who wear clothes, do wear them for their social value and function. They just want to look well.

If a FBC is of human size (Body between 2 and 10) and has a typically built body (two arms, two legs, human torso, and no un-human appendages), then it can easily wear human clothes. Plastic – covered and SuperChromed models have to be especially aware about what they are going to wear on, as it's difficult to find clothes fitting such an inhumanly coloured being.

BOD 11-12 clothes can be sometimes found in stores selling to cyber-modified humans, although the choice is somewhat limited.

For anyone above BOD 12 clothes have to be custom-made, but such big FBC are usually combat models, who have little need and use for clothes. Even more, if they have some sort of sophisticated camouflage wired into their cover, using clothes could interfere with it...

Although many fashion companies are currently issuing and selling whole lines of CyberWear, most FBC tend to wear normal human clothes, either generic fashion, or hand-made and especially tailored for them (tailor craft is meeting its renaissance nowadays), as they are at least averagely wealthy professionals.

Just head down to B0RG5 R U5, or Big, Tall, and Mechanical, and pick something out.

- Psiberzerker

Or they just don't wear any clothes at all...

Sleeping

Even if your machine body does not need rest (which is not exactly true – it requires to loose the extra heat you've created working very intensively), your brain still requires it. And it needs as much sleep as it needed when you were still a fleshie... That's why many 'borgs use built-in sleep inducers. Sure, you can go on drugs for a few days, but finally you'll have to rest.

And, by the way – borgs sleep with their eyes closed. Unless, of course, their bodies are programmed to do otherwise…

Resting

Full cyborg doesn't tire. Not in the way a human does. His breath has nothing to do with how long he can run. His muscles do not hurt. He's not getting thirsty. Nor sweats. Nothing this like. And food canisters or main power batteries do not have to be replaced every day.

So someone could think that a 'borg can run for days non-stop. And this is not true. First, the brain has to sleep. The other problem is machine endurance. Both myomars and hydraulics can work long, but they produce a kind of waste: heat. And that's what limits 'borg endurance.

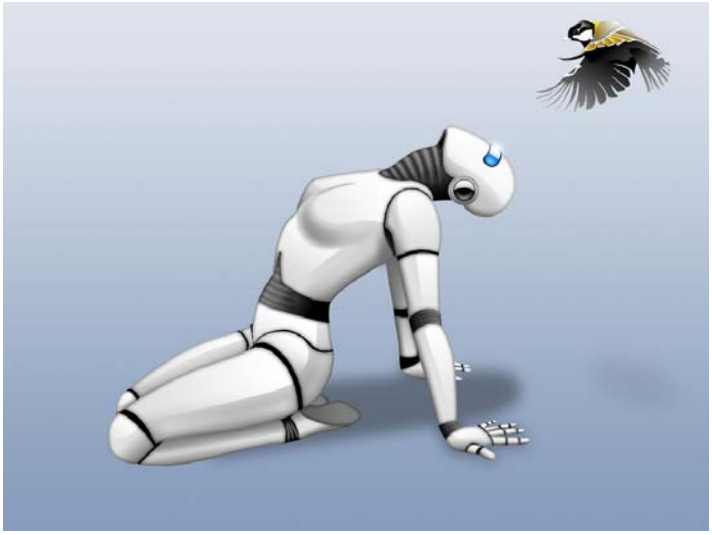
Hydraulics can work for (Bod-MA X3 hours) without overheating due to friction-induced heat and then require a ((Bod+MA) x10 minutes) cooling period of light activity or less for the heat build-up to dissipate.

Myomers (including advanced myomers) would work for (Bod -MA X5 hours) without overheating and then require a ((Bod+MA) X5 minutes) cooling period of light activity or less for the heat build-up to dissipate.

Gender of the body

Cybertechnology can give the body any shape, regardless of whatever reproductive organs it is equipped with (if any). This is solely a matter of preference. There are, generally, four types of bodies being produced, each usually fitted with a matching face:

- Male. Tends to look more athletic (in overall shape), with wide shoulders and slim hips.



- Female. While there are several models of female bodies that are athletic as well, an archetypical female body has hips wider than waist, and shoulders to match them.
- Hermaphroditic (slang: “herm”) is in between of male and female type, sharing some characteristics of both. Matching faces cause uninformed people to mistake a herm for either a male or female (usually the other). This is a rare type, usually available only for special request.
- Non-gender-specific (slang; “no-sex”) shuns any body shape characteristic for a gender, going for pure functionality. This type of body is quite common in utility borgs, also, non-humanoid models tend to use this shape.

Think of body gender as if it were blood groups: male and female are meant to fit the general population, males and females. Herm users are very, very rare, and these bodies do not fit to general population. A no-sex body is an equivalent of a 0 group – anyone can use it, even if it is not a perfect match.

Having sex

Sex drive is one of the most basic human instincts. Perhaps even the most basic. Of course, right training, or pharmaceutical means can suppress it. It can be replaced with electric stimulation of pleasure centres in the brain. Modern technology can do it all. But the effects are just not satisfactory. Lack of sex drive – and the lack of sexuality itself – is nearly as disrupting to human psyche as having the instinct, but no means to utilise it.

Fortunately, a FBC can be equipped with right organ replacements (Mr Studd or Midnite Lady), usually installed on a torso slot (there’s no technical obstacles to utilise a free space on any cyber body part, and in fact some cyborgs do it, although it looks pretty insane, and many cyberpsychiatrists take it as a sign of serious mental disorder).

Hooray, you’re able to do „it” again (and this is worth an overall reduction of HL by 5%).

The problem is getting a partner if you look like a waste bin, behave like a waste bin, and smell like a machine workshop. Of course fetishism can always help. And you can always look for a partner among these like you. Now, here the problem begins, as the old proverb states that „You need two to dance a tango”. RealSkinned, ExoDermed or TrueSkinned models are in the best situation here

– they can pass as humans, and thus – even if their potential partner knows that he/she is going to bed a 'borg – are pretty easily accepted (this works on their benefit, adding next 5% of overall humanity restored).

Super-chromed models only in shape do resemble humans, although they can be still made damn attractive. And whereas having sex with a chromed cyber-lady is not something I would call normal, and I would definitely feel funny doing so, I won't say a definite „no" if given such a proposition. You don't believe me? Then have a look on these old Hajime Sorayama's art. Does make an impression, huh? Plus, Cyberpunk world is a pretty weird place, and there are enough weirdoes, fetishists and people just looking for a new experience...

Plastic-covered models either fall into the same niche as SuperChromed, if they are well made, although those with a cheap plastic cover tend to be much less accepted, as they're neither super-stylish, nor human-like.

The most miserable category are armoured 'borgs. Ballistic armour just isn't made to be good-looking. They are made to stop attacks. Not to caress and be caressed. And since the overall appearance of combat borg is usually made to be intimidating, well... Would you ever consider making love with a two and a half-meter tall, gun toting waste bin? The more lucky of combat cyborgs have quick-change biopods and spare, „civilian" humanlike bodies for off-duty time. But the rest can only hope some weirdo would get interested in them, when they leave the barracks. And as usually they don't (would you let a gun-toting waste bin to go into the city 'cause he wants a leave?) they are forced to find partners among the other ones like them. Believe me; if you haven't heard the sound made by a pair of Dragoons having sex, you haven't heard anything. And you don't even want to know how this does look like.

a cheap motel, at midnight

Knirk! Whirr-irrr! WHAM! Knirk! WHAM! Knirk! WHAM!

Man: "Would'ya stop banging the trash cans together out there, people are tryin' to friggin' sleep in here!!"

in the neighbouring room, an alpha class male gets up from the bed, retracts his Studd-implant and pulls his boxers back up, while the female one stays in bed.

Alpha-man: You just wait here, honey, I'll go tell the nice young man next door to keep his mouth shut.

The male gets out the door

CRASH! Shuffle, Bump!

Alpha-man: "YOU KEEP YOUR MOUTH SHUT OR I'LL TIE YOUR SPINE ONTO A KNOT!"
Man: "Uh, okay, sir! Just don't hurt me!"

- Snowtiger

As for forming stable relationships, it goes along similar guidelines, although lasting relations with FBCs are not something common. And a long-lasting relation between two 'borgs is something particularly rare, although not completely unknown.

Having kids

Well, bad news here: even the most advanced 'borgs cannot bear nor father children. A hint: before you get „canned", visit a reproductory clinic and leave sample of your reproductive cells (semen or ovaries) in liquid nitrogen deep-freezing, so you could ask for them later. Artificial insemination does

the job when you are full metal. Of course, there's a need for a partner, and a (flesh) woman is needed to bear the child, but these are problems that can be overcome.

Of course, you can always go for cloning, using one of your brain cells as a source, and even use genetic recombination technique to mix your genes with genes of another person, thus allowing even two FBCs to have a baby.

Nevertheless, keep in mind that in many countries there are regulations forbidding FBCs to have kids, either their own, or adopted (much like in late 20th century it was about homosexual couples).

Children as 'borgs

Since we are at the kids already… What if we put a minor in a FBC shell? Apart from the easy to imagine trouble when your typical, hyperactive teenager goes full-metal?

First, human children are adaptable. Unbelievably adaptable, if not outright frighteningly able to tune to the situation encountered. And the younger they are the better for them. Since they will grow in the new situation, they'll soon start accepting it as normal… no matter how far from normality would it be. The history gives us numerous examples – kids growing up during a war will perceive a war as a natural state of things. Hey, it's out there. Everyday. They don't know another life.

"Home of the Brave" sourcebook gives us some rules for applying cyberware to minors. According to HotB, any cyberware applied to a kid of age 11 or younger would have HL divided by 3. From the age of 12 to 15, HL will be halved. From age 16 up, apply full HL, as such characters are considered adult in the rules of CP2020 (I would argue with that, but since it's an, errr… minor issue, let's leave it). Of course there's a long list of adverse effects most cyberware classes would have on a kid's biology and growth.

But we're talking about FBC here. They do not grow (well, the brains do). They lack most of their glands (required hormones are applied to the biopod as needed). They would avoid most – if not all – these problems.

What if we take a baby and turn it into a 'borg?

Anne McCaffrey depicts such a problem in her "Brainship" series. Although her "Armored", pilots of the brainships are – in CheapFBC terms – BrainJar systems hardwired into spaceships, the problems are well-depicted. Her Armored ones are mostly babies born in disfigured bodies, saved from death by converting them into "FBC" (hey, they aren't even humanoid! These are "columns", armored sarcophagi containing a small, surgically adapted body with huge head and brain, but brainships tend to refer to their ships as their "bodies")), then raised in a special government facility, and rigorously trained for their intended roles.

Naturally, it costs a fortune.

But the effecting personalities are… not exactly human. I mean, they seem to have a good deal of Empathy, just their ways of thinking and perception of humans is quite different from what we are used to. Brainships are aware of their limitations – but so are of the limitations of humans. Yet they can be trusted with diplomacy, human relief and even military missions. I suppose it's a matter of the way in which they were raised up, under a constant supervision of wary psychologists and pedagogues. So, I suppose it would be possible in Cyberpunk as well. You could raise borg-children to be anything you want. Caring, responsible

beings that wouldn't harm a fly… or heartless, cold-blooded killers.

In fact, just as with "real" children. The point is – they wouldn't lose Humanity. It's rather a matter of training what kind of humanity – if any – would they develop.

But let's deal with the mechanical side. A kid 'borg would need maintenance much more often than an adult, and then – applied with greater care. Just the hormonal alterations are going to give the caretaker a hard time. Then, I suppose most – if not all – countries, allowing kids to go True Metal, would require a constant psychological supervision over the minor by a fully qualified specialist. It is also likely that a child would have software limiters put on its body, should it ever have to deal with other children. After all, when you're young, many disputes can be possibly settled with fists. Kids do not generally have the strength to seriously harm (an occasional black eye doesn't count) each other (although it isn't true any longer for teenagers), but if you are a 'borg, things can get nasty. So probably they would have their physical strength limited to a value typical for a child of that age. To keep on par, the body would have to be periodically swapped for a bigger model. The point is to accommodating the growing child brain, rather than the psychological aspect – a 10-year-old should be as big as a 10-year-old. Not more and not less. I gave a thought to bodies that would contain extendable options to be modified as the child matures, but it would be only a partial solution. And although one could think about a shapechanging / nano-modified shell, I find it to be more trouble than it's worth.

It is also possible that there could be government, corporate or the like facilities, where such borg-kids would be trained. From ones truly adapted into society, to totally obedient metalhead stormtroopers for some forsaken cause. Some GM would like to use this option to flood the world with FBC *yenitseri*, but keep in mind that this is a process requiring several years of training and indoctrination, not to mention expensive maintenance, to produce even a handful such personalities. So I doubt whether it would ever become popular – even in the grimiest, most totalitarian regimes.

Please also keep in mind the problem of technological advance. Whereas a 'borg doesn't have to wait about 20 years for its body to reach top condition, it doesn't learn that much faster than a normal human. And since borgs weren't invented before year 2000 (and I suppose the first, crude ones were created about 2010), you need several years. First, to get the technology needed to make the technology of transplanting baby brains into biopods available. Then, to make it reliably safe. Then, to find someone who would get the idea. Then, again, years needed for training. If you want a child borg character to appear in year 2020 or close to this date, keep in mind he would be pretty young. Simply before it wasn't possible to create them earlier…

There's one more thing worth mentioning as we speak of 'borg children. The shells themselves. A child is inconspicuous. A child can operate in well-populated area without drawing attention. This is why many intelligence agencies – both governmental and corporate – do often equip their 'borg agents with child shells, either modified civilian ones or custom made "mini-Ghosts" that pack a wallop in a kid silhouette (Japanese do excel in such, due to long experience in creating "cute" effect and significant achievements in miniaturization). Of course, even the most souped-up "kid-borg" isn't going to be as high on stats as a full-sized one could be. The number of options is also quite limited. But such a 'borg isn't meant to fight, just to observe and call for reinforcements if necessary, and with stats high enough, as well as the right optional (and carried) equipment they're likely to hold their own until cavalry arrives.

Several police departments have been using child shells, crewed by experienced officers, to round up pedophiles, kidnappers, or for invigilation. Covert agents in kid shells are also useful in penetrating youth gangs and underage criminal activity.

Taking damage

Borgs don't feel pain, do they?

The answer - as stated below - is "no, they don't". A borg can disconnect the pain receptor interface. He will feel hits, pressure, and so on, but it wouldn't cause pain.

However, it doesn't mean the borg can take hits without adverse effects until it shuts down. No. If you're a fleshie, wounds can incapacitate you because of pain, shock, and blood loss. But even if you're really hard (or simply drugged), tough-as-nails, and you laugh at pain, you will be

affected with wounds. Shattered muscles can't flex very well. Cut strings will immobilize whole limbs. Cut nerves won't transmit impulses further.

And the same is with 'borgs. Bullets and blades do penetrate borg's hide, but in reality they don't do abstract "damage points". They sever neural transmission wires, cut the metal/plastic/composite strings and shatter hydraulic pistons / myomar muscles. Which means the borg can't use the damaged body parts as well as if they weren't damaged... The system provides us with the threshold point where a cyberlimb becomes non-operational – 2/3 of its total SDP value. However, it's not like it works perfect until that point, and shuts down after it has been reached. The efficiency loss is a gradual process.

To make it easier, think of it as an equivalent to human wound levels. Simply, there are more "wound boxes" on a cybernetic body part and there are no such things as pain, shock, and blood loss (however, put a damaged cyberlimb in water, and a shortcut is quite likely…).

How do we determine "wound" levels?
We do divide the "still working" SDP into 3 parts.
Part one (up to 1/3 "working" SDP lost) - "warning!". No adverse effects - backup lines do compensate the damage. Equivalent to a light wound on a human being.
Part two (up to 2/3 "working" SDP lost) - "malfunction...". -1 to all actions with this limb (not -2, since pain is not a factor here). Equivalent to a serious wound.
Part three: (between 2/3 and "disabled") - "system critical". 50% reduction of all the stats for tasks performed with this body part. Equivalent to a critical wound.
Part four: "disabled" level achieved - "system shutdown..." – equivalent to a mortal wound.

Note 1: if a torso was damaged, this applies to all actions.

Note 2: if head was damaged, sensors (eyes, ears, radar, etc) placed there will be affected.

Fractions are rounded up - first in "warning", than in "critical" levels, if needed - in favor of the cyborg.

- Mikael van Atta

Example: your standard-issue cyberarm SDP 20/30. So, we have the "disabled" level made at 20 (21 damage and you have it disabled).
Divide the remaining 20 by 3 = 6,66(etc). Not good... but round up, and we have 7 "scratch", 7 "damaged" and 6 "critical" points of SDP. Clear?

Full 'borgs and electricity

Typical damage is not a problem any longer, but what happens when a full 'borg gets zapped with a taser? This is a tricky question. On the one hand, tasers were invented to bring down humans, not machines. On the other hand, electricity is a pretty good way of damaging electronics. However, it would be far too easy to knock down a combat 'borg worth a whole heap of money with a 10eb zap-stick...

Pain Editor
'Borgs do not mount pain editors - they don't need any. Simply, the same way you can turn off pain receptors in your cyberarm (allowing you to put it into campfire and pick up that sausage you've just dropped), a full 'borg can do with any part of his body. Of course, remember that "street 'borgs", that are just human torsos & heads closed in armoured shells, aren't so lucky.

- senior officer Mikael van Atta

And tasers are not the only form of electricity a borg can face.

As (mostly) mechanical beings, 'borgs cannot be stunned – they don't fall into shock, they can turn their pain receptors off, and these few internal organs they still do possess are well-protected against concussion. But still, there is a lot of mechanical "nerves" and "muscles" that tend to conduct electricity exceptionally well. Thus, following rules do apply to 'borgs (and humans with cyberlimbs affected by electricity):

- "killing" electric attacks, like a hit from Volt Pistol or putting fingers into a wall socket: even if a 'borg is armored, it doesn't help (special, anti-electricity insulation would be more useful), although electricity does only half of the damage rolled. That's because on live humans electricity causes burns and can cause heart attack, whereas borgs lack heart, and most damage is to resistors and safety fuses, not to the limb's superstructure itself (thus SDP loss is much smaller than the damage roll would indicate). There's also no need for a stun save, although adverse effects of a stun are comparable to taser's.
- "stunning" electricity attacks, like taser or electrified police nightstick: no need for a stun save, but negative modifiers (-2 per hit, usually – as in most taser models description) are applied for the same duration as for a human. Electric attack

FID Tasers
If you're using the Flipper Is Dead's Taser rules (which are IMHO way better than the standard), simply use them as they are: roll Body save (plus EMP rating) versus the tasrer's Stun rating. It the borg didn't passed the test, all points it didn't made it by are applied as a negative modifier.

- Mike van Atta

causes a lot of “fuzz” on ‘borg’s artificial nerves, so, whereas it is not stunned, it loses reaction speed, agility, and overall effectiveness. Several taser hits can subdue even a ‘borg – jamming his nerves well enough to prevent him from taking any action. However, this would be effective only for a short time.

EMP-hardened borgs can reduce negative modifier by the value of their EMP shielding, on one-to-one basis (thus, a grade 2 EMP protection makes the ‘borg immune to most commercially available tasers, as they do cause only -2 modifier).

Frying FBC netrunners

Well, that's a problem, at least as long as you're trying to fry one. Since they're more machine than men, some forms of anti-personnel attacks are useless against them. For example, a Hellhound program causes damage (2d10) by stopping one's hear (artificially induced heart attack). But, as an FBC has no heart, he's immune to such tricks.

On the other hand, if you could hit a borg with dedicated anti-system software, like Flatline program, it could be deadly - imagine shutting down one's life-support system.

I suppose this should lead into more GitS - styled combat... but his is to be further investigated...

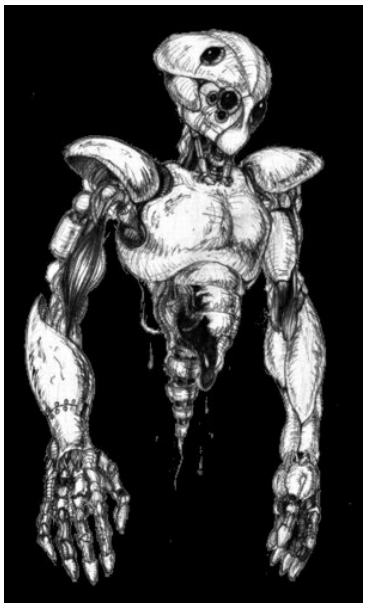
-Mike van Atta

Someone could ask why the biopod isn’t affected as well. The answer is – it partially is. However, the biopod is a really safe box, and it’s additionally insulated. Thus, the shock it takes is counted into the negative modifiers described above.

Dying:

Sure, if we blast a ‘borg into myriad pieces, it will do, but what about more conventional methods - bullets and blades?

The head contains the brain and kind of last-ditch rescue system. If the head is destroyed - well, welcome to the heaven where chromed angels sing to the glory of the chromed Lord. You're dead. But if torso is destroyed, or head separated from it, there's still a chance of survival. So your rescue system comes into action - saving (by instant freezing and drug / nanotech application) your brain. Roll 1d10 to indicate your death state, and call TraumaTeam (in late settings they should be equipped to save borgs as well as fleshies), increasing Death State in normal way. And when the specialists come, they use right equipment to revive your brain (or find it frozen into a stone and useless). After that (if you're still alive, that is) you can begin a long and expensive process of getting and adjusting new body. In the meantime, you need as much time to heal as a normal human would, and you could have lost some memories (as the neurones in your brain were destroyed by ice), including some skill levels (GM’s call).



Of course, you can also die because of your power sources running out (but this takes quite a time) and not being able to power your life-support system. If you can’t breath (usually because you’re in space or underwater), you’re dead in 5-10 minutes after your time for another breath comes (a hint – breath as often as you could, so you’ll have an 8-hour backup). You can starve yourself to death by not changing food container (this takes about 3 days). Then, of course you can electrocute yourself or fall the prey of EMP. Both these things first of all turn your life support off, thus leaving you 5-10 minutes air reserve. As your sensors usually go dead as well, absolute sensory deprivation can make you crazy in just a few minutes. Complete sensory deprivation is one of the few things ‘borgs are really afraid of.

De-borging

And what if you have changed your mind and don’t want to be a ‘borg any longer? Yes, I know – when pigs fly. But let’s pretend, okay? You’d have several options.

If you want immortality, you may download your mind into the Net, as described in Rache Bartmoss Brainware Blowout. This problem is well-covered there.

Switching back into human form – borgs call it “fleshing out” – is much more difficult. It’s up to GM then whether such means are available in his campaign at all.

The first method, surgical, is technologically simpler. You need a fresh body your brain will be transplanted to. Here’s where the simplicity ends: you’ll need a complete cloned body. That is so, because complete bodies are a rare offer from body banks. Besides, you need the best genetic match possible if you don’t want to risk transplant rejection. And since it’s your brain to be rejected, there’s nothing to make fun of. Of course, the body doesn’t have to be exactly like your original one – some minor modifications, like cybernetics implantation, may be already done to it. Birth defects overcame,

genetically-transferred illnesses neutralized, and so on. As for Humanity cost, treat it as a “bodyswap”, although a Mk. 1 human body will have no HL on itself. Thus the only HL experienced will be due to the change itself. Still, the surgery is a risky one, requiring a double Critical level. Personally, I’d rate it as a Third Generation tech.

The second method requires mind transfer technology. You scan your mind and transfer it into a fresh, cloned body with a blank mind. It is described (with satisfying set of detail) in the Hardwired sourcebook. Whereas the rules for Hardwired state such mind-scans cannot be stored for prolonged periods, the following book by Walter Jon Williams (“Voice of a Whirlwind”) points out clearly that such records can be kept safe for whole decades. Of course, either way there’s a risk of losing some parts of memory and obtaining unpleasant mental problems. If you want my opinion, that would be well beyond even the Third Generation tech.

Here you’ll find the Blackhammer Archive’s text on cloning. The site itself is one of the best Cyberpunk 2020 repositories I know, rivaling the Datafortress.

But, of course, your campaign could be stretching so far to include even such advanced technologies.

Anyway, if you want to know a few things about cloning in Cyberpunk, the Blackhammer’s Cyberpunk Project has the best material on that I’ve ever seen. And yes, they cover brain transplants.

What the ‘borgs do in spare time

Borg organizations

By Companero

There are a relatively small number of borgs, most of borg groups are relatively small. The Combine is the largest, while supra thought is common and the faceless and collectives can both claim a couple of thousand adherents. The others are limited to smaller covens scattered across the globe, or individual adherents. Still, do not consider these to be homogenous, as like not all the racist groups are one, even if they do share the same (or similar) ideology.

Political:

Borg supremacists:

This is the earliest and most infamous Borg organization. 'Metal is good, meat is obsolete' is the simplest form of supra philosophy, and probably as far as most of them get. Those philosophical types who run the movement have a more solid foundation, based on cyberpsychosis.

> *'Cyberpsychosis, as seen by meat doctors, is a defect, an - as they say - psychosis. I say this is Wrong! I say it is merely the next state of being! I say it is the hardening of the obsolete, indecisive human spirit into something solid, something strong enough to break the old world, and bring about the new, stronger world!'* - attributed to the 'Steel Soul', 20 minutes after the bombing of a anti-metal meeting in a church in Houston, February 2023.
>
> *- Companero*

Supra political cells have varying philosophies and ideals, and most have no explicit programme of violence. Some leave human society and form colonies in the desert, but like all borg communities these tend to be very small. Most groups console themselves by trying to encourage borgs in corporate servitude to revolt against their employers, and supra borgs come in all models, most without a dedicated cell, rather a pile of downloaded literature and a grudge.

The Supras have links to most other borg groups, to varying degrees. They claim kinship with the Immortals and the Builders, but the former are in reality victims of self loathing and the latter don't care about politics. The faceless and the collective are regarded as just manifestations of borg superiority, albeit weird ones. Supra leaders loathe the Combine for remaining within the meat political arena, seeking to transcend it completely, although many members share affiliation.

Combine:

The Combine is an early political association of borgs fighting corporate servitude. The Combine sees borgs as another oppressed minority, albeit a very, very small one, divided against itself. Inspired by old left thought, they campaign for Borg employment rights and try to expose corporations that 'abuse' borgs. The Combine is essentially a union, made more difficult because the what exactly 'abuse' constitutes is a difficult question for borgs, and the very nature of the creation of most 'working' borgs implies their employer has a stake. Combine borgs can be of any type, although military types are rarest.

The Combine usually operates within human politics, with a lot of meat support. However, this very act causes many more political motivated borgs to spurn them, including the supras, who believe that borgs are superior and should take, not just another group. The Combine are ignored by the Faceless and Collective, although both support its aims of freeing borgs from corporate indenture, and many Builders could not carry out their actions without Combine help in setting up new lives first. The Combine dislikes the Immortals intensely, because they feel that their actions undermine their political program by causing anti borg feeling. All this said, a large number of borgs with no interest in philosophy join the combine, and it is one of the largest groups.

Psychological:

Faceless:

While most borg groups formed after the borgs came into being, many faceless chose to become borgs after joining this group, which composes only a few cells in a few cities. Faceless philosophy, devised in a series of texts by early borg, AI and ghost theorists is very complicated, but it comes down to a number of points:

- There is freedom in masks (although that is far simpler an explanation than they would wish for).
- Manufacturing of objects creates purity, free from kinks and mistakes that an individual would make. Individuality is flawed, like a hand made pot is flawed compared to a manufactured one.
- Society is a machine with flawed, individual parts that do not fit together as they should. Harmony within a given society works when the machine is functioning properly.
- Modularity works: for a machine to be effective and repairable the parts must be interchangeable and simple. Society is a machine, and thus the same concepts apply.

Essentially, faceless covens consist of a borgs with completely stock, unmodified bodies. In some covens all models are the same, in other covens, different ones are used by different members. It is often impossible to tell a devotee of faceless philosophy from other borgs. Specialized shapes are most common. Many faceless tend to be individual (wrong word...) borgs working with companies to make the 'machine' work faster, and many faceless do not agitate against indenture. The faceless believe that when all people have attained a metal body of certain stock types specialized in certain roles, society will function as a perfect machine, free from distress or agitation, capable of creating anything new.

The faceless always use stock borgs, often using the same mechanical vocal pattern.

Faceless philosophy shares elements of supra thought, and the two groups are connected. Faceless tend to ignore the Combine, but many graduate to the Collective, which is a newer group stealing members from older faceless cells. The Builders stand in complete opposition to Faceless thought with their reckless, unspecialized individuality, while the Immortals are simply juvenile, somehow not adapting to their superior form. The faceless are a small sect in most places, although many borgs are aware of the philosophy, and some meatheads aspire to become faceless borgs, searching for discipline and place in the cyberpunk world. Faceless memes are subtly encouraged by the corporations, reasoning (wrongly) that it serves their aims...

Immortals:

No-one knows how long a borg lives. They don't catch disease. They are armored against trauma that would kill a man. They can avoid pain. A borg can walk away from a car crash without any trouble. Imagine the kind of extreme sports these guys can get away with...

The Immortals are a group of borgs, mostly independent types, corporate runaways and so on, who's feelings of invincibility lead them into a series of nihilistic activities - partly related to borg feelings: unable to feel pain in the traditional sense, and with feelings suppressed by the lack of chemical stimulation, it takes a lot to make them feel anything - and a lot of them want those feelings back again, so they do whatever they can to feel a rush...

Street races are the most famous and spectacular Immortal activity, in the city or out in the desert, often resulting in spectacular crashes. Individual Immortal covens engage in even crazier activities, often lethal for bystanders. Many are just a step away from cyber-psychosis, and murder often follows. Others gain their kicks through more altruistic means - firefighting borgs often join the immortals, as do rescue workers and others who put themselves into extreme danger that only they can survive.

Immortal borgs tend towards heavier models, with a focus on amour plating. Human forms are the norm, because it allows them to operate in most machinery and gain the widest selection of experience within the human sphere. Immortals are scattered through the borg community, with major cells in orbit and in major urban areas.

The Immortals tend to be fairly individualistic and in many cases apolitical, spurning the Combine. The Collective too, melding consciousness', seems anathema to a group who are effectively trying to regain their feelings. The builders appear tools to the Immortals, who are confused by their desire to leave their humanity behind completely. The faceless evoke similar feelings, although the two groups rarely come into contact.

The Immortals have a strange relationship with the Borg Supremacists - many covens are interconnected with Supra cells, and many Immortals claim affiliation with the supra groups, claiming that their ability to walk away from what would kill a man makes them superior. However, at the very core of the movement is a desire to return to human feelings by any means, and while neither side realizes it, their aims are mutually opposed at the deepest level.

Technical:

Collective:

The Collective are a group who took borghood as a method of combining their personalities completely with others. They live and work in total connection, able to experience anything another borg feels through the Link, to form a collective consciousness.

The link grew out of a module used by emergency borgs as a co-ordination tool, and the machine is very simple to install. Small Collectives are common within corporations and military units. Originally these systems were used to share thoughts and experiences, but in the case of The Collective, the modifications went further than they did in most groups.

The Collective is not merely an experience sharing group, it is something else entirely. Using a modification program, collective borgs merge their personalities into a whole, with one voice. Individual consciousness is essentially lost, but incorporated into the whole. The Collective Consciousness changes a little with each new convert. Each borg's individual mental capacity is used by the Collective Consciousness to increase its own mental power. The Collective Consciousness uses each borg to its own ends.

There are some things that cause concern to those outside the collective. Many collective borgs have taken the upgrade without those around knowing, and carry out their lives as before, except serving the Consciousness (which doesn't appear to have any explicit plans as yet, beyond perhaps incorporating smaller, less conscious collectives). And even while it has only a few hundred members now, some people (those who know about the real truth of the largest group) think that it is already tending towards cyberpsychosis...

The smaller collectives come from all groups of borgs - there are immortal collectives, supra collectives, builder collectives... the larger consciousness seems to regard supras as potential if unpredictable allies, the faceless as a group of potential converts, the Immortals as self loathing failures to be avoided, and every other borg as someone to incorporate if possible. Right now, it seems to be mostly concerned with experience and expanding its horizons. Both groups can be of any model.

Builders:

The builders are a small group of independent borgs with means. Believing that they have left behind their humanity already, they see no reason to continue to appear human. A biopod does not need a human form body to operate a machine it is plugged into, so why should there be a human form body at all? Newer members start by changing the appearance of their frame to take after old golems, baroque steampunk apparitions, changing at will and always creating newer ideas until the human form is left behind forever...

The builders are one of the newest and best sources of innovation in the borg community. They change their bodies every way. Starting with Golems, they graduate onto creating new body forms, tails, tripod and quadruped bodies, multiple arms and legs, even spider legs and outlandish forms. They create new frames, while builder covens pool resources to create such objects with CADAM machines and so on. They have run across problems - even upgraded, the human mind can only operate so many limbs at once, and while programs can be created to compensate, this is a stumbling block on the way to creating completely new forms. Other problems have also been found, but nothing halts builder enthusiasm.

Builders share information in much the same way as any other enthusiastic techie, over forums and at small conventions. Famous builders tend to be idolized within the community for their newest body form, while their meat neighbors look on in horror at their outlandish visage. The continual changing of body can lead to cyberpsychosis very quickly in some cases, and some builders are mentally unbalanced. The only commonality among builder frames is detachable biopods. Most builders have financial means available, and there are few of them, usually rich eccentrics.

The builders have little contact with the Combine. Some form collectives but The Collective itself spurns them. The builders embrace their borg from rather than rejecting it, so the immortals tend to be ignored or pitied, although a few builders test their frames in Immortal contests. Essentially Builder culture is an outgrowth of Suprematism, but the builders consider their exploits to be personal exploration rather than to a political purpose. The builders in general do not like the faceless at all - after all, borgs are still individuals, not just the cog in some machine...

The Elementals

The Elementals, never a big organization, became full borg to get back to nature.
Seriously. I kid you not.

The idea goes like this - borgs are created of metal, which is one of the elements of the earth. By returning to metal, one can return to the earth. Lists of the theological and philosophical inconsistencies inherent in that can be found at

www.elementaltheologicalandphilosophicalinconsistancies.tvcnet [2]

How this manifests itself is in a group of borgs who have retreated into the wastelands. Most of them sport modified borgs with piezoelectric generators placed wherever possible, and are masters of power conservation. They are also hermits by tendency. Look up Epicureanism, and consider the whole of nature to be the garden...

Beyond this vague hedonism of thought and back to nature philosophy, there isn't much to connect individual Elementals. Some of them take up vigilantism against corporations like Petrochem, and at least one Borg out in the Bayou has created a major urban legend around himself, appearing out of the swamp like the Thing from the Black Lagoon, covered in vines and plant growth, and ripping apart an illegal hunting party with his bare hands...

Anti-Borg Organizations:

(*Authors note:* Most anti-borg organizations are also anti cyberware organizations, but not necessarily visa versa - in fact FBCs face less stigma than the very heavily cybered, since groups like Mothers Against Consumer Eugenics aren't really sure what the hell to make of borgs, especially indentured ones.

The problem is, MACE and related groups aside, most anti-cyberware groups fall into the category of religious (and probably religious) wackos. This author has no intention of going into the theological justification that the Evangelical Church of South Georgia had for persecuting borgs before getting their just desserts, any more than I intend to go into the reasons of finance and continued survival-with-guns-pointed-at-their-heads that the Islamic Council of the UAE declared that the Emir of Abu Dhabi's decision to go Immortal was entirely theologically acceptable and in line with Sharia. So the anti-borg organization section will take on a different character to the Borg group.)

Do ‘borgs dream of electric angels?

FBC and religion

Author’s note: religion is a difficult and delicate issue, and shouldn’t be treated lightly. What is written below is basically a speculation, based on author’s ideas (and a few other sources). It is by no means complete and exhaustive study, and it’s absolutely not meant to insult anyone’s religious beliefs.

Although religion is a problem often neglected in Cyberpunk, it is by no means insignificant. It is far too important to numerous people in the world to be considered not significant... even in 2020-era. Sure, one can argue that FBC are a good evidence for atheists - we can do what was once thought to be available to the Maker only, so there is no Maker (call him Jesus, Brahma, Allah, Jehovah, or simply God). *Vivat rationalism*. But on the other hand, what makes the difference between an FBC (especially a heavily augmented one) and a humanoid robot? Do AI have souls? What happens to your ghost when you die?

[2] You may notice the server is located in some flooded part of the TVC, somewhere far away in Companero’s private Cyberpunk universe. We are truly sorry for any connection problems that may happen thus.

What exactly IS a ghost? (remember Major's problems from GitS?).

We can't say. We do not know.

However, institutionalized religion would have to answer these questions. It couldn't pretend that such things do not exist… although quite a few are likely to say that "It ain't in the holy books, therefore it's a work of the Evil One". You have to remember that most religions are very traditionalistic, if not outright reactive. On the other hand, they have to change. The world around does change and the followers do so as well. Thus, the doctrine can either follow the changes, and decide which are acceptable, and which have to be banned from a theological point of view, or begin loosing followers. Because people are going to do things, that aren't in the holy texts and if you point them out as sinners, some of the will simply abandon the religion. Religions (mostly) no longer have the power to dictate to their constituents what they can or cannot do, and if a large enough portion of The People want to get 'borged up, The Church is going to have to go with it eventually. Kicking and screaming, maybe, but they'll go. Of course, there will be enormous space for splinter churches and cyber-bigots around, which leads to some possibilities for religious wars and riots against Satan's spawn, but by and large, mainstream religions will go with it eventually. Sure, it's pretty likely that some sects of major religions will follow different paths here, but again, we can't predict this.

As far as it goes for cybernetics and FBC, there are two typical points of view, both somewhat extreme:

- Conservative: we were created to the Maker's likelihood, therefore we are as perfect as possible, and works of the Maker. Any fiddling with it is usurping Maker's power, and a sign of sinful pride. This is unacceptable.
- Liberal: true, we are Maker's creations. However, he had given us reason as well, right? And the reason is to be used. Cybernetics are creations of this reason, and meant to improve our lives. Thus, there's nothing wrong in using them – if the Maker would not approve it, he'd never let us invent such things.

In fact, most religious officials fit somewhere between these two statements.

See, there's pretty simple logic behind this: cybernetics is, first of all, a form of prosthetics. Sure, prosthetic teeth aren't exactly the same level of technology… But only an extremely hardcore traditionalist would oppose them. Then, why oppose contact lenses? And then there come more advanced and invasive prosthetics. Why use a fake leg, if cybernetic prosthetics are available? They are fully functional replacements… And so on. So, every faction within a religion has to mark the border on its own. Since it isn't all that obvious.

How particular religions could react to 'borgs?

Islam: Will use borgs as further proof of the unholy decadence of the west (lets face it, unless their religion changes drastically they will still be in the 12th century), and so launch a new Jihad. However, there's already an excellent passage on Islam and cybernetics, and it doesn't make these two automatically opposed. You can find it in the When Gravity Fails sourcebook.

Catholicism/Anglicanism: Will originally call it unholy and the spawn of the devil, but will one day induct a borg pope/archbishop and so make it holy writ that borgs can go to heaven too. Whereas many traditionalists were shouting that cyborgising is against the will of God, the official position of the Catholic Church was first that cybernetics are allowed for prosthetic reasons only, then, after the New Catholic Reformation, it became just allowed. However, going cyber is still considered a very dangerous to your soul, and many priests treat it as a sin. Going FBC was first forbidden to Christians, as after such operation you practically cease to exist. As you're doing this of your own will, that meant suicide (which is a deadly sin according to Christianity). Now, in the very early 2020s, first 'borgs have been recognized to (still) have souls (see Firestorm: Stormfront, there's an NPC Aquarius 'borg with such event meant in his history).

New religions:

A few interesting religions of the 2020 era that might be somewhat popular among 'borgs:

DDI aka Digital Divinity, Inc - hard to tell whether it's more a church, or a corporation. Basic concept: the Net is the first creation of Humanity that is infinite. Thus, it is a proof of the Humanity's godhood. Interfacing with the net allows the followers to experience nirvana, accepting the infinity and becoming part with it. (from *Wildisde*)

Realism - the world is nothing but a huge, perfect virtual reality simulation (Matrix?). Who had created it and for what purpose, remains unknown, but probably these were gods, intending to pass the time. (from *Wildside*)

Malism - the world is evil, the people are sinners, and there's no way to make it any better. Pray for Armageddon, for it's the only way to end this misery. (from *Wildside*)

The Immortal Pyramid - humans are nothing but particularly cunning animals. There is no soul, and no afterlife. If you die, you cease to exist at all. Thus, do whatever possible to avoid dying. Use whatever protective measures you can. If possible, download your personality into the Net... (from *Home of the Brave*)

- Mikael van Atta

Uniting/Presbyterian /Pentecostal: Will embrace the new technology as "a gift from God" because they will use it to heighten their emotions and so get more of a "buzz" out of church.

Baptists: Will be divided, and never agree with anyone else, or indeed each other, and each church will go their separate ways, as they do, some accepting borgs to preach, others banishing them from their churches and claiming there is no place in heaven for one such as them.

Buddhists: Won't care, nothing really exists anyway.

Atheists: Will hail it as further proof that god doesn't exist, and then proclaim the technology to BE god, so contradicting themselves.

Agnostics: Still won't know if it is really real or is it all just a dream....

Jehovah's Witness: Will still be door knocking, however there will be new signs on fences "JW's beware: Uncontrolled BORG inside programmed to kill".

Mormons: Will discover a new "golden template" that expressly states that borgs are some other mysterious lost tribe of Jews and that Jesus was really a borg and so all borgs really are Mormons, gods incarnate on earth.

Jattenhand

Borg philosophy

"Learn to accept." – Rick

So what is this "Jattenhand"?

The founder of Jattenhand, Rick Denning, was a young Parkour practitioner, turned 'borg in an effect of unrelated road accident.

He was a student of the Stockholm University as well. Thus, he became one of the most important subjects of the university-run research program in psychology, and methods of diagnosing, suppressing and counteracting cyberpsychosis ('borgosis wasn't recognized as a separate disorder back then). Sure, the program was state-funded, and there were corporate grants as well, but that's not the point.

One of the psychologists was a Zen practitioner as well, and he insisted on implementing Zen philosophy into the counseling, as a possible way to teach the subjects the acceptance of their new self. In this particular case, it worked. Zen meditation and acceptance, as well as respect for every living thing got mixed with the "free move, free thought" philosophy lying behind advanced Parkour. The effect was early Jattenhand, a way incorporating Parkour as improvised kata's, Zazen meditation for mental stability, and 'borg superhuman performance to make the impossible into reality.

Rick on borgs and fleshies

"Just like a caterpillars hatch into butterflies, we become borgs.
But not all caterpillars hatch into butterflies, nor do all humans become borgs.
But all caterpillars that survive hatch into something.
But none of these creatures has a reason to hate the caterpillar, for they too were caterpillar once.
And just like they hatched into something else, so will the rest."

- Mike van Atta

What's it all about?

Jattenhand is a philosophy about adapting and accepting to

being a borg. About using the speed, precision and strength that your new body grants you. Not only in combat but in everyday situations. When your eating breakfast (if you do that) driving your car or helping your wife with the cleaning. It's about realizing and accepting that your not human anymore, and using the abilities of your cyborg body to there fullest extent.

There are several aspects to Jattenhand, the bigger it is, the more time is spent teaching it.

Movement: the biggest and most basic aspect, it's the aspect that really shows of its parkour roots. It about doing parkour, borg style. jumping between rooftops, performing aerial maneuvers that not even a circus performer would think of and other things that would make your average parkour performer yellow with envy. Every Jattenhand user loves this, running across the city, finding new, unexplored routes and just having a blast, either alone or with friends and fellow users.

Rick on "unenlightened" 'borgs:
"They are fighting themselves. They're no longer human, they pretend to be, and yet hate it at the same moment. And then they wonder why humans do not trust them. Some of them do better in this fight, some - and this is tragic - do not do well.
A fight with yourself is a fight you can't truly win, for if you're victorious, then you're the defeated as well.
Abandon this path of self-mutilation, and accept what you are. Do not mistake your imaginations for the reality."

On Gemini conversions:
"We have changed ourselves. We have made ourselves to fit the environments in which we do live and work.
Some of us do work mainly among humans, so they do chose a human shape to fit this environment. However, becoming a gemini is a two-edged blade. They are not struggling against the memoirs of their humanity as strongly as non-Geminis, but for this reason they don't question themselves.
A Gemini is an easy way to accept your change, but a difficult one to accept you're not a human any longer. In other words, it makes your first step on the path of Jattenhand easier, but the following one much harder."
- Mike van Atta

Combat: The smallest aspect, this is a fighting style that incorporates capoeira, bok pai, fu chiao pai and several other arts. The preferred way of attack is hit n run. Where the user never stops moving, jumping between enemies and using the environment to his advantage. If used in a more classical way, it looks like a multi style art, with smooth stance changes, sweeping attacks and handstands. Using the environment is still a major tactic.

JH Combat
Key attacks:
strike 2
punch 2
kick 2
disarm 0
sweep 3
block 1
dodge 4
grapple 0
throw 0
hold 0
choke 0
escape 4
ram 3
- Mort

Meditation and philosophy: This aspect is the one which clearly shows the Zen part of Jattenhand. Philosophical discussion with Rick, meditation in unorthodox places and lots of plain thinking. The discussions are done both in groups and one on one, often at the lounge of the "school". The meditation is often performed in unusual ways, such as in the net or while running.

So where do you learn it?

In a small bar in night city, owned by Rick, named the Bucket o Bolt. The bar's main clientele are borgs, with opened minded parkour users a close second. The second floor serves as apartments for Rick and JH users and student who don't have there own place. The basement serves as the hangout for the Jh and local parkour users. The basement features a gym (mostly used by fleshies. The borgs only use it for fun, or testing new hardware) a small room used for installing and tuning cyberware and various form of entertainment. However, very little actual training in Jattenhand is done here; it mostly serves as a meeting place.

Votum Separatum on skills:
Since I do use quite a different rules for Martial Arts, my call is that you'd actually need a few more skills for JH to work: JH combat, Athletics, Stamina (yes, even on a 'borg), Meditation, and JH philosophy – each of them on the same level as others, except for Stamina, which could be half of that level.
But that's just me.
- Mike van Atta

I wanna learn!

Well, you get little choice in the matter, since Rick handpicks his students. He often chooses parkour performers that recently got a FBC. If you do get picked, you're in for a bumpy ride. Not only will you struggle with learning the moves, but you will be forced to give up your very humanity. The end result is something that is not quite human.

In game terms you will have to learn two skills, or aspects. JHcombat and JHmovement. Jhcombat is, for all extent and purpose, a standard martial art. This is knowing how to use your body in combat.

Jhmovement is the knowledge of the parkour-like aspect of Jattenhand. This is how to best

Mr Toad, FBC-only option. HL 3d6, 400e$, 1,5 space. Torso spaces only!
It's thicker and longer (3 meters) than a standard cyberwhip (see chrome 1). However, the strangest part is the placing. Mr Toad is housed down the throat, like a cybersnake, and most of the whip itself rests in a torso compartment when not in use. It can be, however, launched in blink of an eye, sliding upwards and being swung by its own myomars.
The whip and it's anchoring point are strong enough to withstand most of the human borgs swinging on it, however, large models (over 100 kg) should be wary that although the whip should bear them simply hanging, putting it against dynamic changes is risky (reliability VR, if there would be a need to test it).
The end of the tentacle can be covered with mild adhesive to help it snatching small items. However, the adhesive itself couldn't hold anything heavier than, say, a pen, and - given the huge speeds the whip reaches - it couldn't be seen as a reliable way of holding anything (thus the tentacle does usually wrap around the item in such a situation).

- Mike van Atta

traverse your surroundings, and looking good while doing it. This is the knowledge of flips, vaults and jumping techniques.

By combining JHcombat and JHmovement, you get JHphilosophy. This is used instead of Empathy for the Jattenhand user. This represent that the Jattenhand user is no longer human, but something else.

So, what do I need to know?

Well, for starters, the average Jattenhand practitioner isn't your typical Buddhist monk type. They tend to be wild, crazy and fun-loving (not that hermit-like types aren't at all possible).

Secondly, we get some fun statistics! There are about 15-20 trained practitioners and 10 trainees. 7 out of 10 students fail the training.

What fun stuff to I get to do?

Well, apart from kicking ass, you get the tag. Not the silly little thing you play in kindergarten, mind you. No, you get JHtag. Basically it's tag. With borgs. And fighting. Needless to say, it's violent. Of course it's fun.

You also get the nice sessions (as in not including kicking each other of rooftops) with your fellow jattenhanders, and the occasional fleshie parkour user.

A players guide to Jattenhand

So, you wanna play a jattenhand borg? Assuming that your character fits, the first thing is really showing that parkour is a major part of its life. Small things, like vaulting a fence instead of opening the gate.

Thing is, parkour ain't for everyone. Jattenhand ain't for all the borgs that do parkour. So, Jattenhand is rare. Really rare.

Secondly, remember that your character has removed itself from humanity. How you show this is up to you, but learning Jattenhand is a major change in a characters life. It's up there with losing your virginity and being born.

If you come out the same, with nothing but a flashy martial art to show, you've missed the point.

Another thing that's really important, especially in cyberpunk, is clothes. You not gonna see a female traceur in a long dress, or a tight pair of jeans. The key is freedom. Non restrictive clothing is very important; the style doesn't matter as long as you can move freely. Secondly, secure pockets. After all, you don't want that important piece of data falling out of your pants fifty feet in the air, do you? However, even

How does PanzerFaust look like?
Since we're already in the Martial Arts matter?

I'd think PanzerFaust looks like something out of a proverbial giant robot anime (although there's no fight-&-flight scenes and buildings are rarely slagged), although on a human-sized scale. You know, 'borgs start a fight and for the first few minutes, it seems like a normal bar fight scene, but then one of them throws the other through a reinforced concrete wall.

Style-wise, it might be something combining several human fighting styles, as well as moves humans are not capable of doing, and allowing the 'borgs to use the full capabilities of their bodies.

- Snowtiger

As for PanzerFaust, I think Snow is right. It's a no-holds-barred punching-kicking-grappling style, similar to modern Sambo or military variants of, say, ju-jitsu. You know, no rules except for "you have to survive, and he does not" - thing.

Of course, this was designed for FBC. It can incorporate all the techniques humans can perform, including those you have to train for years and be exceptionally fit and flexible to begin with.

So there are going to be all the nastiest, most brutal tricks invented in the martial arts history, like Muai Thay kicks. All on full power.

Techniques the fleshies won't use, because they might be effective, but are too risky. You can't fight with a broken leg... but if you're a borg, your leg won't break! And even if, so what? You can always buy a new one...

- Mike van Atta

thought the style of clothing changes from user to user there are a few common nominators. A very popular accessory is lightbands, bracelets filled with glowing liquid. When worn they produce light streaks, making the flashy moves even cooler.

Being borg: something that goes even further to show your borgness: customization. Do what you like, just as long as you do it. Fiber optic hair, marble skin, glowing eyes or headmounted air vents. Personality is important and originality is the key.

JH Slang:
A few phrases to get you started.
Mäster: master. Rarely used.
traceur: a parkour or Jattenhand user.
Jam: doing Parkour or Jattenhand with others.

Then there's combat. In gunfights, show of. In fact, show of. Period. Spinning flips, butterflies, cartwheels. For you, they are as easy as breathing.

And last but not least, cyberware. For this, think like a traceur. Could you use a cyberwhip to swing with? Would catfeet give you better grip? I can't tell you what would work, that's up to you and your GM.

Borg sports

Some futurologists did predicted ‘borg sports to be solely combat sports. Sure, their greater physical prowess, as well as injury-resistance, makes them well-suited to such activities. However, becoming a ‘borg doesn’t make one a destructoholic, so visions of ‘borgs playing “rip’n’smash” or football with an explosive-rigged ball haven’t come true.

Yes, there are some combat sports among FBC, like cyborg wrestling, or Motorball (described in the next chapter). But majority of the ‘borg sports are just adapted variants of the sports regular humans do attend, and that’s simply because there’s no way in which ‘borgs could be competing directly with humans. Their physical capabilities make them far out of any possibility for a fair competition. And since fair competition is what sport is all about…

It did took a while to set the standards for ‘borg sports. Some, like performance sports – pole vault, jumping, swimming – had to be eliminated, since this had turned into plain competition not between participants, but the tech teams who were preparing the bodies. Others needed to have additional rules set – mostly to limit the amount of body modifications allowed. Of course, the equipment used does need to be made especially for this…

But the effects are interesting, especially in team sports. When you have two teams of ‘borg soccer players, each body with exactly the same performance level, it becomes purely a game of skill, and elaborate tactics (that’s why the Combat Crystal rigs are thought to be a big hit next season), even if you need a slow-motion replays to see the whole artism of an action.

Motorball

FBC combat sport.
(yup, stolen from Battle Angel Alita / Gunnm manga... so what?)

The motorball was invented in Germany, as a past-time among local IEC factory's worker 'borgs, but soon became a popular sport among FBC elsewhere.

The rules:

The Ball: it’s a 40kg „ball” (about the size of basketball one), with 6 independent, motorized balls sticking out of it. The balls move in random directions, propelling the ball, if it isn’t carried by a ball-keeper. There are series of holes (grouped by three) on the surface. If player’s fingers are put into the holes, the propelling balls are stopped.

The track: the track is of various lengths, and there may be any kind of obstacles and weird inventions on it – loops, tunnels, tight curves, and the like. Generally, most tracks are between 1 and 3 kilometers in length, and they surprisingly resemble rollercoasters...

The players: these are exclusively FBCs, usually specially modified bodies (called “wett zeug”,

after the original, German description). Although there's a lot of league-enforced limitations on wett zeug performance and construction, two most universal are:

- at least one arm, at least one leg per wett zeug (note that a monowheel counts as "leg")
- only built-in (or firmly attached), close-combat weapons are allowed.

The winner. There are a few variants of winning conditions, two most common are:
1. The one who makes a full round on the track holding the motorball, wins.
2. A number of circles are made by all the participants. The one, who holds the motorball when crossing "Finish" line after his last circle, wins.

Like in car races, players do start from computer-generated pole-position, and the ball is launched randomly on the track during the first circle (or dropped by a car leading the group of players, this varies from track to track). If the ball falls off-track, or is destroyed (that is, it can't propel itself any longer), a new one is launched.

There's pit-stop, as in races, localized at the start / finish line. You can get there for repairs. However, if you stay in pit-stop for longer than 10 minutes, you're disqualified. However, the ball-keeper can't enter the pit-stop (ever wondered, why quick-change mounts are so popular in Motorball?)

Fighting on the pit-stop entry is penalized in overall rating points. Also, going back on track is penalized as well – you should go forward only. If you stop on-track – for any reason – for one minute or longer, you're disqualified. Actual penalties do differ from league to league.

If there are only two players left on track, they enter so-called "showdown" – a one-on-one combat not limited by the stopping or going back rules.

Legality: Motorball is being technically classified as Low Impact Bloodsport, but – due to the destruction visible on track – many officials perceive it as High Impact Bloodsport. Thus, Motorball is illegal in most areas (but where it's legal, it's usually transmitted on TV in prime time, even to places that wouldn't allow such sport to happen on their territory).

"Low Impact bloodsport? You gotta be kidding..."

Well, the Low Impact / High Impact bloodsports (see *Wildside*) differ in that in low impact bloodsport, a participant's death can happen, but is not a goal as itself. In high impact bloodsport, a death of a participant is very likely, and almost expected to happen, or is a goal on itself.

Cyborg wrestling is considered Low Impact, and I've classified Motorball as similar. Sure, you can be killed on the track, but the point is to get the ball to the finish line. Besides, wett zeugs are specifically designed for this type of game, and have appropriately reinforced construction. Remember, BAA is artist's vision... but I can't honestly imagine participants getting pulped to death each race. As long as the biopod remains undamaged, even a borg who lost the rest of his body is pretty likely to rejoin the league as soon as his manager gets a new wett zeug.

For a fleshie, having an arm ripped off is a death sentence. For FBC, that's merely a discomfort. So, although this is a damn brutal sport, it's not that lethal...

- Mikael van Atta

Weird Ideas

FBC are a quite new and still somewhat experimental technology. Although there are some ways of doing things that have been already generally accepted, once every time someone comes out with a new idea. This can be revolutionary, or awkward, useful or useless... nevertheless, it's usually too weird to be mass used...

Cyborg-driven vehicles:

The basic idea is to use a 'borg to drive a vehicle, usually a combat one. 'Borgs are potentially much better pilots than fleshies, and, although it can change on daily basis, they're still better than AI systems. The reason is they combine human intuition and experience with machine-like reaction time and endurance.

The simplest way is to put a 'borg in place of normal pilot, and let it drive the vehicle, either by manual controls, or – better – thorough interface link (on interface, there's only –1 cumulative penalty for multiple actions), and – combined with his superhuman reflexes, a single FBC can successfully control a fairly complicated vehicle. A FBC can control a cyber-linked tank single-handed (or rather, single-minded) – driving, firing the main gun and spotting for new targets – something you'd need at least 3 ordinary tank crewmen to do. And he's doing all that with only –3 modifier – with his REF 14 and boosted perception, it places him still well above ordinary tank crew. Not to mention he takes up only 1 seat, so you can throw two out and use the space for ammo, for example.

Sure thing, the army just fell in love with the idea. And began to experiment.

The most widely known incident was when a FBC-controlled tank went berserk and fled from Fuji testing grounds in 2017. It rampaged from Osaka to Tokyo, until a joint strike force of Arasaka and JSDF gunned it down. What happened? Cyberpsychosis. They used an interchangeable biopod to drive the tank. You think they've abandoned the idea? Nope. It was clear to them it needed a few modifications, that's all.

Nowadays biopod-driven vehicles are considered a dead end – you need a „brain controller" or „mood regulator", like the one being used to prevent Dragoon FBCs from going psycho, and the effect is similar – most of the personality is lost, same goes for initiative and creativity, leaving just a little more than organic-based AI driver. Not what generals consider their wet dream. Still, some armies, corporations and people use these old „brain jar" systems.

Brain Jar driver system:

You need only a biopod of a borg. The vehicle must be equipped with biopod socket (0,5 space, provides power to life support system, interface linkage, and „brain controller") that costs 15'000 e$. A rudimentary REF processor is also required, but it's needed only to interpret data between the brain's interface and vehicle. It's being build in the vehicle, costing mere 1'000 e$ per 1 Ref. Although cheap, this system has a few disadvantages. Apart from its potential psychosis, the biopod lacks personal mobility. It has no body except for the vehicle. If the vehicle is disabled or destroyed, the 'borg cannot run away – even in the vehicle was equipped with an equivalent of ejection seat (such systems do exist), it has to depend on its internal life support, power system and whatever SAR group being sent to retrieve it. No one likes his best pilots hanging helplessly on some tree, so Brain Jar system is considered a dead end in cybertech development.

Tight Pack driver system:

This is how the problem is solved nowadays. You take a normal cyborg with a standard-sized body (anywhere in human range, although the smaller, the better), pack the body tightly and stuff it into a specially designed compartment in the cockpit. It takes 0,75 spaces, no extra cost. This makes use of the fact that 'borg can stay motionless for hours, even in a position a fleshie would consider to be a sophisticated form of torture. Yet the body remains fully operational, and can operate independently from the vehicle when dismounted or ejected.

Please note that all input data are received thorough interface, from vehicle's sensors. Tight Pack compartment is designed to take as few space as possible while still allowing for use of rescue equipment (equivalent to ejection seats), but not to provide a good all-around view.

ACPA Borgs:

As I've mentioned in the main tables, regarding FBC size / BOD, there's nothing to stop you from building an ACPA-sized 'borg. Note, however, it'll have similar advantages and disadvantages as a regular ACPA. Not to mention you can leave your ACPA shell in the warehouse and go on leave in your flesh, but you can't do it with your FBC shell. Thus, interchangeable biopods are generally a

ACPA-borgs in everyday life

Maybe becoming ACPA-'borg sounds nice, but remember you would stick out like a sore thumb in a crowd, as they're about two-to-three feet taller than the average Alpha Class 'borg. I'd imagine that they have some difficulties fitting into vehicles and using things designed for normal people (cellphones and common household remotes, ATMs etc).

I mean, typing messages using an antique "Net-Slug" terminal or a cellphone would be akin to normal Joe Cyberpunk pushing the keys with a sausage, but that can be countered by plugging into the device or using vocal controls if present, and to use a car it would probably have to be a cargo truck or a van (with cybernetic controls), and that'd be an awfully tight fit at best. I'd suggest a pair of normal-sized utility arms for this kind of jobs, and the abovementioned cyber-controls for vehicles.

And then to the obvious, you'd probably have to use a tailor if you ever want to wear clothing ever again (even for camouflage purposes), unless you want to use a cargo tarp for camouflage (but you probably would not get into night clubs and places like that with a cargo tarp slung over your oversized shoulders). Of course if your shell has adaptive camo, the camouflage issue is solved, and you could use some stylized colour for festive occasions.

Of course, using an interchangeable biopod would solve all these things, as you could have an Alpha Class or a Gemini body for off-duty purposes, and you would use the ACPA-body only when in active duty.

- Snowtiger

ACPA spaces vs. Cyborg spaces

After consulting MaxMetal and a few other books I came to a conclusion that ACPA spaces are about twice the size of a cyborg space. Weapons taking 1 space on a cyberarm tend to take 1/2 space on an ACPA, although ACPA variants tend to be equipped with much more ammo. I take this as an effect of lack of consequence from R.Tal, they were making "popup weapons in cyberlimbs" size variation without going into much detail, obviously stating that option spaces on a BOD 10 limb are bigger than on the BOD 4 limb, but their number is stable. I took a directly opposite approach - "option space" represents a set amount of free space, bigger limbs just do have more of these.

- senior officer Mikael van Atta

must. And, of course, there are no much applications for an ACPA-borg, especially a heavy model, except purely military duties. ACPA-borgs make great grunts, except for the fact they can be sometimes too big and too heavy for urban combat, just like fleshies in ACPA suits (and are completely useless in everyday life – think about the size of their fingers). But in the open field, they're general's wet dream. Sure, they usually can't be trusted if not fitted with behavioural regulator, and are far too expensive to even replace flesh soldiers...

In short, treat ACPA-borgs as ACPAs, not FBCs, just nastier.

On the other hand, since you must fit only a quick-change biopod into the suit, and not a full-sized human, there's a lot more space for extra equipment. And with a good Ref processor, this baby would outclass a regular ACPA equipped with coprocessor and fleshie pilot as far as coordination and reaction speed is concerned.

In fact, only three things have to be clarified:

ACPA 'borg's Interface system. This is equal in performance to ACPA Wide Range HUD (Initiative Bonus +0, Direct Fire Bonus +2, provided the 'borg has smartgun subprocessor, and combat ones usually do have. Note, however, that none of the upgrades listed as standard for such Interface is included – they have to be installed separately, usually as cyberoptic options). A better one, like VR interface, can be installed as extra set.

Spaces. The number of spaces is derived from borg's Body stat. Each ACPA Space is equal to 2-3 cyborg spaces (GM's call, I think that x2,5 would be closest call - ACPA equipment was being built quite bulky and resistant, where cyborg parts had to by concealable first).

Humanity Loss for the systems adapted from ACPA equipment: use the HL for the closest cybertech equivalent. For example, all cyberarm guns have HL of 2d6. Therefore, any ACPA gun you adapt for use on your ACPA 'borg is pretty likely to be 2d6 HL. Even if it is longer than you are tall… If a system doesn't have an equivalent, use your common sense.

Head spaces on 'borgs:

In Cheap FBC, torso and head are generally bought as a single piece, with an amount of "option spaces" located there, but without pointing out any more precise location. While this depends on a particular model, and the spaces are usually equally distributed among lower and upper torso, some people would like how's that exactly. And since ACPA can have some of their equipment installed in their heads, it'll be nice to deal with it, right?

First, remember that the head is already being packed with a lot of optionware. A brain, vision equipment (cybereyes or similar, usually two), audio receptors and processors (cyberaudio), voicebox (either BoxAlter or NewThroat, usually mounted in throat of course), plus typically a moving jaw, ventilation ducts (yes, air intakes and exhausts **can** be fitted on any body part, but usually they are in the same place as on normal humans, both because it helps you being human-like, and because it's one of the better localisations on a bipedal, upright creature. You think why the evolution placed these right there?), and olfactory & contact chemical sensors (nose and tongue, that is). Quite a lot, huh? Sure, you can freak around a bit, moving some of these elsewhere (or dropping them out completely), but still, you're not to gain much. So this is rarely used.

Only one ACPA-borg has been presented in this book, since I find them too narrowly specialized. However, several models can be found in the Corporate / Military FBC section of Datafortress 2020. Please keep in mind that the link was up to date when I was creating this material. Datafortress is known to change its address sometimes.

Of course, you can decide you want another shape of head, for example a cone-head. This would give you the extra room. Or when you become an ACPA-borg, you can decide for a large, unproportional head, that's the same effect (ACPAs do regularly have quite big helmets, nothing new). Just don't pretend you're a "human-looking 'borg" anymore.

All in all, up to 25% of "body" spaces can be declared as head spaces when the FBC body is bought. However, only small options (GM's call) can be installed there, if the head is not to gain "inhuman" features.

External spaces:

Optionware can be fitted on the outside of a cyberlimb / body, like it can be mounted on ACPA as "external equipment". Maximum amount of spaces for such things is the number of internal spaces on that body part, -2 (direct offspring of ACPA rule). Remember however, that such 'ware isn't protected by the armour, nor by any means it cannot be said to be human-looking. Apart from that, a full set of external optionware almost doubles the 'borgs amount of "options", thus driving energy use thorough the roof! GM should reduce FBC operational time then, even by up to 50%. All in all, it's rarely seen...

How many limbs can a borg have?

With artificial shoulders and multisection modules, you can go for a pretty high number of these. However, with a lot of extra arms you'll probably have to use an elongated torso, which will have adverse effect on your balance. You might find it easier to crawl than walk upright.

But the real problem emerges when you try to use all those limbs. See, your brain isn't used to having more than four limbs, two of them prehensile. Some mammals do have prehensile feet, and even prehensile tails, but that's all. No vertebrate has more than four limbs, so our brains are really evolved far away from having to cope with such.

Sure, with enough time you'll teach your brain how to recognize third or fourth arm, or sixth and fifth leg. The point is, however, not in recognizing them, and not even in just moving them. The problem is coordination.

Legs are easier to cope with. After all, the number of things you do with them is somewhat limited – you mainly walk or run. A "backbrain" computer, built into a multisection module, will cope with it, keeping your legs from getting in their own way. Jumping is going to be a problem, however, as your body is much longer than you ever though it'll be, and has completely different movement mechanics.

Kicking someone (or even a couple of “someones”) is another kettle of fish.

Arms are more difficult to handle, since we use them for precision tasks (Yes, there are disabled artists, who paint keeping a brush between their toes, but they’re rare. Even more so in 2020, when prosthetic replacements are readily available). And most people (apart from those few ambidextrous ones) have one hand dominant, the other being the “off-hand”. Even with a dozen of arms, only one will be dominant… Also, whereas you can try doing more things at once (you don’t have to count on boosted reflexes to try punching four opponents at once – you simply have enough fists), you have to divide your awareness between them, and this translates into multi-action penalty. Just a simple processor isn’t enough to deal with it. While we can dream about gizmos like “Hecatonchires” (“Hundred-handed”) processors, that would allow us to control immense number of devices and operations, such things do not exist yet. I’d say they’re above the level of even the third generation technology.

After all, it doesn’t make much difference to the game mechanics on how many arms do you have: you still can’t do more things at once, and the only advantage is that you won’t ever lack the proverbial third hand to hold you something.

Sample FBC designs:

Below, you'll find several examples of Full Body Conversions created with these rules. All of them have been calculated using „cheap cybertech" prices. No HL caused by increased REF or ATTR has been counted in, as these losses are handled on individual basis. Same goes for MA and BOD – caused Humanity Loss. Although these FBCs have been constructed in various technologies, there's no specific technological level / generation assigned.

Standard neuralware – many of the 'borgs below have their neuralware listed as "standard". This means they do have a neural processor (mandatory for all 'borgs) and a single set of interface plugs.

FBC general table						
Model	Price	HL dice	HL reduction modifier	Minimum HL (with modifier applied)	Average HL (with modifier applied)	Maximum HL (with modifier applied)
Ilya Mooromyets	11-22'000e$*	16d6+6,5	-	22,5	62,5	102,5
PlasticMan	15,300e$	19d6+1/2d6-0,5	-	20	70	117,5
Adam/ Eva	25'000e$	9d6+1/2d6+1	35%	10,5 (6,8)	35 (22,75)	58 (37,7)
Attila	360-600'000e$*	27d6+3,5**	-	30,5	98,5	165,5
Angel	400'000e$	9d6+1/2d6+3	50%	12,5 (6,25)	37 (18,5)	119,5 (59,75)
Ghost	550-650'000e$*	12d6+1/2d6+1,5	50%	14 (7)	45,5 (22,75)	76,5 (38,25)
Ego	50'000e$	12d6+1/2d6+3	40%	15,5 (9,3)	47 (28,2)	78 (46,8)
Golem	40'000e$	12d6+1/2d6+2	-	14,5	46	77
Wheelchair	10'300e$	15d6+2	-	17	55	92
EMPM	10'300e$	23d6+2	-	25	83	140
Jameson Mk.1***	9,050e$ / *7'100e$*	18d6+2 / *12d6+1d6/2+1*	-	20 / *13,5*	65 / *44,5*	110 / *76*
Jameson Mk.2***	9,050e$ / *8'300e$*	18d6+2 / *15d6*	-	20 / *15*	65 / *53*	110 / *90*
Icarus	170'000e$	14d6+1d6/2+1**	-	15,5	51,5	88
Hero	110'000e$	16d6+1d6/2+1,5	-	18	66	100,5
Apollo	110'000e$	19d6+2d6/2+1	-	21	70,5	121
Aesklepios	115'000e$	18d6+2d6/2+1	-	20	67	115
Themis	110'000e$	18d6+1d6/2+2	-	20,5	66,5	113
Ares	145'000e$	18d6+1d6/2+1,5	-	20	66	112,5
Sebastian (generic)	21'000e$	6d6+1d6/2+7	30%	13,5 (9,45)	29,5 (20,65)	46 (32,5)
Stalker	650'000e$	27d6+2	-	29	96	164
Nautilus	90'000e$	19d6	-	19	66,5	119
Galileo	130'000e$	20d6+2	-	22	72	122
Jason	250'000e$	17d6+3	-	20	62,5	105
Agamemnon	2'150'000 e$	28d6+1d6/2+2,5**	-	31	102	173,5
Naga	65'000e$	14d6	-	14	49	84
Chiron****	700'000e$	12d6	-	12	42	72

* depending on model

** due to the CyberTrooper moddy, HL for this borg is usually irrelevant.

*** There are two sets of calculations on the Jameson borgs, mostly because they are so non-standard constructions that many factors depend on interpretation.

**** Please note that Chiron isn't a body on its own, just an add-on to a standard body, replacing its legs.

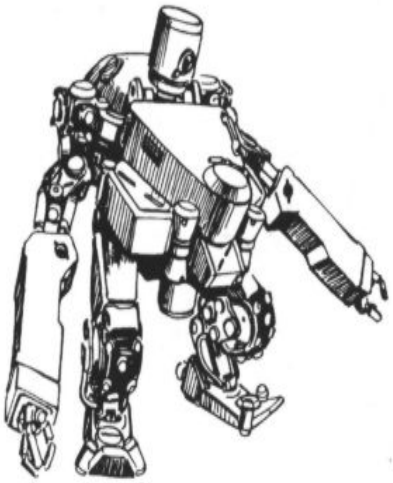
Borg model compilation

There are several ‘borg models available from various sources, and most of them tend to fill one of many niches available for such things. Below, I’ll list Chromebook ‘borgs and their (estimated) CheapFBC equivalents. Since I follow a design philosophy completely different from that presented in Chromebooks, the matches aren’t likely to be perfect.

Also, please note that 95% of the ‘borgs available on various c-punk websites are strictly combat models.

Chromebook ‘borgs	**Source:**	**Niche / purpose**	**cheapFBC ‘borgs**	**Niche / purpose**
Alpha Class	Chrome 1	General purpose	Golem, Hero,	Customizable general-purpose bodies
Aquarius	Chrome 1	Sea borg	Nautilus	Underwater laborer
Brimstone	Chrome 1	Firefighter	Apollo (Hero variant)	Firefighter
Copernicus	Chrome 1	Space borg	Galileo	Space borg
Gemini	Chrome 1	Human replica	Adam/Eva, Ego, Angel, Sebastian	Human replica bodies
Eclipse	Chrome 1	Special ops	Ghost	Secret agent / commando body
Enforcer	Chrome 1	Police	Themis (Hero variant)	Police shocktrooper
Samson	Chrome 1	Worker	Ilya Mooromyets	Borg laborer
Dragoon	Chrome 1	Combat	Attila, Ares (Hero variant)	Combat
Wingman	Chrome 1	Pilot	Icarus	Pilot
Sheol	Chrome 2	Haz-mat	Hades (Hero variant)	Haz-mat handling
Kildare	Chrome 2	Doctor	Aesklepios (Hero variant)	Paramedic
Wiseman	Chrome 2	Netrunner	*No equivalent so far*	
Spyder	Chrome 2	Espionage	Stalker	Reconnaissance
Burroughs	Chrome 2	Martian borg	Jason	Martian borg
Daioni	Shockwave	ACPA-Borg	Agamemnon	ACPA-borg / ‘borg C3 station
	No equivalent		Anaconda, Sidewinder	Sport body
	No equivalent		“Wheelchair”, EMPM-01, Jameson, PlasticMan	Medical replacement body
	No equivalent		Chiron	Centauroid chassis
	No equivalent		Naga	Wereborg

Rostovic Ilya Mooromyets



There's only one explanation why FBC don't tell their children „if you'll be nasty, you'll grow up to be an Ilya" – because full 'borgs don't have kids. Ilya Mooromyets (Ilya the Wall-breaker, named after popular hero of Russian folk tales, renewed for his great strength) is a cheap, mass-produced Russian Full Body Conversion used for heavy labour in factories, oil rigs and wherever its great strength can be useful. That's the light side of Ilya. The dark side is numerous such cyborgs used for slave labour in the infamous labour camps of Gulag.

Using FBC for slave labour can sound crazy, but isn't so out of sense. They are stronger, don't tire, don't get ill, and die much, much rarer than normal humans. It is also hard to run away in an Iliya. Besides, if the political situation changes, you can always move the biopod from a labour 'borg into a civilian body, and send the former convict wherever the government needs him.

Ilya is equipped with only the very basic stuff, like anti-dazzle and level damper to allow him working in heavy, industrial conditions, and pain stimulator to keep them doing what a guard had told them to. They work as lumberjacks, miners, and builders... There's an EMP-hardened (grade 2) variant that is usually used for uranium ore mining and nuclear reactor maintenance.

Almost all Ilyas are poorly maintained, and their overall look doesn't even resemble humans. Here they are, slaves-convicts of Gulag in the Cyberpunk Era...

Technology Note: this FBC is built in Russian technology.

General info:
Type: heavy labour / slave cyborg
Cost: 11'000e$ ("hardened" variant: 22'000e$)
Weight: 140 kg
Cover: cheap plastic (usually orange / black „hazard" striping)
Energy source: batteries

Additional equipment:
Pain centre stimulator – this implant, activated via radio by third party, causes blinding, agony-like pain in the subject, thus dropping the victim completely unable to do anything. Used for prisoner control. HL: 2 (included)

Performance:
BOD: 10 (30, due to built-in hydraulic rams)
MA: 3
REF: 4
ATTR: none
SP: none

Sensors:
Optics*: Anti-dazzle (L & R), 1 free slot each.
Cyberaudio*: level damper, 1 free slot
VocoBox: Boxalter (1 free slot)
Neuralware: standard + pain centre stimulator *2*

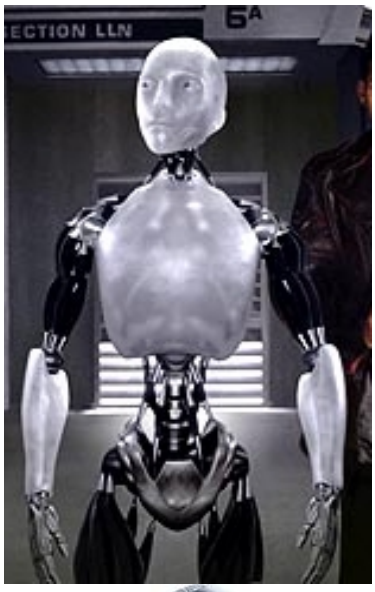
* uses Soviet cybereyes and cyberaudio. See ChromeBook 4.

SDP allocation:
Head: SDP 51
L.Arm: SDP 51, standard hand, 3 free slots
R.Arm SDP 51, standard hand, 3 free slots
Torso: SDP 64, 3 free slots
L. Leg: SDP 51, standard foot, 2 free slots
R.Leg SDP 51, standard foot, 2 free slots

Total HL: 16d6+6,5

Biodyne PM-01 Full Cybernetic Body Conversion

(Nicknamed „PlasticMan")



PM-01 FBC was one of the first commercially available FBCs in history, and the one being best known. A 'borg equivalent to Ford model T (although it was available in more color variants than simply black).

Nowadays, it's clumsy, outdated, and long out of production (Biodyne, the company manufacturing it had collapsed many years ago). Still, bootleg copies are being made around the world, and some "PlasticMen" are available on used cybertech market – prices vary widely, based on actual age, producer, condition, after-market modifications...

Technology Note: this FBC is built on Outdated technology. The price has been calculated along Cheap FBC rules, yet in reality this could be only a suggested market price for a new, bootleg copy.

General info:
Type: basic body replacement cyborg
Cost: 15'250 e$

Skeleton cost: 24'500 e$
Weight: 90 kg
Cover: average-quality plastic (numerous colors available)
Energy source: batteries

Performance:
BOD: 8
REF: 5 (6*)
MA: 4 (6*)
ATTR: none
SP: none

* Outdated body parts cause the reduction (see Enable Cyberlimbs, Chromebook 3). Ref processor and movement myomars are capable of performance equal to 6 stat value, but because of the limbs construction, effective performance is limited as shown.

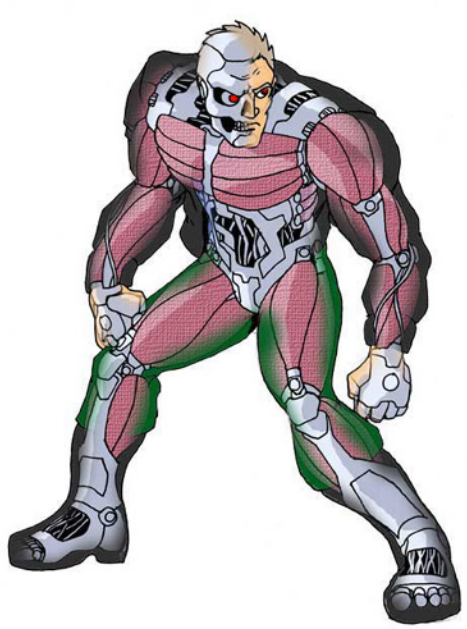
Sensors:
Optics**: L & R: 4 free slots each
Audio***: 6 free slots
Vocobox: BoxAlter, 1 free space
Neuralware: standard****

** Revelation cyberoptics (see Chromebook 3) are used. They provide +1 to visual Awareness rolls.
*** Spectrum cyberaudio is used. Apply –1 to balance rolls. +1 or +2 to audio Awareness rolls do apply (depending on microphone set used, consult Chromebook 3)
**** Neuralware uses outdated Model 100 (see Chromebook 3) interface plugs.

SDP Allocation:
Head: SDP 36
Torso: SDP 47, 5 free spaces
L Arm: standard hands, SDP 36, 4 free spaces
R Arm: standard hands, SDP 36, 4 free spaces
L Leg: standard feet, SDP 36, 3,5 free spaces
R Leg: standard feet, SDP 36, 3,5 free spaces

Humanity loss: (19d6+1d6/2) – 0,5 HL

Corporation Farmaceutica de Belo Horizonte Adam / Eva



Adam / Eva is a cheap, basic Gemini FBC. Yet it's a great market success, being produced and sold – under license agreements or as bootleg copies – all over the world. Sure, it's generally just an artificial human, but that's what keeps this model popular.

Adam / Eva comes with a very limited choice of face finishes, hair styles and similar features (initial edition had only four faces – two male and two female each with its distinctive hair color and cut. As they've become popular in other parts of the world, license agreements were made to produce 'borgs matching local phenotype). The bodies are covered with RealSkin, what gives them impression of being human, but this is far too easy to unveil, and their faces are just too generic – they just look like straight from cheap cosmetic surgery boutique(hence the nickname "Barbie and Ken"),. Still, for some people that is enough. Besides, there's a huge modification after-market for Adam / Eva's, so if you want to change your face, or modify your body in any other way, it's pretty easy.

Technology note: this FBC is built in Brazilian technology.

General Info:
Type: basic human-replica cyborg
Cost: 25'000 e$ (24'750 E$, to be precise)
Skeleton cost: 15'700e$
Weight: 70 kg
Cover: RealSkin (generic quality beauty)
Energy source: batteries

Performance:
BOD: 6
REF: 6
MA: 6
ATTR: 6 (generic)
SP: none

Sensors:
Optics: L & R: 4 free slots each
Audio: 6 free slots
Vocobox: BoxAlter, 1 free slot
Neuralware: standard

SDP Allocation:
Head: SDP 20
Torso: SDP 25, MrStudd (Adam) or Midnite Lady (Eva), 3 free spaces
L Arm: standard hand, SDP 20, 3 free spaces
R Arm: standard hand, SDP 20, 3 free spaces
L Leg: standard foot, SDP 20, 3 free spaces
R Leg: standard foot, SDP 20, 3 free spaces

Humanity loss: 9d6+1d6/2+1
Note: due to realskinning, physical attractiveness and ability to participate in sexual contacts, overall HL is reduced by 35%.

Militech Attila

Militech Attila is a typical modern combat FBC. Whereas too big and obvious for clandestine operations, it makes great attack unit (generals tend to refer to it as “cybernetic stormtrooper”). Although it has a power output and lift capability comparable to a light ACPA, Attila is still not much bigger than a powerfully-built human. This allows it for the use (although not always comfortable) of many human-made weapons, vehicles and other equipment, thus vastly enhancing its tactical flexibility.

Stock Attilas do not come with built-in weapons, since it’s considered wiser arming them with ‘borg variants of standard firearms (the most common is 12,7mm / .50 cal assault rifle, although 14,5mm assault rifles are also popular, especially where Soviet equipment was once widely used – for stats of such weapons, see SoF 2). Yet all four limbs are equipped with twin quick-change mounts, allowing outfitting the borg to given mission in a matter of minutes. This is truly a “Two-Legged Weapons Platform”.

Attila is definitely a team player, being equipped with Combat Crystal and a wide area of data transmitting options (tight-beam radio, standard radio, laser communication and infrasound speaking). It has broad range of sensors as well.

And, with the addition of Cybertrooper behavioral chip, Attila becomes cyberpsychosis-proof, intelligent, dedicated and obedient combat unit, a commander’s dream.

Attila is available in two variants of REF performance (standard Attila with REF 14, and REF 15 Attila Plus) and three of EMP Protection. Thus both these information are included in the name, e.g. Attila I Plus or Attila II.

Technology note: Attila is being based on standard parts.

General Info:
Type: assault cyborg
Cost: depends on variant, see table below

	Attila	Attila Plus
EMP protection grade 1	360’000e$	400’000e$
EMP protection grade 2	390’000e$	430’000e$
EMP protection grade 3	600’000E$	650’000e$

Skeleton cost: 42’400e$
Weight: 340 kg
Cover: Militech P-Steel Composite Armor (SP40 Heavy Armor), with built in Reactive Armor (see SoF 2), thermal baffling and Militech Mirage Gear camouflage.
Energy source: hydrogen cells
EMP Hardwiring: depends on model.

Performance:
BOD: 12 (24*)
REF: 14 (15 for Attila Plus model)
MA: 15
ATR: not applicable
SP: 40

* With enhanced myomars

Sensors:
Optics: uses “bug eyes”, see Chromebook 3. Option package: Anti-dazzle (L&R), Low-light (L&R), Infrared (L&R), Image enhancement (R), Teleoptics (R), Targeting scope (R), Time / date display (L), Times Square + (L),

Audio (standard model): level damper, amplified hearing, enhanced hearing range, radio link, radar detector, and scrambler.
Vocobox (NewThroat): subsonic speaking, volume regulation. 1 free space.
Neuralware: Processor, Interface plugs, Kerenzikov +2, Tactile boost, Olfactory boost, Cybermodem link, Vehicle link, Machine/tech link, Smartgun link, Chipware socket (with behavioral chipware / moddy link), Echolocation co-processor, Lockdown, Cyberdetection computer, Combat Crystal, Braindance recorder. Cybertrooper moddy included into the package.
Sensory extension ("rabbit ear"): Anti-dazzle, Laser communicator, Thermograph, Ultraviolet. Tight-beam radio and frequency changer.

Other features:
Attila comes with two Serious environmental modifications: it's adapted to remain fully operational in hot and cold weather.
Grade 1, 2 or 3 EMP shielding is also built in.

SDP Allocation
Head: 40 SDP
Torso: 52 SDP. Built-in options: Quick-change biopod, Radar, Autoinjector, Radiation detector, Chemical analyzer, Gyrostabilisation.
R Leg: 40 SDP, standard foot, pelvis and ankle quick-change mounts, 1,375 free spaces
L Leg: 40 SDP, standard foot, pelvis and ankle quick-change mounts, 1,375 free spaces
R Arm: 40 SDP, standard hand, shoulder and wrist quick-change mounts, 2,25 free spaces
L Arm: 40 SDP, standard hand, shoulder and wrist quick-change mounts, 2,25 free spaces

Total Humanity Loss: 27d6 + 3,5
Note: due to widespread use of Cybertrooper Moddy, HL is usually considered irrelevant.

Spare limbs:
Spare arms and legs for Attilas are readily available from Militech. They have been calculated as simply limb modules with all the same features as a full Attila, including armor, IR baffling and so on. Each of them is supplied with 2 Quick-change mounts, but you can resign from the wrist / ankle one (this saves 400e$ and gives one space). The module is supplied without hand / foot which has to be purchased separately.

	Arm	Leg
EMP protection grade 1	9'965e$	8'130e$
EMP protection grade 2	12'965e$	10'130e$
EMP protection grade 3	30'965e$	22'130e$

Borg weapons - Since we're speaking of combat 'borgs, what the 'borgs tend to pack?

Glad you've asked. Borgs are all too often portrayed packing absurdly big weapons, just for the thrill of that look. In fact, it's the matter of what do they carry these guns for, at the first place.

If you have a military 'borg, like the Attila, and want it to go tank-hunting, then it'll likely need a railgun, or ATGM launcher. Sure, a 'borg can swing a railgun with ease no human is capable of, and carry more ATGM spares than any human. But that does not mean every 'borg carries these weapons. Choose your target, and it'll show you what guns you'll need.

For most of time, 'borg troopers do use assault rifles, in either 12,7mm or 14,5mm caliber – simply for their utility. These weapons aren't more cumbersome to them than regular AR to human infantrymen, and give them ability to effectively fight most 'borgs and ACPA, as well as some of the light armored vehicles. Not to mention regular troopers, no matter what personal armor are they going to wear.

For strictly anti-personnel ops against fleshies, a simple general-purpose machinegun is all you need – adequate power, and loads of belted ammo.

Now, as we go into the realm of civilian 'borgs, we can see that many of them do not have the strength to use some of the insanely powerful guns that keep filling gun shows. And apart from that, such monster hand cannons tend to be rare, and thus easily traceable. Some Freud's followers do claim that carrying the biggest handgun one could afford is a way of compensating for one's Mr.Studd (or the lack of it).

A reasonable 'borg out in the city does carry a normal, commercially available handgun, not necessary in the 12mm+ range. Frightening boosters off with the very size of your gun sounds reasonable, until you face a punk on Black Lace. Not even packing a 16' naval gun is going to impress such one…

- Mikael van Atta

Raven Microcyb / Versace Angel

If Adam / Eva is a low-key Gemini body, then Angel is a top-shelf – in fact, one of the best artbodies that aren't made for individual order only.

The body itself as well as its control systems, is pretty standard, yet good quality European technology.

Technological note: this FBC is built on European technology.

General Info:
Type: high-quality general-purpose artibody
Cost: 400'000 e$
Skeleton cost: 14'800 e$
Weight: 80kg
Cover: Trueskin, with good quality plastic/ artistic job (Very Difficult to recognize the look as not being nature's work).
Energy source: batteries

Performance:
BOD: 7
REF: 9 (7*)
MA: 7
ATTR: 12
SP: none

* superhuman beauty causes the Reflex loss.

Sensors:
Optics: L & R: 4 free slots each
Audio: 6 free slots
Vocobox: BoxAlter, 1 free space
Neuralware: standard

SDP allocation:
Head: SDP 30
Torso: SDP 40, Mr.Studd / Midnite Lady, 3 free spaces
L Arm: SDP 30, standard hand, 3 free spaces
R Arm: SDP 30, standard hand, 3 free spaces
L Leg: SDP 30, standard foot, 3 free spaces
R Leg: SDP 30, standard foot, 3 free spaces

Total humanity loss: 9d6+1d6/2+3 HL
Note: due to trueskinning, physical attractiveness and ability to participate in sexual contacts, overall HL is reduced by 50%.

Raven Microcybernetics Ghost

(also known as „Black Raven")

Ghost has been projected as commando / secret agent FBC. It combines a dedicated combat cyborg performance with artibody human look of a Gemini. Since it has to be able to pass as human being (or at least, a civilian FBC), Ghost lacks heavy armor or raw physical strength of Militech Attila. However, it's heavy on sensors, quick and able to use its advantages against milspec 'borgs, augmented humans and any ordinary fleshies.

It has to be remembered, however, that Ghost is primarily a covert ops 'borg, not a combat model. Sure, it can hold its own, but it's not what it is built for.

Ghosts are marketed with corporate security and investigations divisions in mind. Governmental agencies, if they can afford it, tend to build more technologically advanced equivalents of this FBC (it is said that Raven builds such bodies for governmental contractors as well, just this is classified. These high-performance Ghosts are nicknamed "Black Ravens"). One of the better known Ghost's equivalents are Megatech Class A Special bodies, used by Japanese state agencies (they're made in Japanese High Tech technology, probably Orbital as well).

Low-performance Ghosts are sold on the open market as expensive artbodies. Since they are very expensive, very few people who would find use for a "secret agent" body, can afford it.

Of course they are not being sold as "low-performance Ghosts" – only people who are aware of "true Ghost" specifications know that this is not exactly "the original artbody of the Secret Services of the world".

Technology note: this FBC is built in standard technology, with +50% SDP upgrade.

General Info:

Type: special purpose human-replica cyborg. Geared for intelligence and commando duty

Cost: depends on the variant, see table below

	"cheap" Ghost	"true" Ghost	Black Raven
Price:	550'000e$	600'000e$	650'000e$

Skeleton cost: 28'480e$

Weight: 80 kg

Cover: TrueSkin (good quality, albeit of limited attractiveness. Difficult to tell from nature's work)

Energy source: varies. Primary power source are batteries. However, there's backup power source in form of 3 hydrogen cells to be used in emergency situations.

Performance:

BOD: 7 (+8 Strength due to thickened myomars, BOD 15 total)

REF: 11 ("cheap" Ghost) / 13 ("true" Ghost) / 15 ("Black Raven")

MA: 15 ("cheap" Ghost / 20 ("true" Ghost & "Black Raven")

ATTR: 7 (good quality)

SP: 10 (Skinweave analog wired into the TrueSkin), with feature alteration system and Militech Ghost camouflage system built in.

EMP Hardwiring: grade 3

Sensors:

Optics: standard, Antidazzle (L & R), Lowlight (L), Teleoptics (L), Image Enhancement (L), Times Square Display (R), Infrared (R), Thermal imaging (R), Time / Date Display (R)

Audio: standard, Radio Link, Phone Splice, Scrambler, Bug Detector, Level Damper, Enhanced Hearing

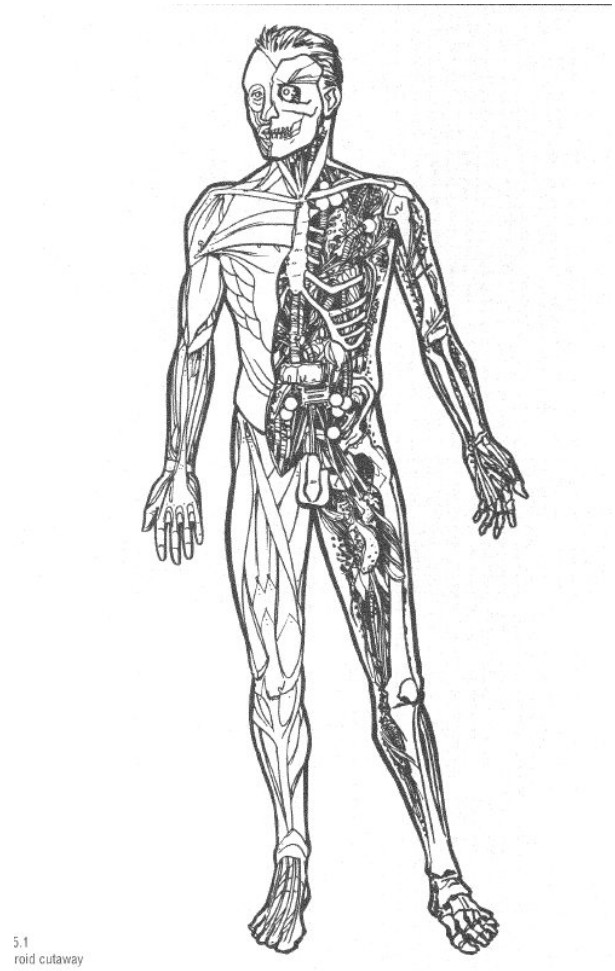
Vocobox: NewThroat, Forked Tongue, Voice Pattern, 1 free slot

Neuralware: standard, Processor, Interface plugs, Tactile boost, Olfactory boost, Taste boost, Cybermodem link, Smartgun link, Vehicle link, Dataterm link, Machine / tech link, Chipware socket with ChipLock, Cyberdetection computer, Lockdown, Sandevistan boosterware, BlackBox braindance recorder

SDP Allocation:
Head: SDP 45
Torso: SDP 60, Sexual implant, 1 Reserve hydrogen fuel cell
L Arm: standard hand, SDP 45, Satellite phone, Storage space, Cyberfingers: Wirecutter / Scissors, Lockpick, Interface plug
R Arm: standard hand, SDP 45, Storage space, 1 free space (usually used for cybermodem upgrades)
L Leg: standard foot, SDP 45, Motion detector, Cellular cyberdeck
R Leg: standard foot, SDP 45, 2 Reserve hydrogen fuel cells, Autoinjector,

Humanity loss: 12d6+1d6/2+1,5
Note: due to trueskinning, physical attractiveness and ability to participate in sexual contacts, overall HL is reduced by 50%.

TripleCo Ego


5.1
roid cutaway

Ego is a mid-line Gemini, a human-replica cyborg popular among those who need something better than Adam / Eva with its low performance and generic beauty. It's being built on pretty standard-quality parts, without a try to save by using inferior ones, but also without price-boosting superior technology. All in all, it sets a good average level, and is quite liked for its versatility and sturdiness, which is much superior to Belo Horizonte model.

Technological note: this FBC is built on Standard technology.

General info:
Type: good quality human-replica cyborg
Cost: 50'000e$ (49'225 e$ precisely)
Skeleton cost: 18'500 e$
Weight: 90 kg
Cover: WarmSkin with average quality plastic job (difficult to recognize the look as not being nature's work)
Energy source: batteries

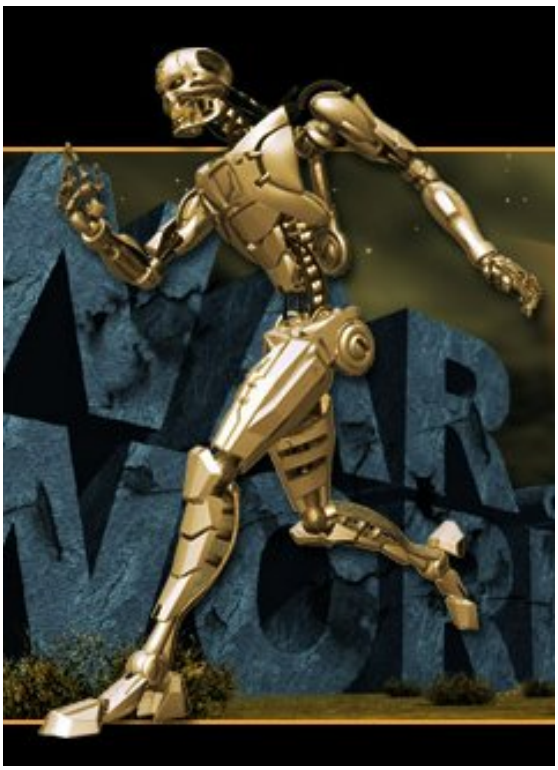
Performance:
BOD: 8
REF: 8
MA 8
ATTR: 8,
SP: none

Sensors:
Optics: L&R: 4 free spaces each
Audio: 6 free spaces
Vocobox: BoxAlter, 1 free space
Neuralware: standard

SDP Allocation:
Head: SDP 34
Torso: SDP 44, MrStudd/ MidniteLady, 2,75 free space
L Leg: SDP 34, standard foot, 3 free spaces
R Leg: SDP 34, standard foot, 3 free spaces
L. Arm: SDP 34, standard hand, 3,5 free spaces
R. Arm: SDP 34, standard hand, 3,5 free spaces

Humanity Loss: 13d6+1d3+1 HL
Note: due to realskinning, physical attractiveness and ability to participate in sexual contacts, overall HL is reduced by 40%.

IEC Golem



IEC produces the Golem quite as a Do-It-Yourself" FBC. They provide this high-grade main component, and the buyer has to finish it, customizing it to his needs. Golem is big and strong, very sturdy, and capable of accepting almost any set of equipment you'd wish it to use.

It is, however, pretty raw. It has the basic reflex processor, and rudimentary mobility control, so you could use it out of the box, but it lacks even a most basic outer casing.

It's a rare thing to see a stock Golem, but heavily-modified variants are pretty common.

Technological note: this FBC is built on Standard technology.

General info:
Type: high-grade component
Cost: 24'000e$ (23'900e$ precisely)
Skeleton cost: 20'800e$
Weight: 120kg
Cover: none. It's up to buyer to install a cover that fits his needs.
Energy source: batteries

Performance:
BOD: 10
REF: 4
MA: 5
ATTR: none
SP: none

Sensors:
Optics: L&R: 4 free spaces each,
Audio: 6 free spaces,
Vocobox: BoxAlter, 1 free space,
Neuralware: standard,

SDP Allocation:
Head: SDP 38
Torso: SDP 48, 6 free spaces
L Leg: SDP 38, standard foot, 4 free spaces
R Leg: SDP 38, standard foot, 4 free spaces
L. Arm: SDP 38, standard hand, 6 free spaces
R. Arm: SDP 38, standard hand, 6 free spaces

Humanity Loss: HL 12d6+1d3+2

TraumaTeam / IEC Model 14 Emergency Replacement Body

(Nicknamed „Wheelchair")

The „Wheelchair", as it's usually called, is a small, weak, poorly coordinated FBC on an unusual (but cheap!) tri-wheeled chassis. Trauma Team invented it (with a little help from IEC) as a temporal replacement body for it's cyborg patients, especially those who have their everyday bodies undergoing serious repair, modification, or damaged beyond repair, and waiting for a delivery of a new one. Rather than have the biopod kept on drugs, and linked to massive life-support machinery, TT invented a cyborg equivalent to wheelchair. It's skeletal construction allows for easy access to all internal parts, EasyClean™ plastic cover can be quickly washed and disinfected (initial series of Model 14's were clad in white only, but it was found to be depressing on both users and other patients – now, they're produced in a number of nice, pastel colors – blues, greens and reds). A number of recently produced Model 14's are equipped with quickchange biopods, to allow transferring patient into the "Wheelchair" in a matter of minutes.

A number of FBC possess Model 14 bodies as spares, just in case they'll have to leave their everyday use body for repairs. However, since "Wheelchair" is physically inferior to most humans, they prefer to use these only within safe locations, and even then only if necessary.

Technological note: this FBC is built on Skeletal technology

General info:
Type: budget emergency replacement body
Cost: 10'300 e$ (10'203,8 e$ precisely)*.
Skeleton cost: 9'380 e$
Weight: 30kg
Cover: cheap "EasyClean™" plastic (50e$ per location)
Energy source: batteries

*** Note**: a Quick-change Biopod – equipped version is available for 30'300e$.

Performance:
BOD: 2
REF: 4
MA: 5
ATTR: none
SP: none

Sensors:
Optics: Kiroshi Mono-Vision, 6 free spaces,
Audio: 6 free spaces,
Vocobox: BoxAlter, 1 free space,
Neuralware: standard,

SDP Allocation:
Head: SDP 24
Torso: SDP 34, 2 free spaces,
Multiwheel assembly (3-wheeled) SDP 31, 4 free spaces
L. Arm: SDP 22, standard hand, 2 free spaces
R. Arm: SDP 22, standard hand, 2 free spaces

Humanity Loss: 15d6+1,25 HL (Note: due to blatantly inhuman appearance, and to get rid of that funny "0,25 HL" thing, round up to a full 15d6+2 HL is suggested)

Rockwell Enhanced Mobility Prosthetic Modification

The first widely produced cybernetic replacement body, and probably the first functional FBC as well, Rockwell EMPM was meant for people whose bodies were completely destroyed, and for quadriplegics. It used a wide, heavy chassis on rubber tracks to allow the user any mobility – and to avoid balance problems that were common among walking machines.
In it's time, this was bleeding edge of technology.

Nowadays, it's but a museum piece. EMPM's aren't produced any longer, not even as bootleg copies.

Technological note: this FBC is built in Outdated technology.

General info:
Type: medical replacement body
Cost: 10'300e$* (10'244 e$ precisely)
Skeleton cost: 11587,5 e$
Weight: 60 kg
Cover: good quality plastic
Energy source: batteries

*** Note**: this is the price due to the rules in this sourcebooks. However, in its best time, this FBC reached price exceeding 100'000 e$.

Performance:
BOD: 4
REF: 5
MA 5
ATTR: not applicable
SP: none

Sensors:
Optics: L&R: Revelation Cyberoptics, 2 free spaces each
Audio: Spectrum Cyberaudio, no option spaces
Vocobox: BoxAlter, 1 free space
Neuralware: standard (using outdated Model 100 plugs)

SDP Allocation:
Head: SDP 29
Torso: SDP 40, 3 option spaces,
Tracked chassis: SDP 57, 7,5 space
L. Arm: SDP 29, standard hand, 3 spaces,
R. Arm: SDP 29, standard hand, 3 spaces,

Humanity Loss: 23d6+1,25 HL
Note: since the body is quite inhuman anyway, a round-up to 23d6+2 HL is suggested.

Mexican Metals Sidewinder

The Sidewinder is one of the few wett zeugs (Motorball race / combat bodies) that are actually being produced. Most of such shells are constructed by a race team's techs on individual basis, and accustomed to the user's preferences. Sidewinders are a common sight in the amateur league, however, and some of the less well-doing Motorballers in the professional circuits also stick to this model, although it's then heavily modified.

A few features of the Sidewinder that are worth noting (and often copied in professional bodies) are the techscanner / radio link telemetry set, allowing the chief mechanic of the team following the damage status, and quickchange mounts to keep pit-stop repair times as short as possible. Please keep in mind that the Sidewinder does have no cyberpsychosis suppression equipment installed.

Please note that – as a bloodsport – Motorball is generally legal in very few places, and only there regulations do allow purchase of 'borgs like the Sidewinder. And even there, it's usually not street-legal, being restricted to the proper Motorball tracks only.

Technology Note: this FBC is built on Standard technology

General info:
Type: Motorball „wett zeug"
Cost: 80'000e$ (77'692e$ to be precise)
Skeleton cost: 16'515e$
Weight: 90kg
Cover: SP20 ballistic nylon (often painted in bright colors)
Energy source: batteries

Performance:
BOD: 8
REF: 10
MA: 30
ATTR: none
SP: 20

Sensors:
Optics: L & R: standard, 4 free spaces each, OptiShield with AntiDazzle, Times Square Plus and Time/Date on top of that
Audio: tight-beam radio, scrambled, level damper, 3 free spaces
Vocobox: BoxAlter, 1 free space
Neuralware: standard

SDP Allocation:
Head: SDP 34
Torso: SDP 44, quickchange biopod, techscanner, gyrostabilisator, 2 free spaces,
L Arm: mace hand, SDP 34, quickchange mount, BigRipp, whip, 2 free spaces
R Arm: mace hand, SDP 34, quickchange mount, BigRipp, whip, 2 free spaces
Multiwheel assembly, SDP 51, quickchange mount, 6 free spaces,

Humanity loss: 21d6+1d3+0,5 HL

Mexican Metals Anaconda

Anaconda is a market follow-up of the Sidewinder: an FBC combat sports body. However, Mexican Metals used their experience from the previous model that had achieved only a mediocre success. Since Anaconda is meant for the professional circuit (its price tag shows this clearly), it's meant to be customized to the user's needs. Thus, it has a pretty rudimentary basic package, but a lot of space for options to fit particular user's combat style.

Generally, there are as many Anacondas as users – some equipped with hydraulic rams for extra strength, others with double-jointed, rotary limbs, even others with heaps of build-in weaponry. They do have to comply with particular sports rules and personal taste of the user.

However, quick-change limbs are almost unheard about, after a few cases when these were used against the combatant – by simply unlocking and removing them from an opponent.

Technological note: this FBC is built on Standard technology, with oversized legs.

General info:
Type: cybernetic gladiator / hand-to-hand combat shell
Cost: 110'000e$ (109'400e$ precisely)
Skeleton cost: 22'400e$
Weight: 120kg
Cover: SP 20 ballistic nylon
Energy source: batteries

Performance:
BOD: 10 (oversized legs of BOD 12)
REF: 12
MA 10
ATTR: none
SP: 20

Sensors:
Optics: L&R: Antidazzle (L&R), microvideo (L), Dodgeball ®, 2 (L) and 1 ® free spaces
Audio: radio link, 5 free spaces
Vocobox: BoxAlter, 1 free space
Neuralware: standard

SDP Allocation:
Head: SDP 38,
Torso: SDP 48, quick-change biopod, 5 free spaces,
L Leg: SDP 40, 4,5 free space,
R Leg: SDP 40, 4,5 free space,
L. Arm: SDP 38, 6 free spaces,
R. Arm: SDP 38, 6 free spaces,

Humanity Loss: 13d6+1d6/2+4,5

Bodyweight Life Preservation Systems/Adrek Robotics
BX-100 ERB Mk.1

Emergency Replacement Body
(Nicknamed "Jameson, Mk.1")
By Snowtiger

The "Jameson" is a down-to-the-ground, cheap-as-dirt replacement body for use during you regular body is in for repairs. Its basic configuration is nothing impressive to look at, it's a simple metal box atop four stout peg-legs with a pair of arms installed at the center of its top face on a rotating mount that can be turned 180 degrees both vertically and horizontally. The one on the left is an interface arm, it has a set of interface plugs, a retractable, articulated physical probe for pushing buttons and typing on keyboards, and a small manipulator claw for picking up small objects and otherwise interacting with the world around. The one on the right is a sensor boom that can be used to see things that are outside the main camera's FOV, it contains a small fiberoptic camera and a microphone pickup. The boxy main body sports a small digital video-camera on its forward face, internal microphones for audio pickup and a simple voice-box for communicating with the outside world. The legs are barely worth mention, as they're just four short peg-legs on limited mobility mountings on the lower corners of the side faces of the main body. They're articulate enough to allow basic mobility at a slow pace, but lack the sufficient articulation to allow the body to traverse neither stairs nor steep inclines on its own. It is, however able to utilize all ramps under 30 degrees of inclination, so it can enter most buildings with ramps for the disabled. It cannot jump, and dropping from extensive heights can damage its leg mountings. It is, however, light enough to be lifted by a single unaugmented person, and thus can enter most vehicles and other places it cannot go on its own.

Most "Jamesons" are found on small cybernetic clinics tending only FBC hosts, along with some less-than-legal establishments (read: ripperdocs) and 'borg communities. Its simple design means that it's cheap to maintain and fairly easy to modify. As it's an older, almost obsolete design, it's very hard to find a completely off-the-shelf "Jameson"(presented by the stats below). This also means that all modifications are made on rebuilt "Jamesons" and aren't therefore available for a stock unit. With a stock "Jameson" the performance values can be upgraded up to a max of 5 per stat, but some rebuilt "Jamesons" can have aftermarket modifications to allow even greater range of mobility and articulation of limbs. It's rumored that some of these rebuilt "Jamesons" have had their fixed biopod mountings replaced with receptables for Interchangeable biopods, although they are not available for stock "Jamesons".

Jameson 'borgs

Yes, I've noticed there's something wrong with the calculations on the Jamesons. However, since they're non-standard creations, I wasn't able to exactly re-work them and put the absolutely correct costs here. I've put my calculations and estimations in italics instead. Use whichever you do like.

- Mike van Atta

Technological note: this FBC is built on Skeletal technology, because its limbs do not have the full function range of a human being, they're counted as partial cyberlimbs. Body costs, 3300 e$.

General info:
Type: budget emergency replacement body
Cost: 9,050 e$ / *7'100e$ according to my calculations - Mike*
Skeleton cost: 6,204 e$ / *4760e$ as far as I could deal with it.*

Weight: 50kg
Cover: cheap plastic (20e$ per location, body counts as one location)*
Energy source: batteries

*** Note**: Available in a limited range of colors (Red, blue, green, white, and black), although rebuilt models can have other colors as well

Performance:
BOD: 2**
REF: 2**
MA: 2**
ATTR: none
SP: none

**** Note**: Can be upgraded to a max of 5

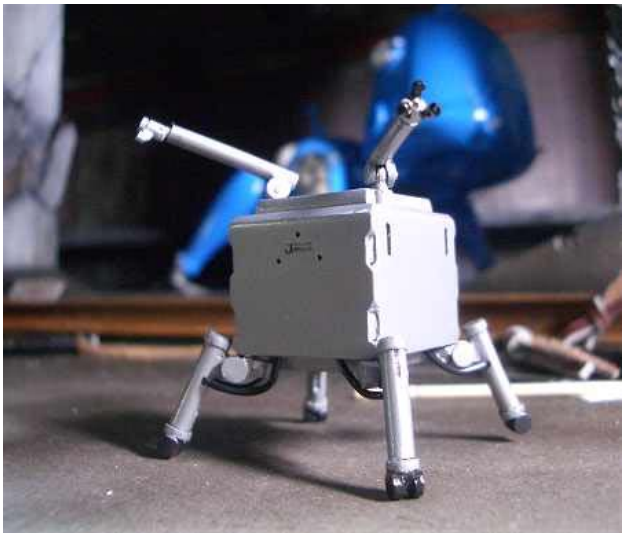
Sensors:
Optics: High-grade digital video camera, 2 free spaces
Audio: Omnidirectional microphone setup, 2 free spaces
Vocobox: BoxAlter, 1 free space
Neuralware: standard.
Snowtiger did use "skeletal" cyberoptic, cyberaudio and vocobox from the "Cyberwares of the World" handbook. However, as far as I know, a "skeletal" cybereye should have 4 option spaces, and "skeletal" audio should have 6) - Mike

SDP Allocation:
Body: SDP 30, 2 free spaces / *I believe it should be 34 SDP - Mike*
Legs(4): SDP 16, no free spaces***
Interface Arm/Manipulator(left): SDP 16 (Pair of interface plugs in an articulated mount, physical probe, manipulator claw)
Sensor Arm(right): SDP 16 (fiberoptic camera, microphone), 1 free space
*** Note: Stats per limb.

Humanity Loss: 18d6+2 / *12d6+1d3+1 as for me… however, that whole torso was a weird idea from the very beginning - Mike*

Popular Options/Upgrades:

LiveWire Prehensile Interface Plugs (most rebuilt "Jamesons" have these already). 400e$, *2*
MA Upgrade (improved leg mountings), cost and HC as in CheapFBC
REF Upgrade (improved motoric system processors), cost and HC as in cheapFBC
BOD Upgrade (Reinforced structure, improved hydraulics), cost and HC as in cheapFBC.
Utility Pincers, cost and HC as in cheapFBC.



Jameson construction notes:
1. All limbs are considered partial cyberlimbs, because none of them are fully functional when compared to normal cyberlimb standards. Also, as the the main body is just a simple metal-framed case, it shouldn't cost as much as a full FBC torso (the 3,300 e$ comes up to 5,000 e$ if you disregard the skeletal tech cost modifier and go for standard tech instead). I'm still having a debate with myself if even that price tag is too low. I also calculated the body's HC as 6d6, rather than 8d6, simply because the box shape is a bit easier to fit options with than a borg body that has to at least mimic humanoid body shape. The amount of limbs builds up the rest of the HC, and because there are so many limbs (seven in total, four legs and three manipulators (I'm counting the interface arm as a manipulator as it can be used to type on keyboards and keypads as well as used as a convenient extendable plug-in device), it bumps up the HC quite a bit.

2. Those stats are for humanoid and near-humanoid ('borgs with inhuman transportation devices instead of legs) bodies, the Jameson is neither, plus it has short legs (low MA), poor coordination (low REF), and the legs as well as the primary manipulator arms (utility pincers) are frail so it cannot carry much else than itself (low BODY), so that drops the stats.

- Snowtiger

- This is what I was able to hear from Snowtiger about how did he made up Jamesons. Thus, if you want to re-create this technology, you're on your own.
Nevertheless, it's a great example of elastic, creative approach to the rules.

- Mikael van Atta

Bodyweight Life Preservation Systems/Adrek Robotics
BX-100 ERB Mk.2

Emergency Replacement Body, modified
(Nicknamed "Jameson, Mk.2")
By Snowtiger

The stats below represent a modified Jameson, contrary to the original version presented above. Such bodies are also available right from the producer, as many were made in the late production series.

Technological note: this FBC is built on Skeletal technology, because its limbs do not have the full function range of a human being, they're counted as partial cyberlimbs. Body costs 3300 e$.

General info:
Type: budget emergency replacement body
Cost: 9,800 e$(rounded from 9,704 e$) */ 8'300e$ according to my calculations - Mike*
Skeleton cost: 6,864 e$ */ 9'000e$ - Mike*
Weight: 50kg
Cover: cheap plastic(20e$ per location, body counts as one location)*
Energy source: batteries

*** Note**: Available in a limited range of colors(Red, blue, green, white, and black), although rebuilt models can have other colors as well

Performance:
BOD: 2**
REF: 2**
MA: 2**
ATTR: none
SP: none

**** Note**: Can be upgraded to a max of 5

Sensors:
Optics: High-grade digital video camera, 2 free spaces
Audio: Omnidirectional microphone setup, 2 free spaces
Vocobox: BoxAlter, 1 free space
Neuralware: standard.

SDP Allocation:
Body: SDP 30, 2 free spaces
Legs(4): SDP 16, no free spaces***
Interface Arm: SDP 16(LiveWire Prehensile Interface Plugs, along with a physical probe and a manipulator claw), 1 free space
Sensor Arm(right): SDP 16 (fiberoptic camera, microphone), 1 free space
Utility Pincer(2): SDP 10, no free spaces***
*** Note: Stats per limb.

Humanity Loss: 18d6+2 */ 15d6 - Mike*

Popular Options/Upgrades:
LiveWire Prehensile Interface Plugs(most rebuilt "Jamesons" have these already). 400e$, *2*
MA Upgrade (improved leg mountings), cost and HC as in cheapFBC
REF Upgrade (improved motoric system processors), cost and HC as in cheapFBC
BOD Upgrade (Reinforced structure, improved hydraulics), cost and HC as in cheapFBC.
Utility Pincers, cost and HC as "partial cyberlimbs" in cheapFBC, only halved, due to the simplicity of these limbs.

Saab-Bofors Icarus

Saab-Bofors consortium has a long and respectable history in producing military hardware, including some of the more innovative designs. They've also found their way into cyberware market, and their products have gained healthy reputation as well.

One of the better known (in military circles) products of Saab is their aircraft. They do not only stand up to world performance standards, but also tend to sport some unique innovations that become obvious in time – and then everyone wonders why those Swedes had got the idea first.

However, modern combat craft began to suffer from the weakest link in the chain: the pilot. Whereas planes themselves are capable maneuvering very tightly even on ultra-Mach velocities without any harm, a human pilot – even in a bulky g-suit - can withstand only that much stress before he loses the ability to fight further. Yet no AI can replace a human pilot so far, at least in combat missions. FBC pilot seemed to be the best option – but Wingman borgs were found absolutely unacceptable by Saab-Bofors. Their brand new Saab J-45 Svärdet[3] (*the Sword,* according to out resident Swedish interpreter) cyberfighter needed more.

And that's where the Icarus comes from. It's innovative, yet surprisingly reasonable construction. It is light and as strong as ordinary human (there was an idea to make the pilot 'borg the size of a child, to save on space and weight, but it was rejected, as such a borg would need a cockpit to be made especially for it), since there's simply no need for more. It's battery – powered, for it cuts down on maintenance, and – contrary to ground combat borgs like Attila, it doesn't use much energy when in action, and can even power itself from the plane's systems, if appropriate links have been provided in cockpit (in J-45, they were). It is equipped with internal parachute, but this is meant as backup only – normally, Icarus is ejected along with the seat, using the parachute and survival supplies attached to it. Borg's optic system is one of the best packages for air combat ever designed, including the highly-valued Blue Max subsystems. No matter whether the aircraft has old-styled manual controls or cyberlink, transparent canopy or all-around armor with external cameras – Icarus will handle it equally well.

Icaruses are also adapted to adverse conditions, so they can survive cockpit depressurization even on extreme heights. Some organizations are taking advantage of it, employing these borgs as aero-orbital and space pilots (although some minor modifications are often applied). Also, situations are known of Icaruses successfully driving various other vehicles in combat. Recently, commercial airlines began inquiring Saab-Bofors for a stripped-down Icarus variant to be used on their commercial air- and spaceplanes.

What's worth noting, Icarus is meant to be full interchangeable with a flesh pilot – a regular, unaugmented human can fly the plane, then Icarus can do it as well, without any readjustments needed. In fact, this was one of the requirements in the J-45 Svärdet program: that the very same fighter could be piloted by human and 'borg. The only equipment in the cockpit an Mk.1 human wouldn't have use of is interface cables and power links.

Technological note: this FBC is built on Standard technology.

General info:
Type: cyborg pilot
Cost: 190'000e$ (186'950e$ precisely)
Skeleton cost: 15'700e$
Weight: 60kg
Cover: top-quality plastic, usually covered in appropriate ground camouflage pattern
Energy source: batteries

[3] The J-45 Svardet can be seen here: http://datafortress2020.110mb.com/milcat/mfighters.html , courtesy of Datafortress 2020. Please note that the page is graphic-heavy, and might take a while to load.

Performance:
BOD: 5
REF: 15
MA : 8
ATTR: none
SP: none

Sensors:
Optics: L&R: Blue Max* (L&R), teleoptics (L&R), image enhancement (L&R), thermograph (L), ultraviolet (R) Optishield: anti-dazzle, Times Square Plus, time / date display, low-light.
Audio: level damper, sound editing, 4 free spaces
Vocobox: BoxAlter, 1 free space
Neuralware: standard plus psycho restrainer / Cybertrooper moddy rig, Kerenzikov boosterware +2, chipware socket, vehicle link, smartgun link

Other features:
Icarus comes equipped with grade 2 EMP hardening, and three Extreme level environmental adaptations: vacuum, cold and gravity stress.

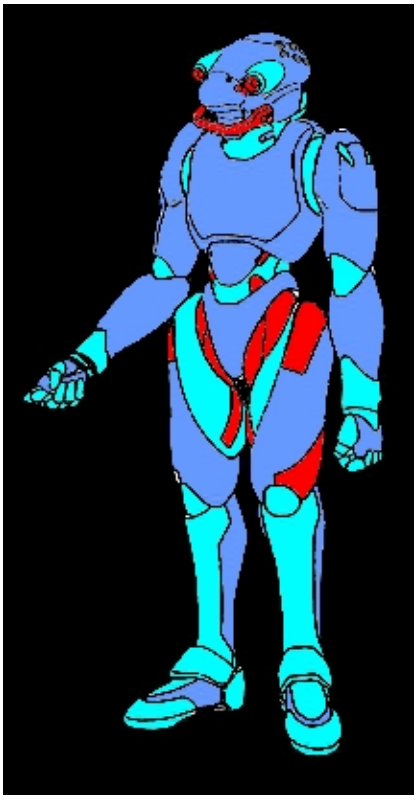
SDP Allocation:
Head: 30 SDP
Torso: 40 SDP, built-in parachute, quick-change biopod,
L Leg: 30 SDP, 1 space, standard foot
R Leg: 30 SDP, 1 space, standard foot
L. Arm: 30 SDP, gyrostabilizer, 1 free space, standard hand
R. Arm: 30 SDP, autoinjector, 1 free space, standard hand

*Blue Max – HL 1, 700e$, 1 space. Surely you've heard about Dodgeball, a cyberoption that analyzes opponent's movement in hand-to-hand combat, allowing to predict his further moves and thus both avoid his strikes better, and aim your own attacks more effectively. The effect of Blue Max is similar, but its field of expertise isn't a mere barroom brawl, just aerial combat. When multi-ton, cybercontrolled fighters worth zillions of eurobucks throw superfast missiles, AI missiles and cannon bursts at each other, squeezing out dozens of G in tight turns at supersonic speed, Blue Max gives pilots the edge they need. Game effect: like the Dodgeball, Blue Max gives a +1 to attack rolls and vehicle dodge (i.e. increase "to hit" difficulty level by 1) against a particular opponent after a brief moment of observation. Blue Max requires neural processor – it relies on it's extra processing power to cut the observation time down to 15 seconds (still a lot of time when in combat).

Note: Saab-Bofors is still working on "Viggen" ("the Thunderbolt") system, a Combat Crystal's equivalent for Icarus 'borgs, to allow perfect coordination of aircraft squadrons. It is to rely mainly on craft's laser communications system for coordination. Cost of such a device is yet unknown.

Humanity Loss: 14d6+1d6/2+1
Note: due to widespread use of Cybertrooper Moddy, HL is usually considered irrelevant.

Olympia Cybernetics / IEC Hero



The Hero class, a design from Olympia Cybernetics (now produced by IEC, under license agreement) has proven to be a massive success. While not outstanding in any particular field, it is a good all-around platform, and several specialized variants are based on it. Hero was – from the very beginning – designed with crisis reaction forces in mind – fire brigades, ambulance services and police forces. It is small enough to use any equipment designed for humans, including load-bearing equipment, tools, weapons, and vehicles. It's well-armored, so it can enter a blazing, collapsing building (advanced heat shielding comes handy here) or any other disaster site without fear, and still strong enough to move debris with its own hands. There's also a moddy-capable socket, if the buyer prefers to have his emergency personnel issued such, and a handsome amount of space for further upgrades.

Please note that Hero and its variants were intended as duty-only bodies, thus all are equipped with quick-change biopod sockets, standard.

Technological note: this FBC is built on Standard technology.

General Info:
Type: base for emergency service 'borgs
Cost: 110'000e$ (precisely:105'715e$)
Skeleton cost: 16'500e$
Weight: 90kg
Cover: SP 20 ballistic nylon
Energy source: batteries

This model comes with one Extreme-level environmental adaptation versus heat.

Performance:
BOD: 8 (16*)
REF: 12
MA: 12
ATTR: none
SP: 20

* due to 2nd generation myomars

Sensors:
Optics (standard): L & R: Anti-Dazzle (L&R), Times Square Plus (L). 3 free spaces (R)
Audio (standard): radio, scrambler, level dampener, sound editing, enhanced hearing range, 1 free space
Vocobox: BoxAlter, Volume (used usually as a megaphone)
Neuralware: processor, interface plugs, chipware socket (modified to accept moddy chips)

SDP allocation:
Head: SDP 34
Torso: SDP 44, Quickchange Biopod, 2,75 free spaces
L Arm: SDP 34, standard hand, 3,75 free spaces
R Arm: SDP 34, standard hand, 3,75 free spaces
L Leg: SDP 34, standard foot, 3,625 free spaces
R Leg: SDP 34, standard foot, 3, 625 free spaces

Total humanity loss: 16d6+1d6/2+1,5 HL

Olympia Cybernetics / IEC Apollo

The most commonly seen of the Hero variants, Apollo is equipped with a genuine set of tools – all for one purpose. Get to the disaster site, remove any obstacles in its way, and get people out of there! Contrary to the old model, Brimstone, it doesn't drag a heavyweight water pipe attached to its back – a small CO2 extinguisher is built in, but it is meant as an emergency measure – normally, the borg carries a conventional, hand-held fire hose. There are chemical and radiation scanners as well, so the borg can detect such dangers. Variants protected vs. radiation and chemicals are available (see Olympia Cybernetics / IEC Hades), but the standard model can use human-issue protective means, if a need arises.

Note: the Apollo presented here is equipped with an external, cyber-controlled fire extinguisher backpack with extendable foam jet / sensory unit boom.

Technological note: this FBC is built on Standard technology.

General Info:
Type: firefighting 'borg
Cost: 110'000e$ (precisely:108'565e$)
Skeleton cost: 16'500e$
Weight: 90kg
Cover: SP 20 ballistic nylon
Energy source: batteries

This model comes with one Extreme-level environmental adaptation versus heat.

Performance:
BOD: 8 (16*)
REF: 12
MA: 12
ATTR: none
SP: 20

* due to 2nd generation myomars

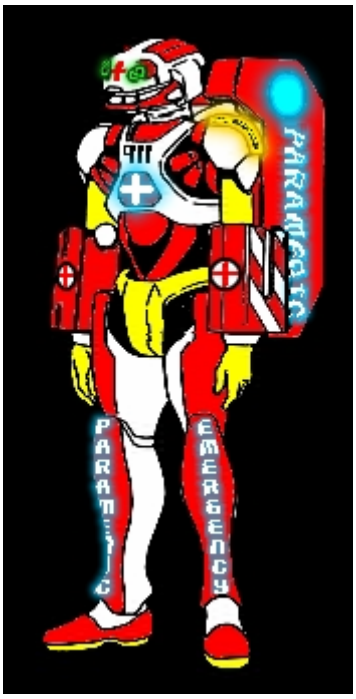
Sensors:
Optics (standard): L & R: Anti-Dazzle (L&R), Times Square Plus (L). Thermal imaging (R), LowLight (R), 1 free space (R)
Audio (standard): radio, scrambler, level dampener, sound editing, enhanced hearing range, 1 free space
Vocobox: BoxAlter, Volume (used usually as a megaphone)
Neuralware: processor, interface plugs, chipware socket (modified to accept moddy chips)

SDP allocation:
Head: SDP 34
Torso: SDP 44, Quickchange Biopod, radar, 1,75 free space
L Arm: SDP 34, Grapple hand, ChainRipp, 1,75 free spaces
R Arm: SDP 34, Extension hand, CO2 extinguisher, cutting torch, 1,75 free spaces
L Leg: SDP 34, standard foot, chemical analyzer, 2, 625 free spaces
R Leg: SDP 34, standard foot, radiation detector, 2, 625 free spaces

Total humanity loss: 19d6+2d6/2+1 HL

Olympia Cybernetics / IEC Aesklepios

Aesklepios is the paramedical variant of Hero. It isn't a full-fledged doctor, but it is meant to be a lifesaver, not cosmetic surgeon for the rich. It is to ride ambulances to the meanest back streets of the town. Several are used as battlefield medics as well. An Aesklepios carries all the tools it may need in it's arms: there are two sets of Microwaldo bracers (effectively, Aesklepios has more hands than a whole surgical team), modular hands with medical instruments, two storage bays for extra utensils, taser grips re-tooled into use as defibrillator paddles (with extra batteries to compensate the power drain) – not to mention these can be also used to zap anyone trying to interfere. Also, a gas jet is provided – usually, its reservoirs are filled with antiseptics, to be sprayed upon the patient. However, Olympia Cybernetics is considering adding more of these, to allow quick application of tissue glue and spray-on casts, as soon as those technologies are patented by TraumaTeam.



Aesklepios is usually seen carrying a huge backpack or bag with supplies – IV's, stretchers, oxygen supply, mylar blankets, wound dressings – that would make anyone but an Olympic athlete fall to the ground.

Technological note: this FBC is built on Standard technology.

General Info:
Type: Paramedic 'borg
Cost: 115'000e$ (precisely:111'950e$)
Skeleton cost: 16'500e$
Weight: 90kg
Cover: SP 20 ballistic nylon
Energy source: batteries

This model comes with one Extreme-level environmental adaptation versus heat.

Performance:
BOD: 8 (16*)
REF: 12
MA: 12
ATTR: none
SP: 20

* due to 2nd generation myomars

Sensors:
Optics (standard): L & R: Anti-Dazzle (L&R), Times Square Plus (L). Thermooptics (R), low-light (R), micro-optics (R)
Audio (standard): radio, scrambler, level dampener, sound editing, enhanced hearing range, 1 free space
Vocobox: BoxAlter, Volume (used usually as a megaphone)
Neuralware: processor, interface plugs, chipware socket (modified to accept moddy chips), tactile boost

SDP allocation:
Head: SDP 34
Torso: SDP 44, Quickchange Biopod, , 2,75 free spaces
L Arm: SDP 34, Medical Modular hand, medscanner, microwaldo bracer, taser grip, 0,75 free space
R Arm: SDP 34, Medical Modular hand, gas jet, microwaldo bracer, taser grip, 0,75 free space
L Leg: SDP 34, standard foot, storage space, additional battery, 2,125 free spaces
R Leg: SDP 34, standard foot, storage space, additional battery, 2,125 free spaces

Total humanity loss: 18d6+2d6/2+1HL

Olympia Cybernetics / IEC Themis

Police model of the Hero, Themis is meant to be used as a SWAT or Max-Tac commando, although they were successfully fielded as Riot troops as well. There's nothing preventing Themises fulfilling any police duty, simply they are too expensive to be widely used. Still, in any SWAT situation, they're going to do just fine.

In fact, Themises perform so well that the military asked for a combat variant, which Olympia had designated Ares.

Technological note: this FBC is built on Standard technology.

General Info:
Type: Police 'borg
Cost: 110'000e$ (precisely:109'140e$)
Skeleton cost: 16'500e$
Weight: 90kg
Cover: SP 20 ballistic nylon
Energy source: batteries

This model comes with one Extreme-level environmental adaptation versus heat.

Performance:
BOD: 8 (16*)
REF: 12
MA: 12
ATTR: none
SP: 20

* due to 2nd generation myomars

Sensors:
Optics (standard): L & R: Anti-Dazzle (L&R), Times Square Plus (L). LowLight (R), Targeting scope (R), Image enhancement (R)
Audio (standard): radio, scrambler, level dampener, sound editing, enhanced hearing range, 1 free space
Vocobox: BoxAlter, Volume (used usually as a megaphone)
Neuralware: processor, interface plugs, chipware socket (modified to accept moddy chips), Kerenzikov +2, smartgun link

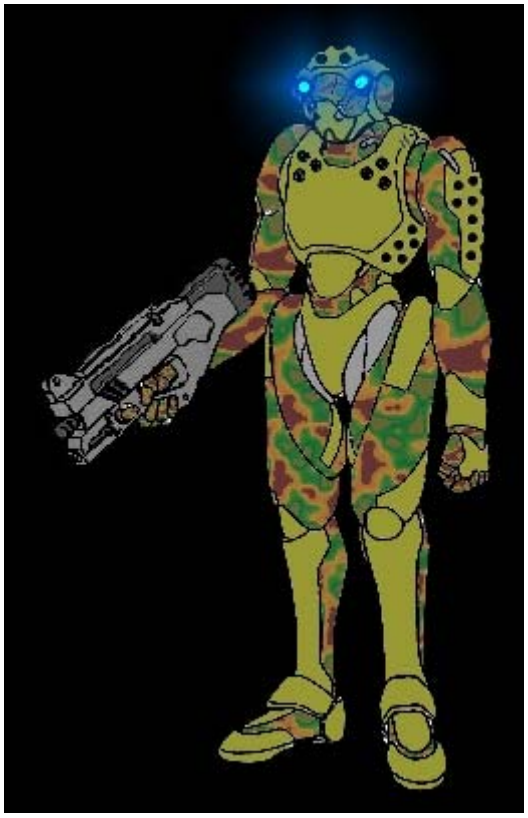
SDP allocation:
Head: SDP 34
Torso: SDP 44, Quickchange Biopod, 2,75 free spaces
L Arm: SDP 34, standard hand, gas jet, taser grip, 1,75 free spaces
R Arm: SDP 34, standard hand, Black Book computer, taser grip, 1,75 free spaces
L Leg: SDP 34, standard foot, 3,625 free spaces
R Leg: SDP 34, standard foot, restraint strip dispenser, 2,625 free spaces

Total humanity loss: 18d6+1d6/2+2 HL

Olympia Cybernetics / IEC Ares

While Ares, the military Hero variant, can't match Attila as a "cybernetic shocktrooper", it is still a valuable asset. Militech may try to ridicule it, since Ares isn't as strong, as fast, or as resilient as their model, but Olympia points out one small thing: price. You can have almost two and a half Ares borgs for the money you'd need to buy a simplest Attila. And Ares comes with grade 2 EMP shielding standard. And if the protection is too weak, you can always dress it in some XL-sized flak jacket for extra armor. Plus, Ares will fit into any standard transport, combat or utility vehicle, and it won't damage the shocks, unlike a 340kg Attila.

The commanders who like to flex their muscles are going to lobby for Attila. But Ares is not as expensive, and it can do most of the same things. That's why so many countries prefer it over Militech's product.



Technological note: this FBC is built on Standard technology.

General Info:
Type: military 'borg
Cost: 145'000e$ (precisely:143'065e$)
Skeleton cost: 16'500e$
Weight: 90kg
Cover: SP 20 ballistic nylon with Militech Mirage Gear camouflage system equivalent build-in.
Energy source: batteries

This model comes with one Extreme-level environmental adaptation versus heat. Also, EMP grade 2 hardening is provided.

Performance:
BOD: 8 (16*)
REF: 12
MA: 12
ATTR: none
SP: 20

* due to 2nd generation myomars

Sensors:
Optics (standard): L & R: Anti-Dazzle (L&R), Times Square Plus (L). LowLight (R), Targeting scope (R), image enhancement (R)
Audio (standard): radio, scrambler, level dampener, sound editing, enhanced hearing range, 1 free space
Vocobox: BoxAlter, Volume (used usually as a megaphone)
Neuralware: processor, interface plugs, chipware socket (modified to accept moddy chips). Kerenzikov +2, smartgun link

SDP allocation:
Head: SDP 34
Torso: SDP 44, Quickchange Biopod, radar, sensory extension (with 4 free optical and 2 audio spaces). 0,75 free space
L Arm: SDP 34, standard hand, 3,75 free spaces
R Arm: SDP 34, standard hand, 3,75 free spaces
L Leg: SDP 34, standard foot, 3 extra batteries, 2,125 free spaces
R Leg: SDP 34, standard foot, 3 extra batteries, 2,125 free spaces

Total humanity loss: 18d6+1d6/2+1,5 HL

Olympia Cybernetics / IEC Hades

A rare sight, Hades is hazardous-environment Hero variant. It is protected far more than a standard Hero, it can cope with a chemical spill, nuclear reactor leak, biohazard – in fact, nearly any problem that would otherwise require the use of most severe protective means, or even remotes-only. Like Apollo variant, it has some tools built in, but generally relies on hand-held equipment. Thanks to extensive sensor system, it can work even in the worst kinds of smoke (not even white-phosphorus smoke is going to stop it!). The one quality that is often seen as disadvantage is the lack of additional air reserve. However, Olympia Cybernetics replies that requiring even a Hades to work in a place so dangerous it can't breathe in it, for over 8 hours is asking for an accident, and thus lack of additional air supply is to force regular checkups on Hades 'borgs when working in harshest conditions.

Standard moddy link is rarely used, however, some Hades borgs are being equipped with the "Rescue Ranger" moddy.

Note: the Hades presented here is equipped with an additional backpack tank meant to disperse liquid chemical neutralizers. The two jets are fully adjustable due to cybernetic control.

Technological note: this FBC is built on Standard technology.

General Info:
Type: base for emergency service 'borgs
Cost: 270'000e$ (precisely:263'440e$)
Skeleton cost: 16'500e$
Weight: 90kg
Cover: SP 20 ballistic nylon, usually in orange (or yellow)-black "hazard" striping
Energy source: batteries

This model comes with Extreme-level environmental adaptations versus heat and corrosives, and Serious-level adaptations versus cold, pressure and lack of pressure. Grade 3 EMP hardening is included.

Performance:
BOD: 8 (16*)
REF: 12
MA: 12
ATTR: none
SP: 20

* due to 2nd generation myomars

Sensors:
Optics (standard): L & R: Anti-Dazzle (L&R), Times Square Plus (L). Thermograph and 2 free spaces (R)
Audio (standard): radio, scrambler, level dampener, sound editing, enhanced hearing range, 1 free space
Vocobox: BoxAlter, subsonic speaking
Neuralware: processor, interface plugs, chipware socket (modified to accept moddy chips), echolocation co-processor

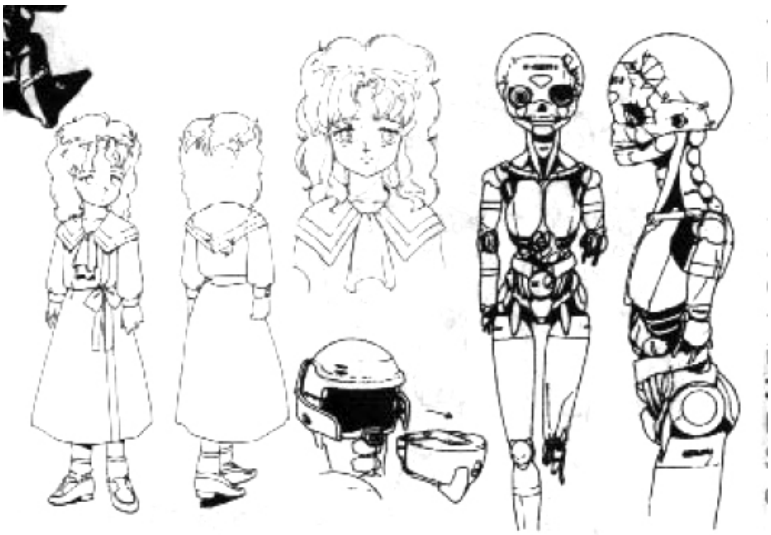
SDP allocation:

Head: SDP 34
Torso: SDP 44, Quickchange Biopod, radar, 1,75 free spaces
L Arm: SDP 34, standard hand, squirter, cutting torch, satellite uplink, 1,75 free spaces
R Arm: SDP 34, standard hand, squirter, semi-contained searchlight (800m range, white light) , 1,75 free spaces
L Leg: SDP 34, standard foot, movement detector, chemical analyzer , 1,625 free spaces
R Leg: SDP 34, standard foot, radiation detector, mini-computer (PCX-equivalent), 1, 625 free spaces

Total humanity loss: 19d6+1d6/2+2,5 HL

Belo Horizonte Sebastian

"We'll treat your child like a king!" – BH Sebastian's marketing slogan



BH Sebastian is meant as a medical replacement / Gemini body for children. Rumor says that the first one was invented for major shareholder's nephew, who was crippled in an accident. Whether true or not, it is fact that BH put a lot of attention into Sebastian line, and show great care for fitting them to specific users.

Sebastian is a body that can be factory-fitted for a child of almost any age (there are variants with higher Body rating as well, although the basic BOD 2 is the most popular), any sex and any look. This is meant to provide a body as close to the original look of the child as possible, and minimalise personality loss and emotional trauma. Because it means every Sebastian has to be personalized, BH maintains a small stock of "generic" Sebastian bodies in ready-to-ship condition for emergency orders. However, those bodies are usually only rented for a limited time, that is – until the proper, personalized body can be finished and delivered. Such a "generic" body is Attr 6, good quality in RealSkin cover, and costs 21'000e$.

Technological note: this FBC is built on Brazilian technology. The data below depict a "raw" Sebastian, without any cover. Belo Horizonte can deliver this model in such condition, but they usually insist that they produce the requested look and cover.

General info:
Type: Gemini medical replacement body for children
Cost: 11'500e$ (precisely 11'435 e$) plus cover costs.
Skeleton cost: 10'800 e$
Weight: 30 kg (optional ballast available for extra weight)
Cover: varies from order to order. Usually WarmSkin.
Energy source: batteries

Performance:
BOD: 2
REF: 6
MA: 5
ATTR: varies
SP: none

Sensors:
Optics: Brazilian L&R: 3 free spaces each,
Audio: Brazilian, 4,5 free spaces,
Vocobox: Brazilian BoxAlter, 0,6 free space (i.e. effectively no free spaces),
Neuralware: standard,

SDP Allocation:
Head: SDP 11,
Torso: SDP 17, 2 free spaces,
L Leg: SDP 11, standard foot, 2 free spaces,
R Leg: SDP 11, standard foot, 2 free spaces,
L. Arm: SDP 11, standard hand, 2 free spaces,
R. Arm: SDP 11, standard hand, 2 free spaces,

Humanity Loss: 6d6+1d6/2+7 HL

Note: depending on the cover variant, a Sebastian can be entitled to varying HL reductions. They are also considered to be attractive, however, they lack Mr.Studd / Midnite Lady implants (BH company politics call it would be “inappropriate” to equip a child with fully-functional sexual organs. Sebastian-class ‘borgs do have realistic genitalia made of the cover material, but these are not useable, and provided only for completeness sake. Of course after-market modifications are possible…), since they are not meant to participate in sexual contacts. Generally, depending on cover type, a Sebastian is entitled to HL reduction of 30-45%. Please check the “Children as borgs” chapter for more information.

Sukhoi Cyberwares Stalker

If you've thought all Russian 'borgs to be hulking, clumsy uglies like the infamous Ilya Mooromyets, let the Sukhoi Cyberwares prove you wrong.

Meet the Stalker.

Contrary to many opinions, this is it's true name (originating from a 20th century SF novel, "Roadside Picnic", by A.&B. Strugacki, it doesn't have that sinister meaning attributed to the term "stalker" in English – in modern Russian, it means someone capable of recon and exploration in the most dangerous places). The Stalker is a dedicated military scout / commando shell. Contrary to secret agent / commando Ghost from Raven Microcyb, it lacks the ability to pass as a human being, but it is able to take (and deliver!) much more punishment. Its mission is to gather intelligence on battlefield or behind enemy lines, being able to perform acts of sabotage, wage irregular warfare and generally do most of the things you expect from elite recon / commando unit.

Spetsnaz, the elite of Russian Special Forces, is said to keep a number of Stalker shells ready for their 'borg operatives. Several such shells have been purchased by other armies for their reconnaissance and commando units; although it is rumored they usually decide to drop the "security" self-destruct explosive charge Stalker comes with.

Note: Stalker has both batteries and hydrogen fuel cells. Fuel cells are the preferable power source for a military borg (due to the unit's high power output), and thus should be replaced on as-needed basis. However, Sukhoi's engineers were aware that battlefield situation is usually less than perfect, and restocking might be not possible. So, the power system hardwired into the borg is rechargeable batteries – thanks to this, Stalker can re-power from any power output available.

Technological note: this FBC is built on Standard technology, with +50% SDP upgrade

General Info:
Type: military reconnaissance 'borg
Cost: 650'000e$ (precisely: 639'288e$)
Skeleton cost: 33'300e$
Weight: 90kg
Cover: SP 20 ballistic nylon with Reactive body plating, Ghostsuit and IR baffling
Energy source: batteries (basic) & hydrogen power cells (additional)

This model comes with Serious level environmental adaptations vs. cold, heat, pressure, lack of pressure, gravity and Grade 3 EMP hardening

Performance:
BOD: 16* (*8, +8 due to tightened myomars)
REF: 15
MA: 20
ATTR: none
SP: 20

Sensors:
Optics: standard cybereyes, Anti-dazzle (L&R), image enhancement (R), UV (R), microoptics (R), teleoptics (L), Infrared (L), low-light (L)
Audio: standard cyberaudio, sound editing, level damper, enhanced hearing range, radar detector,

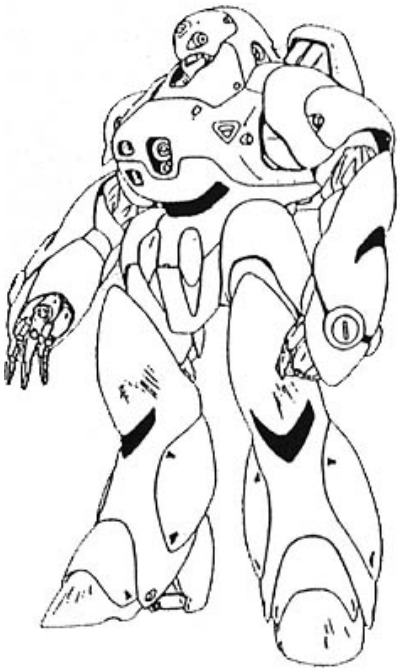
amplified hearing, bug detector
Sensory boom (cyberoptic: anti-dazzle, low-light, thermo vision, infrared, audio: wideband radio scanner, tight-beam radio), Self-destruct charge, Remote targeting link Vocobox: BoxAlter, with subsonic speaking
Neuralware: standard, Sandevistan, Tactile boost, Olfactory boost, Vehicle link, Smartgun link, Machine/Tech link, Cybermodem link, Chipware socket, Cyber-detection computer, Echolocation, Lockdown, Black Box recorder, can accept moddies.

SDP allocation:
Head: 51 SDP
Torso: 66 SDP, no free spaces, quickchange biopod, High-power radar w/ IFF transponder, Sensory boom, Self-destruct charge, Remote targeting link
L Arm: 51 SDP, 2 free spaces, tool hand, Digital recorder, Gyro-stabilizer, Satellite uplink,
R Arm: 51 SDP, 1 free space, Surveillance cyberhand, Built-in blade (machete-sized, 2d6 damage), Line & clamp launcher, Laser mike, Built-in microcomputer (PCX – class)
L Leg: 51 SDP, no free spaces, Climb foot with Catspaw Stealth coating, 3 Hydrogen fuel cells, built-in radio set
R Leg: 51 SDP, no free spaces, Climb foot with Catspaw Stealth coating, 3 Hydrogen fuel cells, built-in ECM set

Total humanity loss: 27d6+2 HL

CINO Nautilus

The Nautilus was meant as an equivalent for Hydrosubsidium's Aquarius. It isn't anything fancy – it is a rugged, effective underwater worker (although military versions aren't unknown – equipped with heavy armor, decoy launchers and boosted performance), with good attention paid to security – it can not only work undersea for much longer than Aquarius, but it can bail out in case of an emergency or failure almost like from a bottle of champagne. It is also intended to be able to care for fleshie colleagues – it utilizes a pretty unique emergency rebreather system, fed from borg's own gills.



Note that it is considered essential for every diver to have a knife at hand, and Nautilus' knife compartment can carry almost any combat / survival knife the user is comfortable with (in fact, underwater versions of IMI Chainknife are the most popular choice).

Technological note: this FBC is built on Standard technology.

General Info:
Type: undersea operations body
Cost: 90'000e$ (precisely: 88'620e$)
Skeleton cost: 20'800e$
Weight: 110kg
Cover: high-quality plastic
Energy source: batteries

This model comes with Extreme-level environmental adaptation versus pressure and a Serious-level adaptation vs. cold.

Performance:
BOD: 10 (20*)
REF: 6
MA: 6
ATTR: none
SP: none

* due to 2nd generation myomars

Emergency rebreather
This system is an assembly consisted of compressed helium canister (a modified Secondary Breathing Tank), a mixer unit linked to borg's own oxygen supply / gills, and a mouthpiece. It is meant to provide air to a human victim of an underwater mishap. Since the helium supply is limited, it cannot be used for longer than one hour, provided the human minimizes its air demand by remaining calm and motionless. The gills can copy with increased oxygen demand caused by a human for up to 3 hours. The whole assembly takes 2 spaces, costs 400e$ and has HL of 1.
-Mike van Atta

Sensors:
Optics (standard): L & R: LowLight (L&R), 3 free spaces
Audio (standard): Radio link, Level damper, Enhanced hearing range, 3 free spaces
Vocobox: BoxAlter, 1 free space
Neuralware: processor, interface plugs, chipware socket, ULF transceiver, machine/tech link

SDP allocation:
Head: SDP 38
Torso: SDP 48, Quickchange Biopod, underwater propulsion system, saltwater gills, 0,5-space emergency floatation bladder, 0 free spaces
L Arm: SDP 38, webbed hand, semi contained searchlight (800m range), heavy sonar 0,5-space emergency floatation bladder, 1 free space
R Arm: SDP 38, webbed hand, Emergency rebreather, 0,5-space emergency floatation bladder, 2 free spaces
L Leg: SDP 38, webbed foot, ULF radio antenna & reel, built-in computer (PCX equivalent) 1 free space
R Leg: SDP 38, webbed foot, chemical analyzer, 2-space sized knife holster, 0 free spaces

Total humanity loss: 19d6

Utopia Galileo

When Cybermatrix created their space operations ‘borg, Copernicus, they had an idea that wasn’t half bad. But it was far from being perfect… mostly because it was designed by dirtsiders, not Highriders. By people who know a lot about living in space – in theory. But they lack practical knowledge. For example, even if the borg itself isn’t much concerned with the atmosphere or radiation status, this information are critical to the fleshies working side by side with it. And there’s nothing like a chemical and radiation analyzer at hand in a situation like this!

Utopia is an orbital corporation, and they know their FBC will have to deal with the same issues they do deal with on daily basis. What they wanted, thus, was more like a space equivalent to all-purpose borg, a FBC platform that could be used for everyday operations inside and outside of habitats, living and working among humans.

So various interesting designs, like four-armed “quaddies” were left on the design boards, and the Galileo was given a basic humanoid shape. Like to Copernicus, it is protected well enough to make it safer from debris than a human in a space suit – however, the key to survival in space isn’t the armor, but fail-safe construction of multiple redundancy, achieved thorough the use of Orbital-made materials.

Galileo ‘borgs are especially common in the Belt area.

Technological note: this FBC is built on Orbital technology.

General Info:
Type: space operations ‘borg
Cost: 130’000e$ (precisely: 125’255e$)
Skeleton cost: 15’700e$
Weight: 90 kg
Cover: SP 20 ballistic nylon
Energy source: batteries

This model comes with Extreme-level environmental adaptation versus lack of pressure, cold and a Serious-level adaptation vs. heat, as well as Grade 2 EMP hardening.

Performance:
BOD: 6
REF: 8
MA: 6
ATTR: none
SP: 20

Sensors:
Optics (standard): L & R: LowLight (L&R), AntiDazzle (L&R), Thermal Vision (L), Cyberoptic Rangefinder (R), 1 free space each eye.
Audio (standard): 6 free spaces
Vocobox: BoxAlter, 1 free space
Neuralware: processor, interface plugs, chipware socket, full ambidexterity processor

SDP allocation:
Head: SDP 75
Torso: SDP 100, Maneuvering thrusters, built-in radar, 0 free spaces
L Arm: SDP 75, standard hand with Magnetic Grip option, Gyrostabilizer, pop-up searchlight (500m range model), solid oxygen battery (1 space-sized, good for 16 hours), 1 free space.

R Arm: SDP 75, space tool hand with Magnetic Grip option, radiation detector, chemical analyzer, 2 free spaces
L Leg: SDP 75, prehensile leg & grappling foot with Magnetic Grip option, satellite uplink, storage space, 0 free spaces
R Leg: SDP 75, prehensile leg & grappling foot with Magnetic Grip option, built- in radio set, 0 free spaces,

Total humanity loss: 20d6+2

Space tool hand

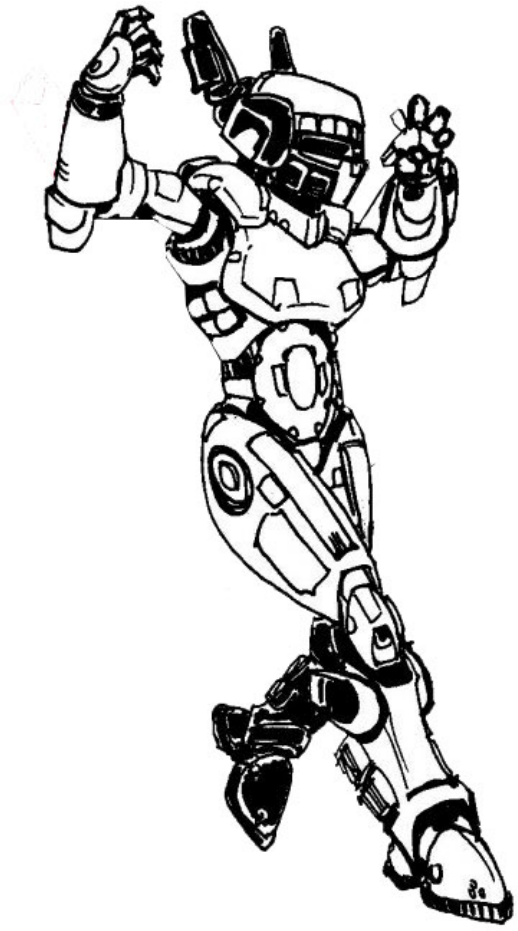
This is a variant of the standard Tool Hand, adapted to the use in null-gravity and void of space – the screwdriver has a counter-rotating balance, the soldering iron is a vacuum model, and so on. All for mere 50% increase in cost.

Cyberoptic rangefinder

This small laser rangefinder was designed to allow people precision distance guessing. Simply look at whatever you want and know how far away it is. Accuracy is limited by atmospheric conditions, distance and the size of the object, and of course it isn't as good as vehicle-mounted rangefinders, but still useful. Generally, 5 km range is considered standard, provided you can see the target at all. It would be especially useful in space, letting people almost instinctively guess how far they are from things and thus how much energy they need to get there, but since helmet visors tend to interfere with it, it isn't very popular. Almost all models work outside of the visible spectrum, usually in IR. 400e$, 1 HL, 1 cyberoptic space. May be considered as +1 to maneuvering in space, or +1 to hit with ranged weapons outside Short range, at GM's discretion.

- Mikael van Atta

Mitsubishi – Koryidansu Jason



Jason, named after the leader of the mythical Argonauts, was designed to be an explorer. “To boldly go where no man…” – of course, this is just the marketing slogan. Due to budget reasons, the world it is suited to work at is Mars. A new world, nevertheless. And requiring a lot of precaution to be explored safely.

Like Ardek Robotics’ Burroughs, Jason is somewhat a basic package, meant to be outfitted to specific tasks on as-needed basis. However, design team put a lot of effort to make it suited to long-range scouting missions – a Jason is equipped with additional nutrient canister, extra energy source, and a very sturdy construction. Provided some kind of energy outlet is available (and Jasons do often carry portable solar / wind power generators in their equipment), it can perform scouting mission for week without a need to restock.

Please keep in mind, however, that even this marvel of Japanese technology, built with the most advanced Orbital-grade material, isn’t completely maintenance-free. To maximize its durability, it is suggested to not perform maintenance duties in situations, where Marian dust can get inside of the mechanism. Although the cover (along with Optishield) was designed to be especially durable, and is – theoretically – able to withstand a Martian sandstorm, any testing of this fact may be performed on user’s own risk only.

Due to high cost, compared to the standard Burroughs, Jasons are almost never seen outside of JAB forces on Mars.

Technological note: this FBC is built on Orbital / Japanese High-Tech technology. It uses Japanese High Tech sensors. All options for this borg (except for neural options) are 3 times more expensive.

General Info:
Type: Mars operations ‘borg
Cost: 250’000 e$ (precisely: 247’840e$)
Skeleton cost: 25’900e$
Weight: 90 kg
Cover: SP 20 ballistic nylon (1300, 13)
Energy source: batteries (primary), hydrogen fuel cell (secondary).

This model comes with Serious-level adaptation vs. cold, heat and lack of pressure, as well as Grade 1 EMP hardening. (160%) = 41’440e$

Performance:
BOD: 8 (16*)
REF: 8 (60%) 20’720
MA: 8 (20%)
ATTR: none
SP: 20

Sensors:
Optics (Japanese High Tech standard): Cyberoptic logocompass (L), 4 free spaces (L), 6 free spaces (R)
Optishield: (Japanese High Tech), Times Square Plus, LowLight, Time/Date display, 1 free space

Audio (Japanese High Tech standard): sound editing, 8 free spaces
Vocobox: Japanese HighTech BoxAlter, 1,5 free space
Neuralware: processor, interface plugs, chipware socket,

SDP allocation:
Head: SDP 85
Torso: SDP 110, nutrient canister (1 month worth) 3 additional fuel cells, 3,125 space
L Arm: SDP 85, standard hand, build-in radio, 1 extra battery, 3,125 space,
R Arm: SDP 85, standard hand, satellite uplink, Radio lantern / homing beacon, 1 extra battery, 3,125 space
L Leg: SDP 85, Sand foot, 2 extra batteries, 2,937 free space,
R Leg: SDP 85, Sand foot, 2 extra batteries, 2,937 free space

Total humanity loss: 17d6+3 (round up from 17d6+2,75)

Sand Feet

This is simply a variant of the "swimming" web feet – the "fingers" spread apart, and thin, fan-like sheeting (or high-resistant film, like Kevlar fabric, that depends on the model) is spread between them, allowing to distribute your weight over a bigger area (useful when you have to walk on sand, snow, mash or any else terrain not dense enough to support your weight – it counts as "having larger feet"). While these don't perform well as fins (and vice versa), they are very useful in the environment they were designed for. Cost & HL as for Web Feet.

- Mike van Atta

Militech Agamemnon[4]

When Militech made Attila combat 'borg, it soon became the object of wet dreams of most generals in the world. So, Militech went along "the more, the better" line, creating Agamemnon. However, it seems they've lost the link with reality somewhere in the process. One of the reasons why Attila remained a general's dream – and usually only a dream! – was the price tag. And Agamemnon was meant to be even more expensive.

Militech's 'borg construction department were also unable to make their mind about the new design – was it to be a commander model, or heavy weapons platform? Those two roles don't mix up well, but that didn't stop the R&D team from borrowing a number of subsystems from the ACPA division, and installing these in their new project. The advantage was to be having a 'borg whose sensor and communications range would be on par with ACPA and many vehicles.

So, here it is – Militech Agamemnon, the biggest and scariest 'borg in the yard, stuffed with expensive electronic equipment and providing a first-class target to any anti-vehicle system on a battlefield. A perfect case of what they call "putting all your eggs in a single basket"… Plus, the HL caused by this package requires it to use Cybertrooper moddy, which – in fact – cancels most of the mental qualities that would make an useful battlefield commander…

Popular add-ons include drone bays (using either the free spaces in right arm, or bigger spaces gained thanks to rearranging option placement) and externally-mounted heavy weapons (especially big autocannons, or hand-held Gatling guns)

Technology note: Agamemnon is being based on standard parts.

General Info:
Type: ACPA-borg
Cost: 2'150'000 e$ (precisely: 2'111'355,5e$)
Skeleton cost: 85'190
Weight: 753 kg
Cover: Militech Crystalline Steel (SP80 Heavy Armor), with built in Reactive Armor, thermal baffling and Militech Mirage Gear camouflage.
Energy source: hydrogen cells. A secondary set is included.

This model comes with EMP grade 3 hardening, Extreme heat, Serious cold, Serious pressure and Serious lack of pressure environmental adaptations.

[4] Kudos to Agamemnon of VftE staff for suggesting the name.

Performance:
BOD: 20 (40*)
REF: 15
MA: 15
ATR: not applicable
SP: 80

* With enhanced myomars

Sensors:
Optics: uses a “bug eye” (R) and a standard one (L). Option package: AntiDazzle (L&R), LowLight (L&R), Infrared(L&R), Image enhancement (L), Times Square Plus (R)
Audio (standard model): level damper, amplified hearing, enhanced hearing range, radar detector, wideband radio scanner and scrambler.
Vocobox (NewThroat): subsonic speaking, volume regulation. 1 free space.
Neuralware: Processor, Interface plugs, Black Box, Remote Targeting, Combat Crystal, C3(ACPA-grade), Smartgun, Dataterm, Cybermodem, Kerenzikov +2, Tactile boost, Olfactory boost, Machine/tech link, Chipware socket (with behavioral chipware / moddy link), Echolocation co-processor, Lockdown, Cyberdetection computer. Cybertrooper moddy is included into the package.
Sensory extension (“rabbit ear”): AntiDazzle, Thermal imager, Image enhancement, Teleoptics, Tight beam radio and Amplified hearing

SDP Allocation
Head: 48 SDP
Torso: 68 SDP. Quickchange biopod, AGAMS, Radar (ACPA-grade), Radio lantern / homing beacon, Gyrostabilizer, 1 free space
R Arm: 48 SDP, Standard hand, Rabbit ear, ACPA-grade laser comlink, Built-in computer, Drone control deck (cybernetic), 4,25 free space,
L Arm: 48 SDP, Standard hand, ECM (ACPA-grade), Painting laser, Satellite uplink, 2 spare hydrogen cells, 0,25 free space
R Leg: 48 SDP, Standard foot, Doc Richter movement detector, MAD (ACPA-grade), 3 spare hydrogen cells, 0,375 free space
L Leg: 48 SDP, Standard foot, ECCM(ACPA-grade) Radiation sensor Chemical analyzer, 1 spare hydrogen cell, 0,375 free space

Cybernetic drone control deck – just as in Chromebook 2, apart from the fact it is built into the cyborg. I followed computer rules here: 1 space, 1600e$, HL 1 (like a cybermodem, it doesn’t differ that much after all).
- senior officer Mikael van Atta

Total Humanity Loss: 28d6+1d6/2+2,5
Note: due to widespread use of Cybertrooper Moddy, HL is usually considered irrelevant.

SyCust Naga

When the brightest star of Indian Bhangra music, Devarsi Ahmad, decided to swap his cancer-devastated body for an FBC shell, he turned to SyCust to provide him with "something special". What they've finally come up with was a being out of Hindi myths and legends: a *naga*, half-human, half-snake protector of waters. Someone in SyCust had really done their homework well.

The idea was accepted, and re-appearance of Devarsi Ahmad created a major follower movement, of which some people went that far they did also adopted the *naga* shape. Thanks to the fact, the (somewhat simplified, to cut on costs) body is still being produced, although in very limited numbers, and available mostly on on-demand basis.

Needles to say, the original one is still performing well, as any attendant of Mr. Ahmad's concerts can tell you.

Technology Note: this FBC is built on Standard technology.

General info:
Type: wereborg
Cost: 65'000 e$ (precisely: 61'826e$)

Skeleton cost: 17'300 e$
Weight: 80 kg
Cover: modified TrueSkin
Energy source: batteries

Performance:
BOD: 7
REF: 6
MA: 6
ATTR: 6, very good quality
SP: none

Sensors:
Optics: standard, Infrared (L&R): 3 free spaces each,
Audio: standard, 6 free slots
Vocobox: BoxAlter, 1 free space. Usually tuned for hissing pronunciation, but this is simply a matter of personal choices in the programming.
Neuralware: standard,

SDP Allocation:
Head: 30 SDP
Torso: 40 SDP, 1,5 free spaces,
L Arm: 30 SDP, 3 free spaces, standard hand,
R Arm: 30 SDP, 3 free spaces, standard hand,
Snaketail: 45 SDP, 5,5 free spaces,

Humanity loss: 14d6

Please note that TrueSkin does not entitle for HL reduction in this particular case, since it doesn't eve resemble human skin – the TrueSkin technology was used to give the realistic effect as well as regenerative capabilities. However, it does not cause additional HL.
- senior officer Mikael van Atta

SyCust Chiron

Note: please consult the "Centauroid Borgs" section of Appendix 3 for more information on such bodies. The Centaur presented on the illustration is a complete assembly, consisting of a Chiron chassis covered in TrueSkin, and a slightly modified torso.

Chiron is the most popular of the centauroid bodies, having the statue of an idealized destrier of Middle Ages – the body of a perfect knightly warhorse, replicated with modern materials. Since centauroids are a small and diverse community, Chiron seems to be the only model that have ever seen any serial production – and because of that, it comes without any cover – the user has to fit it with one of his liking. Various pseudo-skin models are popular, although a significant minority of Chrome-plated Chirons also exists. Same with REF processors – they are usually made for specific clients, to match their everyday specs. No tail has been mounted in the standard body, since it is up to the user.

Technological note: this system is built on Standard technology.

General Info:
Type: centauroid body
Cost: 700'000e$ (precisely: 676'104e$)
Skeleton cost: 171'600e$
Weight: 260kg (many users request optional ballast to bring the weight closer to that of a real horse, usually 450- 600kg)
Cover: none installed
Energy source: batteries

Performance:
BOD: 20
REF: none installed
MA: 20
ATTR: none
SP: none

Sensors:
No optics, audio or vocobox.
Neuralware: processor, interface plugs, horse-body's MA processor

SDP allocation:
Torso: SDP 68, 2 quick-change mounts (to fit user's pelvis-level quickchange mounts), 16 free spaces.
L Front leg: SDP 48, 6,5 free space, standard hoof
R Front leg: SDP 48, 6,5 free space, standard hoof
L Rear Leg: SDP 48, 6,5 free space, standard hoof
R Rear Leg: SDP 48, 6,5 free space, standard hoof

Total humanity loss: 12d6.

Appendix 1: Wereborgs

Exotic Cybernetic Full Body Conversions

Some people feel the need to change their bodies for metallic, artificial ones. Sometimes the cause is career choice, or medical requirement, or whatever else.

Some people feel they should go Exotic, turn into animal-like humanoid beings. This is mostly fashion statement, or an effect of some kind of personality disturbance. Although not always.

Now there are those who do both things at once. Cybernetic Exotic Conversions or simply Wereborgs.

Becoming a Wereborg is not an easy thing, as most of the cybersystems have to be custom – built. Digitigrade „animal" cyberlegs can be constructed, but there's no mass demand for them, so there also is no supply. And the same goes for all such 'wares.

Humanity Loss is dealt similarly to that of normal FBC – exotic parts cause some extra HL, but it is not so big (when you're an artificial being, it doesn't matter that much whether you're artificial human, werewolf or just a metallic robot-like being.

Wereborgs can be built using almost any technology, but the purpose is to remind living beings, so in fact Russian and Skeletal cyberwares are out of question, as NuTek technology in most cases is. Most exotic modifications are used for aesthetic purposes only. Exotic fashion depends mostly on nanotech and biotech, which are of little use for FBCs, and have to be replaced by similar – looking cyberware. The general rules for exotic conversions can be found in ChromeBook 2

Exotic change	HL	Cost	Notes
Minor face change	1d6/2	5% torso cost	
Major face change	1d6	10% torso cost	
Short muzzle	1d6	10% torso cost	
Long muzzle	2d6	15% torso cost	
Mandibles	3d6	15% torso cost	
Fangs	Varies		Vampires, Sharkgrin, whatever you want
Claws	1d6+1	20% hand / foot price	
Retractable claws	2d6	200% hand / foot price	
Scratchers	1d6	+100e$ per hand / foot	Standard scratchers applied to a cyberhand / foot
Rippers	Use Ripperhand / Talon Foot from the main book		
Short („Bunny") tail	2	100% single Cover value	
Regular tail	See below		Uses Dan Bailey's Cybertail from Information Overload netbook
Digitigrade legs	+1d6 / leg	300% of leg cost	See below. Affects Skeleton cost
Fur / Scale / skinchange	0 to 3d6	200% cover cost	See Cover, below
Heavy scales	Special, see below		
Exoskeleton	Not applicable		
Frame alteration	2d6	300% skeleton cost	See below. Affects Skeleton cost.

Notes:

Cover: any cover except for armour can be made to look like non-human skin. Of course plastic scales or feathers are worth nothing on the longer run, but hey, some people think it's cool. Superchrome can be made like scales, although it is not too good as feathers, and feels definitively nylon with fur. If you want really nice skin, fur or feathers, you should go for a Skin variant. As most of the wereborgs are insanely wealthy to begin with, most of them go for TrueSkin, as TrueSkin scales, feathers and hair really grow, and feel like real (the same technology that allows TrueSkin grow hair and fingernails is used to grow fur, feathers or scales that cannot be told from live with non-augmented senses).

Cybernetic tail: surgery code MA (if used on fleshie), or uses 1 option space on a 'borg (usually on torso). Can be covered, of course (50% cover cost for a limb, but uses the same amount of space). Please note that cybertail options are not the same as cyberlimb options, even if the table below uses the same formula as regular cyberware tables. As a cybertail is an additional limb and not something you are normally used to, it requires a custom-made Ref chipset, and it is included into Skeleton cost (see digitigrade legs, below). Also, its size doesn't have to match your body size. Tail BOD value has to match the body's only if you want to use it for prehensile functions; it is also suggested for combat tails. However, a tail with BOD smaller than your body does not affect MA. A tail of BOD equal or greater requires a custom-made mobility (MA) system to use its weight for balance. A tail which has BOD more than 2 points over the cyborg's BOD itself does modify MA and REF by –1 per every 2 BOD points difference.

Cybertail: typical 1d6 damage (-1 to hit modifier), 3d6 HL					
BOD	Body type	SDP	spaces	Price	
				Regular CP2020	Cheap cybertech
2	v. weak	7	1	1500e$	500e$
3-4	Weak	9	1,5	1750e$	750e$
5-7	Average	10	2	2000e$	1000e$
8-9	Strong	12	2,5	2250e$	1250e$
10	v. strong	13	3	2500e$	1500e$
11+	Superhuman	+2 for every BOD point over 10	+1 per every 2 BOD > 10	+400e$	+250e$
				for every BOD point over 10	

Prehensile, 1000e$, 1d6 HL, 2 spaces. You can use it for simple manipulation, or hang on it (provided the tree will withstand your weight, you cybermonkey).

Lizard „disposable" tail 50e$, 1/2d6 HL, 0,5 option space – an equivalent to quick-change mount. Unlocks on simple mental command, so anyone who held you by tail remains holding your tail, but not you any longer.

Variable length tail 100e$, 1d6 HL, 1 option space – a popular fashion statement, this tail can be shortened and elongated at will (size can be changed by 75%).

Sensory extension 150e$, 2d6 HL, 1 option space. A cybertail equivalent to „rabbit ears". Can contain up to 2 cyberoptic options, and up to 3 audio.

Interface tail 100e$, 1d6HL, 0,5 option space. This is a standard cybernetic interface port mounted in the tip of the tail.

Combat tail 200e$, HL 2, 1 option space. A variant of advanced myomar application, it doubles the strength of a tail (this translates into 2d6 damage, although not when using The Sting or Blade).

Blade 500e$, HL 3, 0,5 option space, a small, dagger-like blade extending from the end of a tail, it does +1d6 stabbing damage (that is 2d6 total). Illegal.

The Sting 1000e$, HL 6, 1 option space A hollow variant of Blade, paired with 3-dose container for drug or toxin (and a compressed air canister adapted from medical drug applicators). Illegal.

CyberBeast – 3000e$, HL 4d6, 2 option spaces – this is your regular cybersnake, disguised as a cybertail. It already is a combat tail (doing 1d6 damage) and Lizard tail.

Any (GM's call) **Cyberfinger** variant can be also used for 0,5 option space equivalent and 200% finger cost, HL unchanged. Just in case you want a cigarette lighter in your tail...

Digitigrade legs – these animal legs (usually 3-joint) do not change the body's MA per se. Instead, their cost is added to body's Skeleton Cost, as such inhuman mode of movement requires special MA systems and REF processors that have been tuned for such a body. As this often means custom-built, well... All SDP and Option space values remain the same.

Heavy scales – any cover can be moulded to resemble heavy, scaly skin. Most covers can be also armoured by means of Graded Skinweave (variant), even up to SP 16. So you can have an

equivalent of Heavy Scales if you really want. But Heavy scales themselves are a thing for fleshies only. Sorry.

But I thought about some more shapeshifting wereborgs…

Generally speaking, it is possible. But in fact it is more trouble than it is worth. And has no practical application.

Don't even start with that "style over substance" with me – a borg who has no substance to back up his style, is worth nothing. Even if he's a frackin' shapeshifter.

Right, let's go to the business. To effectively "shapeshift" you need memory-shape materials, either plastics or ceramics. Yes, we have something like that in Cyberpunk – in the Ianus Games' supplement "King of the Concrete Jungle". You'll need to build a whole 'borg in that technology, and equip it with appropriate options. Below you'll find a characteristic string in the CheapFBC format.

Model	SDP	HL	Damage dealt	spaces	price
Modularware	100%	75%	100%	50%	133%

Modularware cannot be used with 2nd Generation Myomer nor hydraulics, it doesn't require microwave shielding – it does effectively come with Grade 2 EMP-shielding and Serious-level environmental adaptation to cold. It is naturally armoured up to SP 17, and cannot use additional armour. Due to ceramic construction, it is almost undetectable as well.

Modularware is available in Canada and in Canada only (i.e. illegal elsewhere) – even there, it isn't easy to obtain. Besides, I'd say that it's far too cheap for the options included, not to mention possibilities.

If you ask my opinion, it's munchkinism. I'd need to deal with it more seriously, but I lack time and will at the moment. I wouldn't approve these in my game. And should I meet you on a street, using a modular-based shapeshifter borg, I'll shoot you. With .477 Express silver-jacketed DPU bullets.

- Mike van Atta

Frame alteration – this is a touchy modification. You can have a body changed in height and broadness by 40% (a fleshie is limited to 25%) without changing your BOD value. However, short-legged forms (like Fantasy Series dwarves and halflings) tend to have –2 MA modifier (Their MA is lower by 2 than their body MA would suggest, in other words, you have to pay for MA 10 to get MA 8). Option spaces remain unchanged if size change is minor, or it is compensated dimensionally (a shorter body can contain the same amount of optional wares if it is proportionally more massive), otherwise it's GM's call). However, if you want a BOD 8 frame with the size (height and broadness) of a BOD 2 frame, well… in fact you need a BOD 2 frame with +6 BOD due to tighter myomars, not a reduced size BOD 8 shell…

Behaviour chips – let's face it: if you turn into an animal, you want to not only look like one, but also behave like one. And that's what behaviour chips are for, among others. As FBC tend to have devastating effect on human psyche, and exotic conversions are just second to them, there's also a high demand for chips that would change their behaviour into something socially acceptable. There are enough sociopaths out there in the street, and cyborg werebeasts rampaging thorough the City are no what anybody really wishes for.

I suggest using „When Gravity Fails" moddies here, for they may be used to add a few points to user's EMP – a deliberately handy trick. In my campaigns, these become available in 2024-5, along with new generation of neural interfaces.

Appendix 2: Full Metal Slang

The Word on the Street about Full Conversion Cyborgs

„Hey, metalboy! Have you put new batteries in your Mr.Studd or you're just glad to see me?"

Aquaman: A full conversion cyborg designed for aquatic operations (e.g. Dynalar's Aquarius).
ArtBody: any cyborg body projected to be very attractive (although not necessary to look human). Especially custom-built bodies with ATTR over 10.
Barbie: A female "Humanoid Full Conversion" (Gemini or comparable models), especially low-key styled. Considered extremely derogatory by the said group. Any human using the term would be dead in the next 10 seconds.
Body-Swap: Change a Biopod between full-conversion bodies.
Boomer: A full conversion borg; the term is often used to refer to those borgs near- or completely cyberpsycho.
Brain-Swap: Undergo full-body conversion.
Bunny: any cyborg equipped with Sensory Extensions. Derogatory.
Canned Meat: Derogatory term applied to full-conversion cyborgs by non- or lightly-augmented persons.
Canned Pork: Derogatory term used toward full borgs serving in the police forces.
False-Face:

1. Dummy facemask cyberware.
2. A cyborg equipped with such an appliance.

Fleshie: An un-augmented or lightly augmented human.
Flesh out: opposite to Fully Enhance – replacing a full-body conversion with a human body.
Fleshling: See Fleshie
Fully Enhance: To undergo full-body conversion. E.g.: "Henderson went fully enhanced after that bombing took most of his body."
Fullfaker:

1. A Trooper, whether in Assisted Combat Personal Armour or not.
2. Anyone in Assisted Combat Personal Armour.

Gemini: Full borg designed to look human. From the first human-design borg, Raven Microcyb's Gemini.
Ghost: The personality, consciousness or conscience; the humanity of the cyborg. Often referred to as if it were a tangible, distinct and separate body part. Used similar to 'gut' in gut feeling: "I have a whisper in my ghost...".
Go Panzer: To equip oneself for heavy combat, usually by upgrading the borg body/switching limbs (see Panzer).
GP: for "General Purpose (body)", any human-like Gemini FBC, especially if of human-range performance and/or mass produced.
Haunted: Derogatory term used by "true borgs" when referring to a full borg with a demonstrated conscience/high Empathy.
Herm: a shell with hermaphroditic features.
Hydracell Bunny: A female FBC powered with hydrogen fuel cells, especially those with sexy styling. Sometimes considered derogatory by the said group. More widely, any H-cell powered 'borg (derogatory)
Inquisition: The Cyberpsycho Squad of any police force; as opposed to the street gang known as the Inquisitors.
Ironman / Ironmaiden: any obviously non-human Borg (essentially, any not being a Gemini). Considered derogatory by some members of the said group.
Juice drinking: Act of powering reloadable batteries on a borg, especially if using some kind of wall socket.
Ken: A male "Humanoid Full Conversion" (Gemini or comparable models) especially low-key styled. Considered extremely derogatory by the said group. Any human using the term would be dead in the next 10 seconds.
Meatboy/girl: See Fleshie.
Meathead: See Fleshie.
Metalhead: See Canned Meat
Meat-Lover: See Haunted; also, a full conversion cyborg who has a regard for non-enhanced life / spends most of time with non-full conversion cyborgs.
Mk.1 – also "Mk.1 body", an unmodified human body. A "plain vanilla Mk.1" is completely natural human body.
Near-True: Moderately - to heavily - augmented human without full-body conversion.
No-sex: a shell with absolutely no gender-specific features.
Panzer:

1. A combat-oriented full conversion cyborg.
2. A full-conversion borg trained in the martial art of PanzerFaust.

PanzerFaust: The martial art designed for full conversion cyborgs. See *Solo of Fortune 2*.
Probe(s):

1. An interface spike, similar to that used in the movie Robocop, usually extends between the two middle fingers of the cyberhand. Can also be used for a makeshift survival blade, but needs a thorough cleanup afterwards to clean up blood residue and other stuff that might interfere with the data pickups.
2. A set of LiveWire interface cables (in this case the plural form is used).

Pure Chrome: A full conversion cyborg. Most commonly used by full conversion cyborgs with low Empathy as an adjective for themselves.
Pure Metal: See Pure Chrome.
Robocop: Full borg serving in the police forces. Typically not derogatory (unlike Canned Pork).
Skeleton: basic hardware of the 'borg – arms, legs, torso and head.
Shell: A full-conversion borg body, typically one built to accept an Interchangeable Biopod option. This term is most often used by such cyborgs. E.g.: "I think I'll take the Enforcer shell today."
Smasher's Run: Any direct confrontation or duel between a full conversion cyborg and an un-augmented or lightly augmented human; typically for the purpose of settling an argument over whether "Metal is better than Meat".
Softie: See Fleshie.
Softshell/Softie: Built humanoid enough to pass.
Spam-in-a-Can: See Canned Meat; more often applied to full-conversion cyborgs with Interchangeable Biopods.
Squishie: See Fleshie.
Sword - Any FBC using primarily bladed cyberweapons (both conventional and powered) or bladed melee weapons (including powertools such as angle grinders, circular saws and chainsaws). The term comes from the movie Screamer, where killer robots equipped with various bladed weapons were called "Autonomous Swords".
Tank: From "walking tank": any full-conversion borg intended for heavy combat/warfare (e.g. IEC's Dragoon).
Trash can: a poor-quality „near-true" street 'borg. Derogatory.
True Borg: See Pure Chrome. Often shortened to "True".
Truefaker: See Fullfaker.
Tune-up: a routine visit to cybertech, usually monthly.
TWLP: Acronym for Two-Legged Weapons Platform, usually used in military slang, means a heavily armed and armoured combat borg or ACPA. Not usually considered derogatory.
Vitamins: any dietary supplement for cyborgs. Usually this means food canister.
Voomer See Boomer.
Wannabe Fleshie: See Gemini. Mostly used as an insult by undisguised full conversion cyborgs.(Also Wannabe Softie; Wannabe Squishie)
Wannabe True:

1. A more derogatory version of Near-True.
2. Someone wearing Assisted Combat Personal Armour (see Fullfaker).

Wereborg: any FBC with Exotic (pseudo-animal) styling, especially an equivalent of Major Exotic Package.
Wett zeug: a Motorball sport body, meant for an on-track use only. Also, any fast, close combat-oriented shell.

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Bubblegum Crisis, anime series (AnimEigo dub)
The twisted brains of:

- Robert Farquhar
- VftE staff

Appendix 3: Inhuman transportation modes

Although rarely, yet sometimes FBC constructors want their creations to make use of such inhuman methods of propelling themselves. Wheels, tracks, mouseball-like „casters" or fish-like tails, these things are not very popular – they tend to be less practical in use than legs (yes, they tend to be very useful in a single specified environment, but are not as universal as legs). Yet they can be encountered. Note: each of the optional modules is a full „waist-down" set for a FBC, replacing two legs and two feet. Yet prices, HL and other data are given in comparison to a single cyberleg. Non-standard ones, like Japanese multicasters, or Russian tracked chassis, can be found (although they are really rare, and if someone has them, they have been either bought tenth-handed or delivered on a special order). Price is low, as they don't use most of the advanced myomar muscles, just simple electric motors (tails are exception – they do use first generation myomars). They don't "tire" as myomars, and can easily propel a 'borg much faster than legs. Yet they cannot be masked to look natural. It is also impossible to use most Martial Arts moves when having such an unit mounted (all body mechanics are different) - although it is said that appropriate techniques are being developed for PanzerFaust. Of course, you can still brawl somehow...

Note: prices are for the system only. Due to their lack of popularity, they are not usually available, and have to be provided at special request (which can make the price x2 - x3 up).

Inhuman modes of transportation					
Model	SDP	HL	spaces	price	Cost per 1 MA
Monowheel	100%	300%	150%	35%	1,5%
Multiwheel	150%	300%	200%	30%	2 %
Monocaster	125%	300%	125%	60%	2%
Multicaster	175%	300%	175%	50%	2,5%
Tracked	200%	500%	300%	25%	3 %
Propeller	100%	300%	200%	40%	3%
Snaketail	150%	250%	250%	400%	7%
Fishtail	150%	250%	250%	300%	5%
Multisection module	25 SDP	2d6	See below	1'500e$	+100%

Acceleration and deceleration:

Since some 'borgs, especially wheeled models, can achieve vehicle-grade speeds, accelerating and decelerating can take up a significant amount of time. A human can go from a full stop into all-out run within single turn, but speeding like a car would take more time. Thus, these few borgs who move on wheel, tracks or balls are subject to vehicle rules, respectively they accelerate and decelerate as bikes (mono wheel and monocaster), cars (multiwheel / multicasters) and tracked APC (tracked ones). Extra Acc and Dec can be bought as in MaximumMetal – use the borg's skeleton cost instead of „vehicle's SDP cost".

„Help! I speeded too much and have to maintain control!"

Well, your fault. If you crash into something, you still have a fairly nice chance of survival, unless you were rolling a few hundred kilometres per hour. Sorry boy... But in the meantime, be optimistic. All „vehicle" manoeuvring modifiers do apply to you, besides you receive +2 bonus for being a cyber-controlled vehicle, and +3 for better handling (now, if you don't know how to handle your own body, you shouldn't be allowed of any utensil more dangerous than a disposable teaspoon). And your GM may allow you to use athletics or skating skills as „driving" skill. Most of the time you don't need any rolls, these are applied only when you're trying to travel real fast...

Transport mode descriptions:

Monowheel (also two wheels side by side), this is a very fast method of movement, yet useful only on rather flat and firm surfaces. It requires gyrostabiliser (1000e$, 1 space, 1d6 HL – see Chrome 1) to help them keep balance. Monowheeled 'borgs are, however, quite agile and they usually deal with stairs by locking the wheel and jumping up or down. 1 MA costs 1,5% skeleton cost of a 'borg, and it's practically unlimited. Since they can reach potentially great speeds, as single-wheeled vehicles they are subject to same rules as motorbikes.

Multiwheel (either three, or four, larger number of wheels is rare), this rig is more stable than monowheel, and more resistant, if somewhat slower and bulkier. Gyrostabiliser is not required. This system costs 2 % skeleton cost per 1 MA, and there's no upper limit except for your common sense. Wheeled 'borgs were tested on race tracks, exceeding 300 km/h (yes, there are no practical use for them. So what, you think it stopped anyone?). However, GM may apply the same rules to speeding 'borg as to speeding car (see MaxMetal).

Tracked (one or two tracks, usually rubber rather than steel, to protect floors) suspension is slow, but reliable. Blatantly inhuman, track chassis handles rough terrain well. It was applied to some of the heavier military 'borg projects. It costs 3% skeleton cost per 1 MA, and – although it is not a rule carved in stone – tracked 'borgs shouldn't be made faster than 80 km/h. It can manoeuvre according to tracked APC rules.

Casters: Casters are spherical wheels, which function basically like powered mouse-balls (there are motorised rollers in the caster casing that roll the sphere to produce propulsion). They are more manoeuvrable than normal wheeled propulsion systems and the 'borg can literally turn on a dime, and can even cope with stairs by locking the caster and jumping up or down them. A typical caster comes with a rubberised surface to ensure traction on most level terrains, this rubber surface can be stylised to fit the 'borg's overall style. Treat casters as wheeled systems (respectively Monowheeled and multi-wheeled – e.g. Monocasters do need gyrostabilisation). Casters are also more manoeuvrable – on slow speed (up to normal human's fast walk /slow jogging) they can make instant direction changes, turning on the spot, or moving back ways / sideways on a moment notice. On greater speed it's not that easy (momentum becomes too great), yet they still gain additional +3 to all manoeuvre attempts. The drawback is that the ball and rollers tend to catch dirt, and require careful maintenance to keep them fully operational – traction problems are a bane of Caster-users.

Propeller blade – it consists of usually two (singular ones tend to drive off-course a bit) coaxial, multi-fan propeller screws in a protective casing (like Fantail system on helicopter tail rotors). This is the mechanical competitor to Fishtail set. Easy to control and manoeuvre, Propeller system is equipped with angle adjustation utensils, giving it most of the advantages of vectored thrust. Propeller-driven FBC pay 3% skeleton cost per 1 MA, in water only. Upper limit is 35 MA.

A snaketail example on a variant of a Naga shell

Tails:

Snaketails are not more popular than other Inhuman Transportation modes, but Fishtails have achieved limited popularity among ocean dweller 'borgs. They use myomar technology, not electric motors, as previous models did.

Snaketail (requires to be at least 3-4m long to work, I suppose) your typical Naga image, snake from waist down. I can see no real advantages of it, although the tail is prehensile, and can be used as weapon (dealing as much as 150% of a cyberleg's kick damage with a swing, or 300% on a boa constrictor - like crush). It is not the best way to propel yourself around as well – it takes 7% skeleton cost per 1 MA, and can't move you faster than 15 MA (10 on 2nd Gen. Myomar, and 5 on hydraulics... have you ever heard about a hydraulically-driven snake?).

One aspect of having a snake body that is hard to imagine – at least if you do not deal with snakes on regular basis – is that al. this long body can easily become a monstrous spring. A man can crouch to accumulate energy in its legs. Still, human legs do bend only at the joints. A snake body

doesn't have that limitation. It can become one big spring… Have you seen that old documentaries about arboreal jungle snakes, jumping from one tree to another? Well… That's it. A snake – given it has time to prepare – can add its length to the jump distance. Also, if the tail is somewhat coiled, the snake can maneuver on it as easily as we humans balance on our feet. But you can't use the tip of your toe as support to extend your head a few meters to the front. Or side. A snake can do it easily. This makes it a deadly enemy in close combat: when fighting a human, you have to count in his arms range and how far can he leap from where he stands. For snake, the lean range can be several meters longer!


A SuperChromed Fishtail

Fishtail. This module mimics water creature's movement - fin can be either horizontal (like dolphin) or vertical (like shark), it depends on model. Fishtails are, of course, useful in water only. They allow great movement ability in water, up to 20 MA (15 and 10, respectively with 2nd Gen. Myomar, and hydraulics), at 5% skeleton cost per 1 MA (remember that a legged being has its MA severely reduced when in water). Also, you can perform "tail bash" like a whale (and that's a deadly manoeuvre, given the strength and mass used – 200% kick damage, and since it's an attack invented for underwater combat, don't apply any "kick" restrictions here!)...

Multisection - pelvis equivalent to artificial shoulders, this module allows you to mount two extra legs. Prices and performance are comparable to artificial shoulders, but you can have more than just a single pair - any number of multisection modules can be linked to your lower spine (rear to pelvis) and then subsequently to each another, creating a centipede-like image. Not that it has any practical use, but it's possible (and for some people, that's just enough)... each Multisection unit can mount two legs (or one Inhuman Transport module listed in this section). It can also mount up to 20% of option spaces available to torso of matching BOD. Note that when calculating MA cost, each Multisection adds +100% to the actual cost...


A centaur-like effect of applying a single multisection module in a very weird True-skinned 'borg.

Centauroid ‘borgs

It is a subculture among ‘borgs, true, but a distinctive one: the Centaurs. Yes, they go for the look of ancient Greek mythological centaur, the being that was depicted as human from waist up, and a horse below. While creating a biological body of such a type has proven to be impractical – if not simply impossible – cybernetic ones are available.
Their users claim centaur form has numerous advantages, like, much greater stability and mobility, but, in fact, they tend to be simply unwieldy. Still, there are people who aren’t warned off by such things.

Centauroid body is usually detachable; thanks to quick-change mounts in the “horse’s” “neck” and humanoid body’s pelvis – height leg anchor points. Below, a quadruped body begins, usually formed to resemble an equine body. It is usually well-oversized, comparing to the torso. It typically consist of a slightly modified cyborg torso, four legs (there can be more, just it isn’t common) and a tail. Since there’s no need for a biopod rig or life-support equipment, but also no head (in which the biggest part of biopod, containing brain, is housed), the torso has 2 more option spaces than it’s size would indicate – which means damn a lot of spaces, since even a pony-sized body isn’t smaller than BOD 12. Apart from that, statistics for both body and legs are calculated normally. The tail is a particular case – a horse’s tail can’t have any options installed in it – it’s mostly hair, so count it as a “small tail”, like the rabbit’s one.

The body does always have a Serious Frame Alteration feature (see Wereborgs section), and the legs are usually Digitigrades. HL counts as normal, however, so unless it’s a permanent, first body, the loss is going to be really painful.

Apart from that, there’s a serious problem here, concerning mobility – you’ll need a specialized REF and MA co-processors to have the body moving properly, since there’s no way a humanoid brain (de facto, a brain of any mammal) could deal with having a centauroid body. Never, ever in our evolutionary history had we such a posture and our brains simply aren’t prepared to handle it. Even with the co-processors you’re going to need awhile to get used to the new shape. Cost of such processors are pretty high as well: MA costs 7% per level (starting from zero) of the centaur’s body’s skeleton cost, +1% per level above 6. Generally, the boundaries are wide – horse-sized bodies were known to be able to run as fast as MA 35. They use same myomar or hydraulic musculature as regular bodies, though, thus the limits for other technologies than standard 1st generation myomar may be more narrow. REF costs are 15% higher than for standard bodies – usually, the processor is installed to match the power of the one installed in the ‘borg itself. A gyroscope is a popular addition.

A SuperChromed centaur
Please note that a complete assembly is shown here, consisting of a centauroid chassis and a – specially adapted – standard torso.

Humanity loss: this is another tricky question – first, the shape itself is blatantly inhuman. Centauroid bodies tend to cause massive HL – it is calculated as if they were part of a basic body (i.e. half of their cost for a non-‘borg, 1d6 of every 2d6).

Appendix 4: The Book of Forgotten Tech

In Chromebooks 2 and 3, there were numerous exotic options built into the 'borgs being presented. Some of the stuff came from previously published books, some were covered in later publications. Many of them had altered names. And some were nowhere explained. I took an effort to unveil at least some of these forgotten technologies.

Breaking options into fractions

Working with the CheapFBC rules, you'll sometimes find yourself with odd fractions of an option space left. Now, there comes a question – can a piece of built-in equipment be installed in several places at once?

The answer, as usually is "it depends". The rule of thumb says that if it's mostly electronics, then it can be broken into several pieces that will be installed separately. For example, a built-in radio set, which takes 2 options. I can see no reason why it couldn't be installed as 2x1, or even 4x0,5 space, or even in some more weird combination. They have to be linked together, but when within a cyborg body, it's not a problem.

However, if the option in question is mostly hardware, it cannot be broken that way. For example, headlights must be as big as they are, for summing up 2x0,5 space small searchlights isn't going to give as much light as a single 1-space one.

This procedure does not cause any costs, however, if any of the body parts containing such a broken-down equipment becomes damaged, then the system is affected as a whole, just as if it was installed solely in that part.

However, to not complicate up things, my 'borg designs in this book do not make use of this rule (except for Nautilus, whose 1,5 space floatation bladder was parceled into three 0,5 space ones).

- Mikael van Atta

Ambidexterity co-processor – ambidexterity is achieved in two ways, generally. It can be the Ambidexterity Chip (Chromebook 1), that is available in two variants – the basic one allows for typical ambidexterity (no -3 penalty off-hand, 800e$), whereas the advanced one allows full ambidexterity – including independent use of each eye (thus e.g. shooting at two different targets, 1050e$). It's a normal chip, and requires Chipware Socket (or free interface socket). Alternatively, Neural Bridge (Chromebook 4 – 600e$, HL 1d6+2) can be used, that allows for typical ambidexterity. This, however, is a biotech that has to be applied to a brain. There are naturally ambidextrous humans, and this technology just makes you one of them (this translates as no -3 off-had penalty as well), so this feature cannot be included into a cyborg body (only into his brain, thus swapping bodies with biopod).
The built-in variant, used in some cyborgs, is little more than the chip, just being permanently hardwired into neural processor, so it doesn't take up space in the socket.

Black Book microcomputer: a cyberlimb built-in, it takes 1 space, costs 500e$ and is 1d6 HL. It comes EMP – shielded, grade 1. A civilian model, E-book, is 200e$ and 1d6 HL, and it's not shielded.

Black Box – this is a compact braindance recorder (15'000e$, 2d6 HL, neuralware option). Whereas using digital audio / video recorder would be significantly cheaper, Black Box allows for registration of all sensor data (audio, video, olfactory, touch, radar, radio...).

Built-in blade – although nature and method of operation of cyberarm blades is still under discussion, I'm going to list these blades here as simply retractable "survival knives" (in fact, they're big knives; some could call them even small machetes). Both variants are 1 space, 1d6 HL weapons. A steel blade costs 300e$ and does 1d6+3 damage. A monoblade edition is 1500e$ and 2d6+3damage.

Built-in camouflage suit (like Militech Ghost camo on Eclipse and Militech Mirage Gear on Dragoon, along the lines for Cam-O-Skin): this is a camo suit interwoven into 'borg's cover. It can be interwoven with any type of cover, except for cheapest plastic ones. The cost is equal to the suit's cost (a cyborg version of Ghost suit costs 5300 e$), the trade-off is that cyborg version cannot be taken off and isn't armored. HL is 1d6/2.

Built-in ECM set – a compact electromagnetic jammer. It can disrupt radio and cellular transmissions, radar waves, and wreak significant chaos in cybernetically-enhanced senses. However, without a right skill, it's a blanket effect (covering everything and everyone in a regulated, 5 to 50m radius), creating a load of fuzz on enemy radars. This does mean you're undetectable, but not unnoticed (e.g. as if a hot smoke grenade has been discharged – you can't see who is inside and where exactly, but on the other hand, the smoke around means they are somewhere there and doing something they don't want you see). However, a properly trained electronic warfare specialist can

detect and determine enemy detectors type and capability, jam them in a way they wouldn't see anything suspicious, and do all this on a subtly tuned frequencies that he wouldn't affect own side's communications.
It uses 2 spaces, 2950E$ and HL 2

Built-in microcomputer – a built-in PCX minicomp, it costs 2400e$ (I'm using the guideline worked down for black book: implant version = 2x non-implant version) and has 1d6+1 HL. Due to space restrictions, cyberlimb variant doesn't have screen nor keyboard (it's operated via cybernetic linkage, hence the price), nor any other peripherals. However, it has a full set of I/O ports, so peripherals can be jacked in, or it can utilize user's cybernetics instead of peripherals (e.g. use Times Square Plus or subdermal viewscreen as a screen, chipware socket as chip drive, and so on).

Built – in radio set – this is an equivalent to typical military radio set, so-called manpack radio (since it's roughly backpack sized). It is capable of voice transmission, Morse-code telegraphy, and data transmission (although it should be used for small amounts of data, and it's not fast enough for active netrunning). It can also perform burst transmissions (the message is recorded before, then compressed into a split-eye short "burst" of information and emitted, thus making it less probable to be detected and almost impossible to be localised. Naturally, you need another burst-transmission-capable radio to receive the message and decompress it). Cyberaudio module is required to operate this set. Alternatively, standard microphone and loudspeaker / headphone sets can be used, the module is also equipped with computer I/O ports. To prevent opposition listening to your messages, frequency-hopping ability is used (frequency changing-pattern chips cost 150e$ a piece. Without an identical chip installed it's considered to be impossible to stay tuned for longer than a few seconds or even less). An external scrambler / descrambler can be attached, or cyberaudio scrambler can be used as well. The one included with the set is Very Difficult to de-code. Range depends on the antenna used. No external antenna reduces the range to 3 kilometres. A typical military "whip" wire antenna (about 2m long, usually attached to backpack) raises range to 15 km. Longer antennas, like 6m wire, can be used only as stationary, but they have a range of 25 km. Larger antennas are usually mounted on vehicles or as a part of bigger broadcasting installation and paired with amplifiers. Their range varies from 30-40 km for a jeep-mounted set with longer antenna and small amplifier (yet it can be used on a move) to several hundred kilometres for a large and powerful sets with stationary-only antennas. Power supply is rechargeable, replaceable batteries that provide 168 hours of operational readiness, but real power reserve depends on how heavily the radio is used.
It uses 2 spaces, 2650E$ and HL 2. First described in Interface magazine, 1#2.

CO_2 Extinguisher – described in Chromebook 1 as "Icer" (1 space, 200e$, 1d6/2 HL). Additional gas canisters can be installed per 0,5 space, 0,5 HL and 100e$. Each of these canisters contains as much gas as the basic "Icer" itself.

Combat Crystal (comes from: Hardwired): a Neural Cybernetic option, combat crystal requires either Kerenzikov or Sandevistan initiative booster as prerequisite. Some form of data interchange (usually a Cyberaudio Radio Link) is also required. This is a military cyberware used to maximize effectiveness of small infantry units. It ensures that 360 degrees space around the group is observed, cover used to maximum effect, suppressing fire laid properly, and moving team-mates are given proper fire cover. In fact, there's not much voluntary action promoted by this system, but the whole team goes with perfect coordination and great efficiency. At least 5 troopers with Combat Crystal are required to get it working. It gives +1 modifier to all attack rolls, +2 to defence rolls and +2 Awareness. GM option: combat crystal – equipped units always have better Initiative than these who are not equipped with it.

Hecatonchires Processor

This is but a predicted tech, so if it's ever available in the game (I advise to not do so) the exact cost and size are up to GM.

Suggested HL is 3d6. Hecatonchires ("Hundred-handed") processor allows the user to perform a number of actions simultaneously. The system operates as a semi-AI, utilizing user's knowledge and ability (thus, his skill level) to perform things ordered by him, but without his supervision – without his mind even being aware of that. For example, you could drive a car via Hecatoncheires, and it'll go just as good as if you were driving it with your very own hands. However, you're at the controls of an AV, several meters above the car, and you have to really concentrate on piloting. However, all systems controlled by Hecatoncheires have to be digitally linked to it (in the example above, the car has to be cyberlinked, and under remote control of the AV pilot. It is suggested to pilot the AV via cyberlink as well).

It's up to GM, how many operations a given Hecatoncheires system can supervise, also, how big it's going to be. Early ones are likely to use several spaces (if it's possible at all to install one into a 'borg), whereas late models are likely to be as small as neural co-processors, taking no space. Likewise, prices are GM's call, although I'd suggest that Hecatonchires system should always be expensive.

- Mikael van Atta

Note, however, that communication between crystals can be jammed (depending on its nature) ruining the effect. 1500 E$, 2d6+2 HL.

CyberSteroids - It is a new way of enhancing borg's Strength, tripling its original value. However, they are much cheaper than Hydraulics, costing flat 300e$ per 1 BOD of the borg, they take no spaces and do not limit performance. They can be switched on and off, but – contrary to hydraulics – they aren't meant to be used as general-purpose muscles, since they need a dedicated power source. (a rechargeable battery, good for 10 hours of use). Cybersteroids do triple only the basic BOD – there's no point in outfitting a 2nd Generation Myomar / Hydraulics – equipped 'borg with them.)

Electrified hull – it has been described in Chromebook 3 as "Eelskin" (1d6 HL, 1400e$, built into body cover).

Glue ball launcher – spring powered launcher, shooting 1" balls, used to emergency patching of holes in space. Effective range is 10 meters, and each ball can cover a hole of up to 5 cm in diameter. Internal clip holds 3 balls. Cost: 100e$, 1 HL, and 1 space.

Grenade holster – a variant of regular cyberleg weapon holster (same cost: 100e$ and HL 1), adapted to carry grenades instead of a gun. It can hold either 3 standard grenades, or 5 minigrenades (this must be specified during installation). There are also variants used to hold spare ammunition, like 40mm grenades (roughly equal to mini-grenades), 20mm grenades (circa 12 per holster) or even more shotgun rounds.

Hand Taser (Enforcer) – this is nothing else than Tazer Grip (Chromebook 1), a cyberarm option (150e$, 2d6-2 HL, 1 space).

Headlights – in fact, a little more than high-power torchlights built into a cyberlimb. Modern ones are very energy-efficient; generating almost no heat (did you know that Edison – invented light bulbs emitted only 2% of energy as light, and 98% as heat?). These lights don't have their own battery packs; instead they run off limb's power supply. These are narrow-beam searchlights, rather than wide-beam floodlights, since floodlights tend to not fit well into an option space. Two variants do exist: pop-ups (that are hidden until deployed, but when deployed, they're not protected by limb's cover) and semi-contained (partially sticking above limb's surface, but fully protected by its cover). Both variants are fully adjustable, with 360 degree rotation ability.

- basic model has a range of 50m, costs 100e$, and takes 0,5 space.
- more powerful one is 100m range, 300e$, 1 space
- the strongest currently available has a range of 500m, costs 800e$ and takes 1 space as well.

Built-in holsters:

Note: In my opinion cyberleg holster – if it is to hold a regular firearm, not a stripped down version - should take up two spaces, as it uses whole upper leg. The standard version can hold a P – concealability weapon (knife, derringer or other small pistol). Its grenade version – one standard or two mini grenades. Double – sized variant (two spaces), able to hold most of the J – sized guns (or 3 standard grenades), costs 200% and has the same HL (200e$, 1HL).

In this sourcebook we do take that "space's" size is not tied to a limb's size, but it's rather a set amount of arrangeable space (thus bigger cyberlimbs do have more of these). Therefore, you'll need that much space to hide a weapon of following size:

1 space for a pocket-concealable weapon (derringer, small pistol, knife)

2 spaces for jacket-concealable weapons (most handguns, small submachine guns, big knives, like your typical combat / survival blade)

at least 4 spaces for a long coat - concealable weapon. And this only with GM's approval.

Bigger guns - except for specific cases - cannot be hidden. Why? Because of their overall length! You can quite easily conceal a gun in upper or lower part of the arm or leg. But these do have limited length. For example, my lower forearm has about 9"/23cm of useable length (I'm about 6'/180 cm tall, and probably about BOD 6 in CP terms). So, no matter how I'm going to arrange space within it, I won't put anything longer than those 20-something centimeters in it. No way. And, due to the fact there's either elbow or knee standing in the way, you couldn't use all of the limb's spaces to hide a weapon – merely half of them.

Torso. Whereas it's much bigger, and can hold a respectable number of spaces inside, it provides a problem with this application: it has to be flexible. You can't insert any big, hard object, like a SMG or rifle (or sword) into it, or it will somehow interfere with turning and bending (I assume that we want the borg to be able to bend like a fleshie does). You can use some place inside the chest area (ribs make it pretty non-flexible anyway) but it's still not much more length available. No way to hide your typical rifle (thinking AKM here) in, even with the stock collapsed.

Okay, maybe ACPA-borgs would be able to hide such big guns. But smaller ones? No way. Of course, you could always try to disassemble the weapon and hide it as parts. However, you're not going to gain much, unless you can separate the barrel into several parts. This is up to GM.

Of course, you can always fit these externally, in something like a backpack. But that's not something we're for, right?

- Mike van Atta

These are white-light versions. Both IR and UV variants do exist, they cost 50% more. Please note that ranges are given for normal air clearance. HL 1 per light.

High power radar – this is a more powerful variant of a standard radar system, and due to its larger antenna it cannot be implanted into flesh. It takes 2 cyberware spaces, costs 800e$ and takes 1d6 HL. The range – if not obstructed – can reach 8 km, although in space it's often limited by various electromagnetic interference. In ground mode, it's about 2 km, and dense terrain (e.g. city) can cut it down to as low as 200m.

High power sonar – sonar equivalent to the above. Takes 2 cyberware spaces, costs 1600e$ and 1d6 HL. The range is 40m active, 150m passive mode. Underwater, it's respectably, 400m and 1500m.

IFF transponder – there are a few ways to let your allies know you're on their side. Usually, an IFF is used. However, it's often mistaken on how it works. It's not a wise move to attach to yourself a radio beacon transmitting constantly "I'm a friend" with coded signal. This would mean it screams also "I'm here!" to every electronic warfare device around, and if you're not emitting the signal they use to designate friends, they'll automatically identify you as foe.

So, IFF transponder is usually wired into radar (or sonar) emitter and bursts a directional transmission in response to other radar's scanning (like: "oh, you've seen me? Well, I'm actually a friend"). Of course, this doesn't allow passive detection devices to "ask" your IFF. But hey, even today an infantry patrol tends to rely on their eyes and ears, not radar. That's why visual recognition marks are still being painted on military hardware… Cost is 10% of the radar's / sonar's cost, no spaces or HL.

Line & clamp launcher – another piece adapted from ACPA equipment. This is spring-powered cable and winch system. 20 meters of cable that can support up to 500 kg, a winch (can drag up no more than 300kg), and either magnetic clamp or grapnel. The cable is 20 SDP. Whole set costs 400e$, takes 1 space and is 1 HL

MAD – Magnetic Anomaly Detector is rarely used on full borgs, since it's difficult to shield from the borg's own magnetic anomaly effect (on vehicles, it's usually done by installing MAD on a long antenna). It takes 1 space, HL 1 and 2000e$. It can detect large metallic objects (like armored vehicles) on up to 100m. Gauss weapons can be detected on up to 300m (firing impulse only).

Masking / feature alteration system – although it has been described in Chromebook 2, some more explanations are needed. This seems to be a more primitive variant of Feature Alteration from When Gravity Fails, as it doesn't have to work on a living face, just on a 'borg's one. It consists of numerous liquid silicone pouches on one's face, linked to hidden reservoirs. Pumping those pouches up or down can change the shape of your facial features within two minutes to make you look quite different than before. Hair color is altered by oil-diluted pigments dispersed from hair cells on head. It takes about 3 hours to fully affect a medium-length hair. HL 2, 1000e$.

Parachute – a tightly-packed arachno-silk chute. It's used to allow Wingman 'borgs safe evacuation from damaged aircraft. Minimum open height is 60m. This parachute is much smaller than one meant for a human, thus forcing much greater descending velocity. Since descend is so fast, this parachute cannot be used by humans – only FBC can safely take the landing with such speed. Also, no 'borg weighting more than 150kg can use this system. Bigger ones aren't usually used as pilots, anyway, and if airdrop insertion is required, most 'borgs use heavy – duty backpack parachutes (the biggest of them were originally designed to paradrop ACPAs). It takes 3 spaces, and costs 5000e$. HL 2d6.

In fact, 'borgs prefer using regular human rescue gear (like ejection seats included with most combat aircraft) than the built-in parachute.

Prehensile legs: such legs are quite common among 'borgs projected for zero-gravity use, also can be found on these rare models intended to be arboreal. It's a quite simple modification, requiring two cyberlimb options being installed: double-jointed (knee) and 360^{o} Rotating Joints (ankle) - 1120 e$, 1d6/2 +2 HL, 1 space all together (each leg). "Climbing" cyberfeet mounted on such a leg unit make functional, if clumsy (-3 all actions) hands.

Psycho restrainer - I weren't able to determine what exactly was used to keep Dragoon from becoming a rampaging cyberpsycho apart from psychoactive chemicals (and that tends to produce minds I won't trust with any coordinated military action). However, after a brief discussion, a conclusion arisen that it was some kind of behavioral chipware. Although Chromebook 2 mentions such chips, it doesn't determine how they work. Thus, I had to turn to "When Gravity Fails" sourcebook, where a whole chapter is devoted to construction and use of behavioral chips, known as "moddies". The one being most often used in military 'borgs is called "Cybertrooper" moddy (see below).

Note: in my campaign, moddies are a 2nd generation tech, available together with new generation of neural processors. if you want them to be used in regular CP2020 campaign, I suggest using following tech:

- **Modified Chipware Socket**, Surgery: N, Cost: see below, HL 0, requires a regular chipware socket. This variant contains an additional slot for a single moddy chip (which is not being counted against a maximum number of active chips a person can use). Note: under laboratory conditions, engaging multiple moddies on a single person was tested. Effect was always schizophrenia.
  Moddy Socket cost: although in When Gravity Fails moddy link costs 500EM (50% of the locally available processor/interface/ chipware socket combo), I'd suggest it costs 1000e$ in regular CP 2020 setting, since it's well – ahead of technological level for regular neuralware. If cory implants are available, the cost drops to 500e$. A moddy can be safely used for a number of hours equal to user's current Cool x4 (generally, 24 hours are considered safe limit). After that time, Implanted Personality Rejection Syndrome begins to act, systematically reducing chip's effectiveness, and reducing the user's psyche to a set of exaggerated emotions. Note: moddies are psychologically addictive.

  How does a moddy work?

It overlays it's programming on user's personality. The programming can be either a full personality, an emotion (or set of them) or a fictious story. User's personality remains present, but subdued – he remembers who he is, who his friends and what his goals are, yet acts along the lines set by moddy. For complete information about moddy construction and usage, consult When Gravity Fails sourcebook.

- **Cybertrooper** Moddy (rare Type 2 moddy, cost: 6550 e$)

As those familiar with WGF would notice, it's a variant of classical Perfect Soldier moddy. Cybertrooper, like Perfect Soldier, turns the user into commander's dream: dedicated, intelligent killing machine, with stone tolerance to bloodshed, yet obedient and willingly following orders from his superiors.
As an additional subroutine, Cybertrooper also sets user's mind just a step above cyberpsychosis – not human enough to care about outcome of his actions, except for the strictly tactical effects. If you order Cybertroopers to raze a village to the ground and kill everyone living there, they won't ask you why do you order them to murder innocent women, children and elderly. They'll bark out a short "Yes, sir!" and fulfill the order. Needless to say, in hands of a commander lacking proper morals, they can commit every atrocity. And do it with ruthless efficiency (unlike cyberpsychos, they're not cruel *per se*, they just use the most effective way – from a military point of view – to fulfill their orders).
Still, although they don't tell good from evil, they surely can tell own forces from enemies, thus they are not so dangerous to own troops as Dragoons were.
Game mechanics: EMP set at flat 1 (no

Sons of Alessi
Personality Chipware Line

Sons of Alessi found itself a niche on the market – their moddies are substantially cheaper (if somewhat simpler) than others, and are build especially with the Olympia Hero – series 'borgs in mind. Sons of Alessi offer substantial discounts for wholesale deals.

The "Sergeant Bulldog"
Type 1 Moddy, Common, 1800e$ total
Effects: COOL +3, EMP +3, +4 resistance vs. persuasion & fast-talk

Sons of Alessi had actually bought the copyrights to the personality of a popular TV series character, Sergeant Bulldog. This moddy turns the user into a hard-bitten, stubborn policeman, incorruptible and impervious to smooth talking – yet one who can show compassion to those in need. This chip is pretty popular among police SWAT 'borgs, since it gives them not only the necessary alignment, but also the image and behavior that most people expect from SWAT teams. After all, everybody's watching the adventures of Sergeant Bulldog, right?

The "Rescue Ranger"
Type 2 moddy, Uncommon, 1150e$
Effects: COOL +3, EMP +3

Another product from the Sons of Alessi, this moddy is a common stuff among 'borg firemen and paramedics – they remain calm under extreme stress, but still show empathy to those in need. There are two variants – one geared towards a paramedic, the other – fireman, as they have different priorities, but the difference is not overwhelming, and those two chips are generally interchangeable. Several routines have been written in, to ensure the way the 'borgs speak will match what is usually seen on TV shows depicting work of emergency services.

The "Commando"
Type 2 moddy, Uncommon, 1050e$
Effects: COOL +3, EMP -2 (but never below 1!)

Intended for the Ares 'borgs, Commando keeps the user determination up. However, Commando is still following orders, and not very likely to go cyberpsycho. Sure, it's not as psycho-proof as the Cybetrooper, but also costs only a faction of the Militech's chip.

- Mike van Atta

amount of cyberware can raise or lower it), +3 COOL (up to max 11), +2 INT in all combat-related tasks (including Awareness), -2 INT in all non-combat related tasks. This moddy cannot accept any daddies.

Radiation shielding – Popular equipment on haz-mat cyborgs, this feature is covered by EMP-shielding.

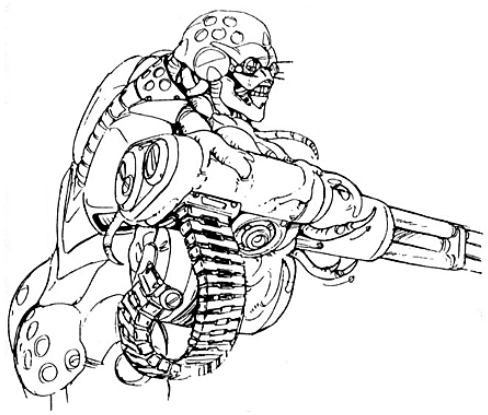
Radio lantern / homing beacon – this utensil broadcasts an easily identifiable radio signal on a pre-set frequency (usually an international emergency frequency), allowing a rescue party to find you. It cannot be used to transmit other information (at least, without some tampering). The range at which beacon's signal can be picked up and traced is 100 km in ideal conditions (like orbital conditions: open space and no electromagnetic interference). In ground – to – air mode (e.g. you're on the ground, and SAR 'copter has been dispatched to pick you), usual range is 80-100 km in good conditions, but can drop to 50-60 in bad conditions. In ground-to-ground mode, you shouldn't hope for more than 20-30 km in flat, clear terrain, and in urban conditions it can be limited to less than 10 km. This beacon holds its own power source (reloadable battery) good for 36 hours of constant broadcasting, but can run off body's power source as well. Cost is 500 e$, 1 HL, 1 space.

Remote targeting link – 1500e$, 0,5 HL, 0 spaces. A cyborg version of this utensil doesn't use its own transmitter to send / receive indirect fire data. Instead, it relies on other communication forms built into the user's body. All it does, is calculating the data. This is a neural option.

Restraint strip dispenser – common police modification, it's a little more than a storage space for plastic restrain strips. It can hold a dozen of these one-use handcuffs, and mounts a spring to feed them to dispenser access slot. 150e$, 1 HL, 1 space.

Satellite uplink – from user's point of view, this is little more than a built-in satellite phone. Just like a cell phone, but you have the range everywhere on Earth. It has a small antenna array that has to be deployed when you wish to use the phone (whether it's a satellite dish or simply a telescopic antenna, depends on the model). On its own, the link can transmit voice, but it can be linked to computer and used as a modem. When used by 'borgs (or seriously augmented humans) it's usually linked to neural processor and cyberaudio, for hands-free operation, but it can be operated via small numeric keypad as well, and microphone / speaker is built in as well. It functions as GPS positioner as well. 1 space, collapsible antenna included. HL 3, 2000e$.

Secondary breathing tank – there are a few ways to deal with extended life support on 'borgs (like the Aquarius and Copernicus 'borgs are equipped with). The simplest of them is installing an additional air tank in the breathing system. Every 'borg has a "lung" running off a storage canister, refilled with every breath-in. Efficiency of that lung plus the low oxygen demand of the biopod (compared to a complete body) allows for up to 8 hours of use per refill (i.e. breath-in). However, to prolong this period, more tanks can be installed – each of them being simply a small, pressurized gas tank. These can be installed theoretically in any body part, however, because of practical means (these have to be linked up to the central breathing system)



Replacing arms with weapons

This is possible, and some people find it "cool". The advantage is that the borg won't lose the gun too easily, and it is much cheaper and less complicated than having the same gun built into a cyberarm.

The disadvantage, however, is that the bigger gun, the more unwieldy will it be in confined spaces, and that you forego a fully functional arm.

A few issues that have to be addressed:

- Humanity cost is always 2d6, no matter what kind of gun you install.
- Size varies – most personal weapons are acceptable on a "rule-of-thumb" basis. As for heavy weapons, consult Maximum Metal for their size (remember that 1 ACPA space equals 2-3 cyberarm spaces… however, in this particular case, I'd suggest applying x2 modifier, since we're no longer limited by the problem of fitting a gun into an arm). A gun can take as many spaces as there would be in an arm of the same size, plus 2. I.e. a BOD 6 arm (which does normally hold 4 spaces) can be replaced by a gun taking no more than 6 spaces. Keep in mind that even if space requirements are met, a borg may lack BOD to withstand the recoil!
- Cost is 150% of the gun itself (you need servos to move it as the borg's neural signals call it to and a frame to rig an – usually big, heavy and causing massive recoil – gun to the borg's frame). Smartsighting can be bought separately.

- Mikael van Atta

secondary breathing tanks are installed almost exclusively in torso. 1 space, 200e$, 0,5 HL per an 8-hours tank.

Silenced cyberfoot – this is an another name for Catspaw Stealth Cyberfoot (Chromebook 4)

Solid oxygen battery – like the one installed in Aquarius 'borgs. It uses blocks of chemically – bound oxygen, the same as used in Independent Air Supply implant. It's available in various sizes, and can be installed in any part of the body, although torso is preferred. The system itself costs 100e$, plus the cost of a sufficiently large amount of chemically bound oxygen. Humanity cost is, in every case, 2.

1 – space sized variant is good for 16 hours. Refill cost: 400e$

½ space variant: 8 hours, 250e$

¼ space variant: 4 hours, 150e$

Sound neutralization system – overpriced, and over-adverted, this system doesn't emit "counter-sound" the advert claims. In fact, it works on a simpler principle – by emitting a "white noise" buzz that covers other sounds, yet fits as "background noise". It is so tuned, that human ear doesn't recognize it (that is, it's heard, but not noticed). The sound affects human perception, de-concentrating people and thus making it harder to them to notice something is wrong. A prolonged exposure (over approx. 15 minutes) can lead to serious headache, yet in operational conditions a single human rarely is exposed on such stimuli that long.

In game terms, this is -3 to hearing awareness rolls. A level damper doesn't affect it (it's not a loud, sudden sound), but sound editor can be set to ignore the "buzz", thus making the emitter lose its efficiency. HL 1d6+1, 2000e$, takes 1 space.

Space maneuver / main jet – another ACPA equipment derivative, it's scaled down ACPA space maneuver rocket. It requires 2 spaces, 800 e$ and HL 2d6 as well. Offers +2 to space maneuvering. It allows 20 seconds of main thrust or 12 hours of maneuver jets usage. Velocity change 5 m/s on main jet. Spare fuel cartridges are 5e$ apiece.

It is worth noting that – although it's described as "rocket", this system doesn't utilize rocket nor jet engine technology, as this would be dangerous and unpractical. Whereas chemical engines of that kind provide great fuel effectiveness and reaction speed, they also produce vibration, noise, and heat, as well as possibly harmful side effects. Such things won't be tolerated inside of a habitat, where non-borged humans do live. Modern 'borg space maneuvering systems do use neutral gas cartridge (either CO2, or, more often, nitrogen) to propel themselves, in exactly the same way space maneuvering units do work. While they are less effective than classical rockets, they have almost no side effects, and spare gas canisters are much cheaper (and refillable).

Squirters – these are chemical dispensers installed on the original haz-mat 'borg, Sheol, to neutralize chemical contaminants. In fact, these are slightly modified Icers with variable loads (exact load depends on assignment) and should be treated like such.

Thermal baffling – full 'borgs do not generate much heat, especially if they aren't moving a lot. In above – zero (Celsius scale) temperatures, they don't differ much from surrounding temperature, over 12 degrees C they are generally in the same temperature as air around them. Of course, heavy work causes myomar muscles to emit heat, and hydrogen cells emit water vapor (although in small quantities). Yet there's sometimes a need to baffle IR signature of a 'borg, usually a military model. This costs 10% of the body's cost, no spaces taken (as with other camouflages, this is a cover modification). IR baffling can be combined with any cover, although it's useless with ExoDerm and TrueSkin, as they are made to emit heat in a human-like pattern and temperature (of course you can turn the Exoderm off to make your thermal baffling useful, but you'd need a few minutes to cool it down and dissipate heat). HL 2.

ULF Radio – this is an underwater communications set. It consists of ULF Transceiver (1d6/2 HL, neural option) and 100m wire antenna on a reel (1 HL, built into a cyberlimb – usually a leg). The whole set costs 200 e$, and allows for voice transmission on distance about 15km. Data can be transmitted even farther (depending on conditions).

Underwater propulsion system (aka "caterpillar drive") – this is a scaled down derivative of EuroArms Deepwar™ ACPA "floater". This one costs 5000e$, and uses 2 spaces on torso section (however, can be also installed in a fishtail module, if the borg is equipped with such). HL 2d6, maximum speed is 54 km/h (MA 30). Underwater propulsion unit runs off main batteries.

Warning lights – these are police / ambulance – like warning lights. They have no other uses (e.g. can't be used to blind anyone). Cost: 100e$, HL 0,5, 0,5 space if mounted externally (1 space if pop-up).

Water jet / fire extinguisher – this toy, tested on early Brimstone fire-fighting 'borgs, consists of a heavy-duty water pump installed on the borg's back (2 spaces, standard fire-fighting water hose is attached there), and linked by series of high-pressure pipes to a regulated nozzle in the wrist (another

3 spaces). While it allows the borg for infinite supply of high-pressure water, it also means it has to drag a several meters long and quite heavy water hose. Not that a borg cannot stand the weight, but it still can limit it's mobility in a blazing building. And disconnecting it takes precious seconds… Nowadays, old – fashioned hand-held water jets are popular among firemen borgs, mostly because they can be dropped in a blink of an eye if there's need to move quickly. HL of this system is 2d6, and it costs 1700e$.

Cyberarm Blades

This is an old problem. What you can see in the Book of Forgotten Tech of the CheapFBC, is merely accepting the status quo. However, it needed a more serious approach. Many of the cyberweapons in Cyberpunk came there because they "looked cool", without any regards for realism. The "wolvers" are a good example of it: they were literally stolen from the X-Men comic books. Sure, these are cool. But first, they're not going to deal 3d6 damage. They're thin, thinner than knives, and not much longer. Sure, we could agree that each of these blades equals a knife, and since there are 3 of them… Whoops, wrong point. See, if you shoot 3 bullets, each worth 1d6 (.22) damage, you do not roll 3d6 versus the armor. You check each of the bullets separately. And the same it goes with wolvers. Suddenly, it's not that lethal, right? Still, if they hit someone unarmored, they're going to make real mess…

Not to mention the way these are implanted, housed, and deployed. For example, wolvers are usually shown reaching circa 30 cm from their access points in the back of the hand. Now, make a simple exercise: take a ruler, and check how you're going to hide these 30 cm in your forearm. Unless you're really big, this is impossible. Not to mention you wouldn't have more than 3-5 cm of the blade still in the housing on the back of your hand. What does this mean? Circa a 15:1 leverage ratio when you hit anything with a slash of your wolvers. Now, if these are housed in a flesh arm, this is pretty likely to tear them out and apart. A real pain, not to mention screwing your blades… and leaving a lot of your blood spilled around the scene.

Rippers. Sure, that's cool, having blades springing out from your fingertips. But 5-7cm length depicted in the rulebook would require taking place within the finger, up to a second joint. Whether the finger would be replaced with artificial one or left biological, it would have to be stiff. Simply, with a 5 cm blade inside it won't be flexible at all. So no bending your fingers any longer. And this is damn uncomfortable.

The only option is to have rippers like Molly had – small, flat, double-edged blades under your fingernails. Taking my hand as an example (I'm 182 cm / almost 6' tall, on my better days), this would mean no more than 2 cm blades, and that's the best assumption. I'd guesstimate that 50% of the blade's length would have to stay inside of the finger, anchored there and acting as counter-lever. What we are left with, are essentially scratchers. Not that you can't kill someone with them, but this wouldn't be so easy.

But then there are cyberarms. You can use a much more space in these, since you don't have to worry about veins, bones, muscles and nerves – their cybernetic equivalents can be arranged as you wish to allow installing whatever-you-wish inside. Still, the blade can't be longer than the part it is housed in.

Votum separatum on cutting weapons damage

What I'm saying is that a broadsword does about as much damage as a .22LR (which is under-rated in CP2020) and a 2-handed weapon like a greatsword/ axe/ polearm hits about the damage of a 9mm. One thing to remember about "damage" in an RPG is that it's not about cutting power; it's about the chances target X will be dropped by an attack with this weapon in one shot. If I hack off a limb with one hit with a broadsword is the immediate result any different than shattering the bone with a 9mm round?

- Psychophipps

But then why not make it fold? A typical folding knife consists of a blade, and a handle that covers the blade when folded. But change the handle for a twin-blade set that would cover the primary blade when folded, maybe add a third such a segment to house these two, and attach the butt-end of the whole assembly to the cyberarm's wrist. It's all nice and dandy when folded – it hides within the forearm. When deployed, the segments unfold, and the hand (useless for the time) is moved out of the way, usually to the underarm. In a moment, you have a blade that is almost 2, sometimes 3 times as long as your forearm.

Sure, it has its weak points: the joints. But still, it's an impressive blade, which can rival proper melee weapons.

Since the way they are linked to the arm, such blades can't be used for proper fencing – you lack the wrist mobility needed for those fancy movements. Also, due to their length, everything larger than a knife-length (well, maybe short-sword, in a pinch) are too unwieldy to be effective as thrusting weapon. Still, as cutting (or rather cleaving…) blades, these work pretty well. They have the proper length, and although the lower parts of the blade tend to be

sharpened as well, you usually use only up to top 1/3 part of the blade to actually hit the target the rest is mainly to provide the reach and leverage.

The rules below will allow you to create cyberlimb blades under the abovementioned mechanics. Please note that damage listings are my guesstimations, and they do not equal damage listings given in CP2020 official rules. Use them, or lose them – I needed them mainly to reflect the scale. Take in mind that this takes different approach to conceal ability: blades tend to be flat, long objects, so one that could be strapped to a shin or forearm and hidden in a sleeve of one's cloth (P conceal ability) won't necessarily fit into a pocket (also P conceal ability) – CP conceal ability rules were invented for guns.

Blade master table:			
Blade length	Damage	Concealability of equivalent	Equivalent carried blade
Up to 4" / 10cm	1d6/2	P	Pocket knife, Swiss Army Knife
Up to 12" / 25cm	1d6	J	Survival / combat knife, bayonet
Up to 24" / 50cm	2d6	L	Short sword, machete, wakizashi
Up to 36" / 80cm	3d6	L/N (GM call)	Long sword, scimitar, katana
Up to 48" / 100cm	4d6	N	Bastard sword
Up to 72" / 160cm	6d6	N	Two-handed sword, no-dachi

Psiberserker's rule:

When dealing with wounds from bladed weapons, apply 1 extra damage per turn per 1d6 of the weapon's damage, due to bloodloss.

A successful dressing of the wound stops it.

- Psiberserker

Now, using the master table for bladed weapons, we can determine Humanity Loss: 1d6HL, +1d6 per every damage die of a blade.

Spaces used: 1 per damage die. However, the blade can't take more than 50% of a cyberlimb's total spaces. So, under CheapFBC rules, an Average-sized (Bod 5-7) cyberarm, that can hold 4 spaces, can't house anything bigger than a machete-sized (2d6 damage, 3d6 HL) blade.

Cost: 50e$, +100e$ / damage die. The abovementioned machete would thus cost 250e$.

Optionally, the top part of the blade (the one you use to cut) can be made out of monocrystal, giving it +1d6 damage extra. It costs +300% of the system (not +500% as in typical rules, because the monocrystal blade makes only a part of the whole assembly).

Partial Body Conversions

Before biopods like those of the modern FBC were developed, Partial Body Conversions were created. The basic idea was to replace all the limbs with cybernetics, shell the torso in an armored cuirass (breastplate & back plate), head in a cowl and faceplate, and fit the whole thing with a set of then-modern audio & optical sensors. Most of these conversions were used in the armed forces, but a few were present in police forces as well, especially in Detroit (now completely replaced by proper 'borgs).

An interesting idea was to leave a PBC one meat arm, as well as going for only a partial coverage of the face and – sometimes – torso. Whereas this meant abandoning the all-around armor and environmental protection, it allowed the PBC to have one arm and one eye still useable, should its mechanics fail. Naturally, most of the noted examples were built that way rather for the owner's fancy, not for practical reasons – and they have never been widely used.

In it's time PBC were an interesting idea. They had several advantages: with heavy armors and mechanized limbs they were very durable, very resistant to damage and given very high stamina (that's mostly thanks to the fact their organisms didn't had to supply whole bodies with blood, oxygen and nutrients, also, there was much less flesh to be moved around). They could be further updated with modified internal organs. However, the psychological impact was devastating. Besides, PBC were usually thought about more like machines than humans, which added to psychological problems.

Nowadays, they are almost no longer seen around, except for cheap "Street borgs" which utilize the same technology. However, Militech did try to revive the idea with their Xenon system.

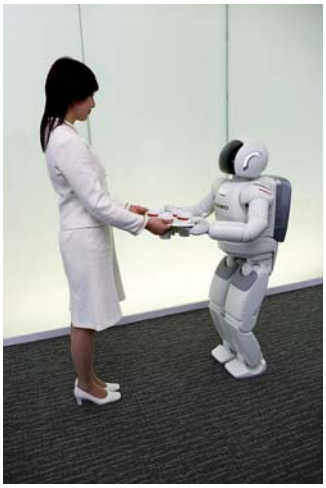
Note: HL of PBC is handled on normal basis, not preferential FBC basis. Also, although it

would be up to the spirit of CheapFBC to design every PBC to fit the users BOD score, I recently got another idea.

Both Militech Xenon and Tin Woodsman (aka Robocop) can be seen at D-Roc's great Datafortress site:

PBC were generally made in a specific BOD, much like FBC. The most typical was BOD 12, since these packages were meant to be big, intimidating and mean business. Where this would call for an Oversized cyberware penalty to HL score, I suggest a preferential approach in this particular case: charge a PBC in the very same manner an FBC would be charged for BOD exceeding his human BOD value, including the "minimal HL" rule of FBC.

Appendix 6: Anima



Honda Asimo
An early Anima-driven android

Anima *– (Latin) the spirit within, one that moves the object (sometimes translated as a "soul"). Also, a kind of pseudo-intelligent computer program, used mostly to run drones.*
(Webster English Dictionary, 2022 ed.).

Anima (plural is the same as singular) are programs made to run drones… as well as pretty complicated robots and androids. However, don't let their clever behavior and smooth talks mislead you – Anima are not Artificial Intelligences. They are mere programs.

How an Anima is different from an AI? First, AI is self-aware, and has some free will. It's an intelligent being, capable of improvisation and creativity. Anima are just programs, not more self-aware than your digital, net-capable refrigerator. They can't be creative.

Still, a well-programmed Anima can make an impression of a real personality, if it's needed (much alike to a character in a computer role-playing game). They can react to changing environment and adapt to it.

Where are they used?

Mostly in military, to run reconnaissance and combat drones / remotes. They lack the imagination of humans, but usually react faster, and they can work under human supervision to compensate for the lack of their imagination. Plus, they are cheap, comparing to big-time military hardware or trained soldiers.

Apart from that, Anima can make companions, assistants, helpers… have you seen Ghost in the Shell: Stand Alone Complex? The mechanical "secretaries" in red costumes are Anima, contrary to "true AI" Fuchikomas (easily distinguishable when a Fuchikoma overloads secretary's logic with the famous "liar's paradox" – a true AI wouldn't let such a minor problem stop it down!). Or whatever you wish them to do, provided you take in mind they are not too bright…

Similar pseudo-AI are being used for quite a while in Net applications. The famous *Igor* assistant program is one of the better known ones.

Hardware

You need a computer that will run an Anima. While really small ones can be ran out of a E-Book class palmtop, usually a more powerful computer is used, most likely a Microtech IIKL workstation equivalent. While Anima themselves tend to be large programs, their expert programming is what can really hurt your hardware requirements.

Nine out of ten Anima run robots of various kind, so you'll need a body for it. Here, only Anima in 'borg bodies are dealt with, so I won't describe a whole system for creating robots. Citizen X's Robot rules (available from Datafortress) cover robots by far well enough.

When installing Anima-running computer inside of a 'borg body, you can either mount it instead of a biopod (so it won't take any spaces), or in a normal way, supplementing a biopod (then usually the biopod is given priority in decisions over the Anima, which is used to run the body when the user is not connected).

And what about a „True" AI?

I don't cover them here. The AI have been already decently covered in Interface magazine. You should refer to it…

But, since we are here, I'm going to give a few guidelines.

First, forget about the "AI" system from the Maximum Metal. It's a military system, which means it's too limited to be really smart. The grunts are too afraid to allow anything like that!

Instead, take a decent computer / cybermodem, and upgrade it to the point where it will be able to house an AI. Yup, it's going to cost you. Then, apply the AI core program, and equip it to your expectation with skills (and leave some memory for gained experience… AI do learn…). Install the whole thing in a shell, just like in the Anima case.

The statistics are going the usual way. Physical are given by the body, mental by the ghost. You have to install a REF processor and keep in mind that AI's INT will limit the top value of the REF. Simply; REF can't be higher than INT. Since AI are usually damn smart, it's rarely an issue…

- Mike van Atta

Software

From a technical point of view, Anima are Controller programs (diff 10), that can also have Interactive function (diff 10) if they are to interact with people in social situations (something military drones do not need to).

They can also have Conversational ability (which allows them to express themselves vocally in a way humans can understand), Pseudo-intelligence (in fact, Neural Network – like structure, which allows for many amazing feats… but is by no way comparable to what we call Intelligence! See below) and usually have Memory (diff 5) ability and Recognition (diff 2) to help them.

Since Anima spend most of their time (if not all of it) as real-world robots and androids, not as net programs, they sometimes do not have Icons at all, and those that do use simple, Cartoon representations of their bodies (very rare civilian models have Realistic icons) (diff 1-5)

Program Strength varies widely. The more Power an Anima has, the more skills it can run.

Neural Networks of various complexity

You can have neural networks of various degrees of complexity. Those more complicated are "smarter", however more difficult to create, and they do work longer to reach a conclusion (simply because they are more complicated - they have more links between logic cells to check). The number of possible linkings between the cells rises damn quickly when you increase the number of cells.

The "intellect" option for programs in the CP2020 rules gives "Int" of 6, and raises difficulty of the program by 6.

My call: neural networks have Difficulty of 1 per level of Int, up to INT of 6. Above that, raise difficulty by 1 per level.

Diff 8 for Int 7,
Diff 10 for Int 8
Diff 12 for Int 9
Diff 14 for Int 10.

Remember, however, this is pure neural network, it knows nothing from the start!

- Mikael van Atta

Statistics

While Anima are not humans, we are used to human stats, and Anima – dealing with humans – have to be treated in a similar way.

Intelligence – as stated before, Anima have no intelligence on their own. They can't think. They merely execute programs. However, some Anima have neuron network programming build into their code. If we forlorn the pointless investigation of the chapter of computer science that deals with neuron networks, we can point a few effects quickly. First, it gives out a limited ability of learning. Not learning in the sense of "raising skills", but of mastering the skill there already are, including something that is called professional intuition". When a neuron network-equipped Anima tries to do some mental task, you may roll twice – one Skill+1d10 roll, and one pseudo-Intellect+1d10 roll, ad choose the better result. However, pseudo-Intellect score can't be greater than the Skill value.

Reflexes – this is governed by the body. However, the more complicated program, the better coordination it can control. Effective REF can't be higher than Anima's program Strength (which would limit Anima to the REF 10 max, unless a GM calls for higher maximum score of program Strength). Ref-based skills will be added to it for skill rolls.

Tech Aptitude – Anima have no Tech. None at all. Some parts of equipment will still add to the appropriate rolls, but there's no something like Tech for Anima.

Cool – It's a complicated business. Robots do not have Cool as such. Any skill based on Cool works on flat skill value. However, robots do have Stability rating (aka "chicken factor" in the programmer slang), which represents difficulty to convince the robot that situation has exceeded normal parameters, and it should, for example, back off to protect it's integrity. The Stability is totally up to the programmer - low Stability gives cowardly Animas (Stability of 5-10 being common in commercial applications), while high Stability gives Animas that are bold and careless (many military robots have complete disregard for their own safety).

Empathy – robots, by definition, have no empathy. However, they might use pretty advanced programming based on extensive databases, making their behavior appropriate to the situation and human expectations (and since they use sensors that equal our eyes, ears, skin etc – or even sometimes superior ones – they can get pretty a lot of information about our mental state).

Luck – can a robot be lucky? Since we can't determine what exactly the Luck is, not to mention reproducing it in an artificial way, it's up to GM. You can declare al robots bad-luck losers by definition (Luck 0), or you can roll a 1d10 to determine Luck of every single robot in your game, or… you might have yet another idea.

Movement Ability, Body (i.e. physical strength) and *Attractiveness* are purely physical things, and they depend on the robot's body type.

Skills

Like other computers, Anima can have skills. And these are not mere skill-chips, but skills of much higher value. Computer skills cost 50e$ per level, up to level 4. Above level 4, they cost 100e$ per level (i.e. +6 would cost 400e$). Maximum value for computer skills is +10 (which makes the most

advanced Anima equal to average human professionals when it comes to mental tasks). Skills take 1 MU per level. Both costs and MU use need to be multiplied by Difficulty modifier.

An Anima can have as many skills as double value of its program Strength. The skill levels are limited only by MU available (yes, Strength 10 anima can have 20 Skills, each of value of 10… which is calling for a MU 200 databank, minimum).

However, you have to remember that, if anima has no given skill, it can't do that thing. Not at all: it doesn't know how.

See, if you're a human, you are assumed to have some basic idea about many skills. You might have no driving license, and probably never driven yourself, but you've seen how a car is driven, even if only on TV. You have a rudimentary idea how this is done. Enough to seat in, and roll your REF+10, hoping that with the massive "never did it before" modifier you'll be, however, lucky enough to have a go.

An anima has no bloody idea how a car works, probably not even what it is. You can tell it to take a seat behind the wheel, sure. But when you tell it to turn it on and drive, it'll do nothing: it has no knowledge.

You don't need Basic Repair skill to take a hammer and use some nails. Sure, you won't hammer them straight, you're pretty likely to waste a lot of nails (depending on your Tech) and the material you're hammering them in. And it's quite likely you'll end with a very sore finger. But you at least know how to hold a hammer.

Anima without the skill does not know how to hold a hammer, yet alone use it. It doesn't even know what a hammer is, and what it is used for.

And anima, even with neuron network program, isn't going to figure anything out of its area of expertise. It can find a way to do something better and more efficiently, or even solve a problem it encounters during performing a task, but this is true only as long as it does have some skill in the subject in question.

No skill, no action.

Having MA and REF, Anima can move itself. Having Conversation function, it would be able to speak (however, it knows no language – you have to install a skill for it). Having no Awareness, it won't have a clue that it should pay attention to that car coming in when the robot itself stands in the middle of motorway. Sure, when it notices it, it's the robot's Stability to determine what it will do…

Learning. Whereas neuron networks are capable of learning (they can even develop professional intuition!), it's not learning like humans do. Anima can learn how to perfect bits of its everyday tasks, and it can learn to solve problems it encounters, but it's not learning in the meaning of gaining any skill levels. Only true AIs are capable of such feats.

Initiative

Robots tend to react fast. They act much faster than humans, at least in most of cases. However, the more complicated they become, the more they have to take into consideration ("to think about", if they were thinking). And this makes them slow down. While it has little influence on civilian droids, as they rarely are exposed to combat situations, programmers of military Anima have to balance it out carefully: the big Anima can be pretty smart (having a lot of skills), but they are slower on reaction. Small Anima are fast, but they have limited number of skills.

Bonuses:

All Anima have a basic initiative modifier of +10 (exactly like Combat Sense in the initiative terms).

This is further boosted by the quality of the computer used: +1 per every INT of the machine.

Penalties:

-1 per every INT point of neural network (“Pseudo-Intellect”)

-1 per every 2 points of MU used (round down)*

* Please note that this may be understood as MU of the complete program, including skills, or just of the core Anima. Personally, I’d suggest the second option – use only MU of the Anima’s core program.

Appendix 6: Cyberware brand names

> Man: "Oh, you have a Ferrari cyberarm. I thought I recognized that shade of red not to mention that logo it has near the elbow. How much did you pay for it?"
>
> Woman: "I'd rather not talk about that, but I can say it was rather Expensive."
>
> *-Snowtiger*

Below, you'll find several sample names of various manufacturers, divided into categories. Note, however, that "technology" isn't tied to a geographical location. While Russian cyberwares are produced mainly in Russia (and former Eastern Bloc), they're just big, tough, somewhat primitive cyber. And cyber matching these guidelines is produced in many places of the world.

If you don't like the table (can be used as a random table with a d10) given below, invent your own. After all, it's meant only as a method of adding some flavor. A cherry on a cake.

Standard
1. IEC (International Electric Corporation)
2. Raven Microcybernetics
3. Arasaka Neotech
4. Militech Cybernetics
5. Motorola
6. Modernbody
7. Hillard Corporation
8. Daimler-Benz
9. Ericsson
10. Panasonic

Soviet
1. Rostovic
2. Sukhoi CyberWares
3. Lomo
4. PCT (Polish Cyber Technologies)
5. Mexican Metals
6. HSW (Huta Stalowa Wola) Poland
7. CZ (Ceska Zbrojovka)
8. SRC (Soviet Resale Cyberware)
9. IRE NASU
10. Tyco Electronics

Chinese
1. CCMIC
2. Yang Ming
3. Radio Shack
4. Ono-sendai
5. Bintang
6. KraftMatrix
7. Samsung
8. HKC Electronic
9. Coby International
10. Shenzen L*Time

Japanese
1. Mitsubishi
2. Sony
3. Samsung
4. Hitachi
5. Microtech
6. Nikkon
7. Kiroshi
8. StrykerTech
9. Hosaka
10. Hyundai

European
1. Daimler-Benz
2. Telefunken
3. Blaupunkt
4. Saab-Bofors
5. Thomson
6. Nokia
7. Electrolux
8. EBM (European Business Machines)
9. Phillips
10. Zeiss

Brazilian
1. Belo Horizonte
2. Cyphire
3. Bodyweight
4. Cobretti Cybernetics
5. Sons of Alessi
6. ANS (Advanced Neural Systems)
7. Stryker
8. Actaris LTDA
9. Girardi & Cia
10. Spider Tecnologia

Outdated
1. Biodyne
2. IEC
3. Modernbody
4. DermaTech Inc.
5. General Products
6. AuraSound
7. Medtronics
8. Synthes Switzerland
9. J&J (Johnson & Johnson)
10. Life Vision

Skeletal
1. Storm Tech
2. Adrek Robotics
3. SyCust
4. Nexus Robotics
5. Lead's
6. Life Vision
7. Cyberdyne
8. O.R.Marco
9. X-treme Technologies
10. Hyperion

Orbital
1. Utopia
2. Replitech
3. Mitsubishi
4. Kiroshi
5. Paradigm Robotics
6. Biomarine
7. TerraNova
8. StellarFox
9. Hyperion
10. Gestalt GMBH

NuTek
1. mindWire
2. Modernbody
3. In Finty Technologies
4. RGA (Revolution Genetics of Antarctica)
5. Wyzard Technologies
6. Cyclops International
7. Fox Industrial
8. SyCust
9. Pacesetter
10. Maas Biolabs

Appendix 7: Quick Construction tables

Typical Skeleton Costs

Standard body, all parts of matching BOD type. Standard feet and hands included.

BOD	Body Type	Cost as in Cheap FBC
2	v. weak	10'800e$
3-4	Weak	12'900e$
5-7	Average	15'700e$
8-9	Strong	18'500e$
10	v. strong	20'800e$
11	Superhuman	25'600e$
12	Superhuman	30'400e$
13	Superhuman	34'200e$
14	Superhuman	38'000e$
15	Superhuman	41'800e$
16	Superhuman	45'600e$
17	Superhuman	47'400e$
18	Superhuman	53'200e$
19	Superhuman	57'000e$
20	Superhuman	60'800e$

The following tables are meant to help you creating your own 'borg quickly… provided it is a standard design, i.e. a basic human shape. You remember how a Skeleton Cost is calculated? Take the cost of all arms and legs of a given BOD you're going to install, add a suitable torso, then +100e$ for every limb (to fit it with a hand or foot – at this point of calculation we assume standard ones only). Some of the BOD modifications (tightened myomars, 2nd Generation Myomars, Hydraulics) are going to affect Skeleton cost. So are various crazy ideas like non-human modes of transport.

But most of the time you will be creating typical bodies. Humanoid, one torso, two arms, two legs, all of matching BOD. So, to ease your work, here are sample Skeleton Costs for typical bodies of BOD 2 to 20:

Since we're talking about typical sets...

A typical sensor package consists of 2 standard cybereyes (500e$, 2d6 HL, 4 option spaces each), a standard cyberaudio module (500e$, 2d6 HL, 6 option spaces), a BoxAlter vocobox (400e$, 1d6+2, 1 option space) and neural processor (1000e$, 1d6 HL) with single set of interface plugs (200e$, 1d6 HL).

Total: 3100e$, 9d6+2 HL.

- Mike van Atta

Head SDP

SDP of a borg's head is equal to SDP of a full cyberlimb of the same BOD.

- Mike van Atta

Cyberlimb Price Tables

Having been doing a lot of high-BOD 'borgs for Datafortress update, I found calculating their basic statistics simply boring. While CheapFBC had tables with BOD in 2 to 10 range (suitable for normal humans and their equivalents), here come tables for BOD 2-20. Still, there are only full limbs and torsos. And if you want anything even bigger, you have to calculate it yourself. Same with any bizarre combinations.

Cyborg replacement torso

Biopod, neural processor and a single set of interface plugs are built-in (although neither not included in HL nor cash costs). Typical HL is 8d6.

BOD	SDP	Spaces	Price
2	34	2	7'000e$
3-4	36	3	8'700e$
5-7	40	4	10'500e$
8-9	44	5	12,500e$
10	48	6	14'000e$
11	50	7	17'000e$
12	52	8	20'000e$
13	54	9	22'000e$
14	56	10	24'000e$
15	58	11	26'000e$
16	60	12	28'000e$
17	62	13	30'000e$
18	64	14	32'000e$
19	66	15	34'000e$
20	68	16	36'000e$

Every BOD level in Superhuman

Cyberarm:

Typical 1d6 punch, 2d6 crush damage, 2d6 HL,

BOD	SDP	Spaces	Price
2	22	2	1'000 e$
3-4	26	3	1'250 e$
5-7	30	4	1'500 e$
8-9	34	5	1'750 e$
10	38	6	2'000 e$
11	39	6,5	2'500 e$
12	40	7	3'000 e$
13	41	7,5	3'500 e$
14	42	8	4'000 e$
15	43	8,5	4'500 e$
16	44	9	5'000 e$
17	45	9,5	5'500 e$
18	46	10	6'000 e$
19	47	10,5	6'500 e$
20	48	11	7'000 e$

Every BOD level in Superhuman range gives +1 SDP, +0,5 space, +500e$ modifier.

Cyberleg

Same as for arm, but 2d6 kick damage. Note: a cyberleg has to be equipped with some kind of a cyberfoot, which takes 1 slot (only very rare models use 2 slots). A foot option space is not included in the following data.

BOD	SDP	Spaces	Price
2	22	2	600 e$
3-4	26	2,5	750 e$
5-7	30	3	900 e$
8-9	34	3,5	1'050 e$
10	38	4	1'200 e$
11	39	4,25	1'600 e$
12	40	4,5	2'000 e$
13	41	4,75	2'400 e$
14	42	5	2'800 e$
15	43	5,25	3'200 e$
16	44	5,5	3'600 e$
17	45	5,75	4'000 e$
18	46	6	4'400 e$
19	47	6,25	4'800 e$
20	48	6,5	5'200 e$

Every BOD level in Superhuman range gives +1 SDP, +0,25 space, +400e$ modifier.

Cyberlimb variants and technologies					
Model	SDP	HL	Damage dealt	spaces	price
Standard	100%	100%	100%	100%	100%
Skeletal	100%	+1 per die	100%	100%	66%
Brazilian	50%	50%, +1 per die	50%	100%	75%
Chinese	100%	100%	100%	100%	50%
NuTek	50%	75%	75%	-1	60%
Russian	133%	125%	150%	75%	40%
Outdated	110%	150%	100%	100%	25%
Orbital	250%	100%	100%	100%	300%
European	100%	-1 per die	100%	100%	150%
Japanese	100%	100%	100%	125%	200%
Japanese Hi-tech	100%	100%	100%	150%	300%

Movement Ability cost			
MA	Skeleton cost multiplier		
	Standard	2nd Gen. Myomar	Hydraulics
3	-	-	*free*
4	-	*free*	5%
5	*free*	5%	10%
6	5%	10%	15%
7	10%	15%	20%
8	15%	20%	25%
9	20%	25%	30%
10	25%	30%	35%
11	35%	40%	*impossible*
12	45%	50%	*impossible*
13	55%	60%	*impossible*
14	65%	70%	*impossible*
15	75%	*80%*	*impossible*
16	85%	*impossible*	*impossible*
17	95%	*impossible*	*impossible*
18	105%	*impossible*	*impossible*
19	115%	*impossible*	*impossible*
20	125%	*impossible*	*impossible*

cost	Round-up
Less than 20k	Up to full 100 up
20-50k	Up to full 1k up
50-250k	Up to full 5k up
250-500k	Up to full 10k up
Over 500k	Up to full 50k up.

Attractiveness cost table	
ATTR	Price per point
1-6	600e$
7	900e$
8	1'200e$
9	1'500e$
10	2'000e$
11	5'000e$
12	10'000e$

Multiply the result by the quality of the job.

Reflex cost table	
REF	Skeleton Cost multiplier
4	*free*
5	10%
6	20% (10%x2)
7	30% (10%x3)
8	60% (15%x4)
9	75% (15%x5)
10	120% (20%x6)
11	175% (25%x7)
12	240% (30%x8)
13	315% (35%x9)
14	400% (40%x10)
15	495% (45%x11)

Cyberlimb Coverings			
Cover	HL	Spaces	Cost
Plastic cover	1	0	1-200e$
SP 20 ballistic nylon	2	0	200e$
Superchrome	3	0	200e$
RealSkin	-25%	0	300e$
ExoDerm	-30%	0,5	500e$
TrueSkin	-40%	1	1000e$
Heavy Armour	13 (whole body)	0	Varies

Notes: all data are for single limb. A torso and head will need 250% of the given cash, HL, and space requirements, a partial limb 75%, and an independent cyberhand 50%. The only exception is heavy armour, which is bought as a single homogenous shell, and thus the values for it are for complete body cover (but see the description anyway).

All covers, except for Ballistic Nylon and Heavy Armour (as it would be of no effect on them) can be armoured, using a derivative Graded SkinWeave technology, with the same cost and HL values as Graded SkinWeave itself.

‘Borg Character Sheet

Courtesy of Wisdom000 – a color version is available from Datafortress 2020

HANDLE

CAMPAIGN

ROLE ☐ Solo ☐ Rocker ☐ Netrunner ☐ Media ☐ Nomad
☐ Fixer ☐ Cop ☐ Corp ☐ Techie ☐ Medtechie

CHARACTER POINTS

S.I.N. - -

C.B.I.N.

STATS **INITIATIVE:**

INT [ ] REF [ ] TECH [ ] COOL [ ]
ATTR [ ] LUCK [ ] MA [ ] BODY [ ]
EMP [ ] Run [ ] Leap [ ] Lift [ ]

Location	Head 1	Torso 2-4	R.Arm 5	L.Arm 6	R.Leg 7-8	L.Leg 9-0
Armor SP						
SDP						

Cyberpunk®

		WEAPON	
STRIKE/CAST	=	=	+
PUNCH	=	=	+
KICK	=	=	+
DISARM	=		
SWEEP	=		
BLOCK/PARRY	=		
DODGE	=		
GRAPPLE	=		
THROW	=	=	+
HOLD	=		
CHOKE	=	=	
ESCAPE	=		
RAM	=	=	+

HANDGUN	=
RIFLE	=
SUBMACHINEGUN	=
HEAVY WEAPONS	=
A/N	=

DRAWING OF CHARACTER

SKILLS Add Skill points to applicable STAT, then list in box. Mark Chipped Skills with an X next to [ ] box.

SPECIAL ABILITIES
Authority [ ]
Charismatic Leadership [ ]
Combat Sense [ ]
Credibility [ ]
Family [ ]
Interface [ ]
Jury Rig [ ]
Medical Tech [ ]
Resources [ ]
Streetdeal [ ]

ATTR
Personal Grooming [ ]
Wardrobe & Style [ ]

BODY
Endurance [ ]
Strength Feat [ ]
Swimming [ ]

COOL/WILL
Interrogation [ ]
Intimidate [ ]
Oratory [ ]
Resist Torture/Drugs [ ]
Streetwise [ ]

EMPATHY
Human Perception [ ]
Interview [ ]
Leadership [ ]
Seduction [ ]
Social [ ]
Persuasion & Fast Talk [ ]
Perform [ ]

INT
Accounting [ ]
Anthropology [ ]
Awareness/Notice [ ]
Biology [ ]
Botany [ ]
Chemistry [ ]
Composition [ ]
Diagnose Illness [ ]
Education & Gen.Know [ ]
Expert_____ [ ]
Gamble [ ]
Geology [ ]
Hide/Evade [ ]
History [ ]
Language_____ [ ]
Language_____ [ ]
Language_____ [ ]
Library Search [ ]
Mathematics [ ]
Physics [ ]
Programming [ ]
Shadow/Track [ ]
Stock Market [ ]
System Knowledge [ ]
Teaching [ ]
Wilderness Survival [ ]
Zoology [ ]

REF
Archery [ ]
Athletics [ ]
Brawling [ ]
Dance [ ]
Dodge & Escape [ ]
Driving [ ]
Fencing [ ]
Handgun [ ]
Heavy Weapons [ ]
Martial Art 1_____ [ ]
Martial Art 2_____ [ ]
Martial Art 3_____ [ ]
Melee [ ]
Motorcycle [ ]
Operate Hvy. Machinery [ ]
Pilot (Gyro) [ ]
Pilot (Fixed Wing) [ ]
Pilot (Dirigible) [ ]
Pilot (Vect.Thrust Vehicle) [ ]
Rifle [ ]
Stealth [ ]
Submachinegun [ ]

TECH
Aero Tech [ ]
AV Tech [ ]
Basic Tech [ ]
Cryotank Operation [ ]
Cyberdeck Design [ ]
CyberTech [ ]
Demolitions [ ]
Disguise [ ]
Electronics [ ]
Elect. Security [ ]
First Aid [ ]
Forgery [ ]
Gyro Tech [ ]
Paint or Draw [ ]
Photo & Film [ ]
Pharmaceuticals [ ]
Pick Lock [ ]
Pick Pocket [ ]
Play Instrument [ ]
Weaponsmith [ ]
Other [ ]
Other [ ]
Other [ ]
Other [ ]
Other [ ]
Other [ ]

REP [ ]
CURRENT IP [ ]
HUMANITY [ ]

CYBERNETICS Assets: $. EB Carried: $.

BODY STYLE: Make: Model:

HEAD:	CYBEROPTICS:	CYBERAUDIO:	VOCAL OPTIONS:

RIGHT ARM:	TORSO:	LEFT ARM:

LEFT LEG?	OTHER OPTIONS:	RIGHT LEG:

TOTAL EUROBUCK COST: TOTAL HUMANITY LOST:

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How do they live?
What do they do in their spare time?

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never tire.
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