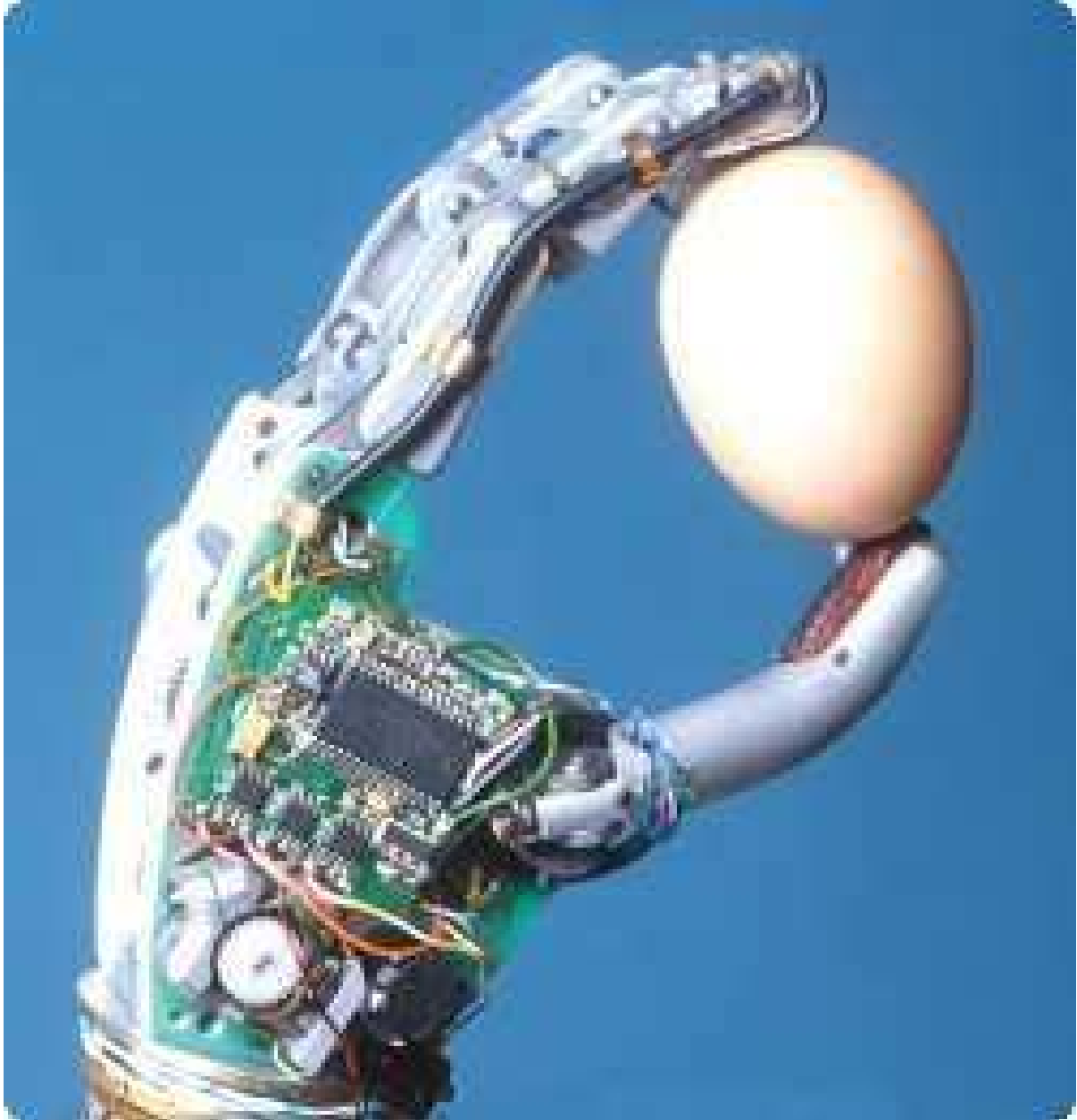*Senior officer Mikael van Atta*

Cyberwares of the World

A completely unofficial guide to various forms of cyberware around the globe
(and high above)

Contents:

Introduction

In the beginning there was only one kind of cyberware. One type of leg, one type of arm, one type of eye… you got the point. And for a time, it was good.

However, as additional sourcebooks for Cyberpunk 2020 were issued, new types of cyberwares began to emerge. Never as complete systems, but merely hints of such. Orbital Cyberarm in Chromebook 1. Russian arms, legs, eyes and ears in Solo of Fortune (re-made and published again in Chromebook 4). And for a time, it was good.
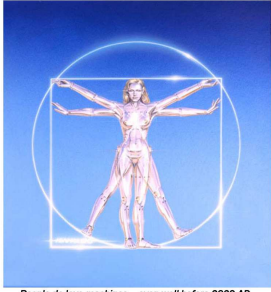
But I came to wonder. We had Russian stuff, we had hints of Orbital stuff, soon we had some outdated (Enabled-series in Chromebook 3) stuff as well. We had some ideas on top of that – we knew that European cyberwares caused lower Humanity Loss. That out there, somewhere, was bleeding edge Japanese cybertechnology (who haven't heard about Chiba black clinics?). Some guys on the Net (kudos to Hound and his excellent Blackhammer Datafort) began inventing even more bizarre trends – NuTek, Skeletal cyberware, Chinese cyberware. Still, there was no coherent system.

When I began thinking about how Full Body Conversions should be ran, this problem was what jumped into my mind. At that moment, I wasn't able to do more than just cyberlimbs in various technologies. However, I kept collecting the ideas, and, with help from the great bunch of VftE members, I've finally managed to fill some niches. Also, CheapFBC – which, in the meantime, has grown from a scratch into a mighty, 130-page long, fully illustrated netbook – has provided me with a handful of useful bits.

And thus here we go. As for now, the Cyberwares of the World covers cyberlimbs, optics, audio systems, voice systems (vocoboxes), implanted body armor and neuralware. While I'm still thinking about covering more areas, it's proving to be more and more difficult. Still, I hope to do it somewhen, so this sourcebook will probably grow in size. In the mean time, enjoy what has already been done.

Full Body Conversions
A new view

This is the material with which my quest has begun – a sourcebook detailing the problems of Full Body Conversions in Cyberpunk 2020. In Cyberwares of the World I present solutions I came to, when I had to face the questions of full 'borgs.

This sourcebook is also known under it's unofficial name, "CheapFBC", and is available on the Net – probably at the same source where you've grabbed CotW. Some parts of the CheapFBC have been directly implemented into CotW.

Note: the current version is edition 2.8. However, previous ones can be still in circulation.

Master tables – you'll find a "master table" in the beginning of every chapter devoted to specific cyberware type. It contains the usual kinds of this cyberware that can be encountered. For example, we have standard cybereyes, Bug eyes, monovisors, and several other types. Most of them are listed in that table for easier reference. However, some, less-popular types (or those that were not as universal) were omitted. Also, I wasn't able to list every idea people did published on the Net. But, having the typical ones for reference, you should be able to deal with any un-standard piece you might wish to have made in some obscure technology…

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

Problems in CyberParadise – these boxes point out possible and – if you give it a thought – pretty obvious problems with various kinds of cyberware in typical life and RPG situations. Things you usually hadn't thought about…

General guide
to the different cyberware design philosophies around the world:

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.

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.

> **„Early" cyberware**
> In some descriptions of the Outdated technology, there comes a description „only the most basic options". While it is to reflect the Outdated cybertech can work only with options that were available at the time of its creation, it may be understood in various means.
> Therefore I explain: if it isn't in the CP2020 core book, it wasn't around in that time. And thus Outdated cyberware won't work with it. Clear?
> - Mike van Atta

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.

> **Option costs:**
> Unless otherwise noted, options do cost the same amount of both cash and HL, no matter which technology they are made in. The only distinctive exception is Japanese and Japanese High Tech – you need specially made, miniature Japanese option packages to utilize all these additional spaces and other goodies (i.e. increased effectiveness of Japanese neuralware). The cost modifier for such options is the same as for the cyberware itself. When used on other types, Japanese options provide no superior performance.
>
> - Mike van Atta

Technological advance
Borrowed from CheapFBC

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%

Cyberwares of the World Rule #1:
<u>1 space = 1 space</u>

We assume that spaces in cyberware do not change with user's BOD (contrary to CP2020 standard rules, where you could for example put a bigger gun in the cyberleg holster, if the leg was bigger). Here, a space is a set amount of volume in cubic centimeters, which, however, can be shaped as you need it.

Cyberlimbs of the World

De facto this is what has started the whole Cyberwares of the World idea. These rules & tables were presented in CheapFBC as well, if in a slightly different form.

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.

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.

Cyberlimb size: 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.

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 these tables and rules come from CheapFBC, a sourcebook 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).

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 cyberarm 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.

Pressure and heat sensors, responsible for the sense of touch, are built into cyberlimbs and torso. You can, of course, boost their sensitivity by installing Tactile Booster, and analogical modules.

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).

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...

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	
		To damage	To destroy	Regular CP2020	Cheap cybertech
2	v. weak	5	8	550e$	225e$
3-4	Weak	6	9	650e$	265r$
5-7	Average	7	10	750e$	335e$
8-9	Strong	8	11	850e$	425e$
10	v.strong	9	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	
		to damage	To destroy		Regular CP2020	Cheap cybertech
2	v. weak	12	22	2	2000e$	1000e$
3-4	Weak	16	26	3	2500e$	1250e$
5-7	Average	20	30	4	3000e$	1500e$
8-9	Strong	24	34	5	3500e$	1750e$
10	v. strong	28	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	
		To damage	To destroy		Regular CP2020	Cheap cybertech
2	v. weak	12	22	2	1200e$	600e$
3-4	Weak	16	26	2,5	1600e$	750e$
5-7	Average	20	30	3	2000e$	900e$
8-9	Strong	24	34	3,5	2400e$	1050e$

10	v. strong	28	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

Body type	SDP		Spaces	Price	
	To damage	To destroy		Regular CP2020	Cheap cybertech
v.weak	11	16	1	1000e$	500e$
Weak	13	18	1,5	1250e$	625e$
Average	15	20	2	1500e$	750e$
Strong	17	22	2,5	1750e$	875e$
v. strong	19	24	3	2000e$	1000e$
Superhuman	+1 for every 2 BOD points over 10		+1 per every 4 BOD > 10	+350e$	+250e$

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	
		To damage	To destroy		Regular CP2020	Cheap cybertech
2	v. weak	11	16	0	600e$	300e$
3-4	weak	13	18	0,5	800e$	375e$
5-7	average	15	20	1	1000e$	450e$
8-9	strong	17	22	1,5	1200e$	525e$
10	v. strong	19	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. Please keep in mind that this is useable only for creation of full borgs.

BOD	Body type	SDP		spaces	Price	
		To damage	To destroy		Regular CP2020	Cheap cybertech
2	v. weak	24	34	2	14'000e$	7'000e$
3-4	Weak	26	36	3	18'000e$	8'700e$
5-7	Average	30	40	4	20'000e$	10'500e$
8-9	Strong	34	44	5	24'000e$	12,500e$
10	v. strong	38	48	6	28'000e$	14'000e$
11	Superhuman	40	50	7	32'000e$	17'000e$
12	Superhuman	42	52	8	36'000e$	20'000e$
13+	Superhuman	+2 per every BOD over 12		+1 per every BOD over 12	+5'000e$	+2'000e$

Cyberlimb variants and technologies

Standard cyberlimb: the plain vanilla from the basic book, exactly what we're used to.

Model	SDP	HL	Damage dealt	spaces	price
Standard	100%	100%	100%	100%	100%

Skeletal technology: bare-boned look of the Terminator's arm, this obviously, cannot be made to look human-like. No realskinning, no superior myomars, but can use hydraulics without losing a space.

Model	SDP	HL	Damage dealt	spaces	price
Skeletal	100%	+1 per die	100%	100%	66%

Brazilian technology: Brazilian law limits the strength of cyberlimbs to "what can be reasonably expected from an unmodified human". Brazilian constructors went along similar lines as Europeans, creating limbs that do not differ much from organic equivalents. Strength as meat limb of that BOD, and cannot be upgraded.

Model	SDP	HL	Damage dealt	spaces	price
Brazilian	50%	50%, +1 per die	50%	100%	75%

Chinese cyberlimbs: known of poor precise movement control (-1 to ranged weapon attacks, -3 Tech). Only arms, according to original idea (first found at Blackhammers Cyberpunk Project, a great site). My suggestion: (and GM's call): legs are –1 MA and –3 to attack rolls (in close combat). Still, the price tag makes them somewhat interesting, compared to other styles, and if it's your off-hand, it doesn't hurt you that much. Also, popular among boosterpunks.

Model	SDP	HL	Damage dealt	spaces	price
Chinese	100%	100%	100%	100%	50%

NuTek cyberlimbs: the new concept, "biomechanics". The ultimate of "cyborg" limbs – part alive, part machine. Cannot use cover (they come in an equivalent of RealSkinn), neither use quick-change mounts, extra arms, hydraulics nor advanced myomars. All surgery costs are 1 level less serious. Please note that nerves are real, thus pain can't be ignored in the same way as with normal cyberlimbs – NuTek limbs do bleed and feel pain. However, they do not tire – the muscles, whereas not as powerful as in the standard cyberlimb, are still myomar, with some cloned muscle tissue planted on top, purely for the effect.

Model	SDP	HL	Damage dealt	spaces	price
NuTek	50%	75%	75%	75%	60%

Russian cyberlimbs: they are tough. They look like something a drunk blacksmith could have made on his anvil, but that's not true. Russian cyberlimbs – as all cyberwares from Central Europe – are rough, but rugged. They do not have to be pretty, they have to be working, no matter what. 5% failure when overstressed, and comes equipped with hydraulics. Originally presented (in different form) (Solo of Fortune 1 / Chromebook 4)

Model	SDP	HL	Damage dealt	spaces	price
Russian	133%	125%	150%	75%	40%

Outdated cybertech: this is generally the 2005-2011 AD –era cybertech. Nowadays, it's obsolete and hard to get, not to mention – repair. It can't work with modern option, and is quite clumsy, yet sturdy. Arms are –1 REF, legs –1 REF and –1 MA (-2 MA if both legs). Originally presented (in different form) in Chromebook 3.

Model	SDP	HL	Damage dealt	spaces	price
Outdated	110%	150%	100%	100%	25%

Orbital technology: Orbital-made materials: composites, crystalline titanium, and others, give out great endurance. For special orders, also European, Skeletal & Japanese models are made in this technology (choose the better characteristic, add prices). (Chromebook 1)

Model	SDP	HL	Damage dealt	spaces	price
Orbital	250%	100%	100%	100%	300%

European cyberlimbs: human-looking by the very conception, European cyberlimbs are designed for realskinning, and they have smooth control interfaces. As the Europeans say, if you can forget that your arm is artificial, then it is a good arm. Most are German or Swiss made.

Model	SDP	HL	Damage dealt	spaces	price
European	100%	-1 per die	100%	100%	150%

Japanese and Japanese High-Tech: whatever you do, we'll do it smaller. The very best, most technologically advanced design. Thanks to wide use of nanotech and finest engineering allows for extra options, but 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...

Model	SDP	HL	Damage dealt	spaces	price
Japanese	100%	100%	100%	125%	200%
Japanese Hi-tech	100%	100%	100%	150%	300%

Changing limb's Stength:
Basically, a cyberlimb comes in the strength of the recipient – unless you want an oversized one. However, if you really think you have an application for a stronger arm (or leg), there are three general ways to achieve that:

Tighter myomars (total BOD stat bought as optional: enhanced performance, 10% of the part'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.

Second generation myomars (strengthened myomars from the main book) can be also used. However, they are much bulkier (eat 25% spaces of the body part), and their cost is 40% of the body part This trick doubles part's strength.

Superfast cyberlegs

There are two interesting sets of cyberware, boosting one's Movement Ability considerably: Speeding Bullet (Solo of Fortune 1) and Corvette Cyberlegs (Chromebook 4).

Speeding Bullet gives a flat MA of 16. Corvette comes in two variants of +3 and +8 MA.

Both systems require a pair of specially modified cyberlegs, as well as an additional CR level surgery to strengthen your pelvis, lower spine and lower ribcage, as well as joints. I'll deal with the modification here, as the unmodified legs are standard models.

Speeding Bullet (aka RoadRunner) costs 500e$, and takes 75% spaces in each legs (it is 75% of the total, including the space reserved for cyberfoot). HL is 4d6, due to the fact the system is pretty invasive and user's interface somewhat primitive. Other parameters are unaffected, although with the 10m jump ability, a flying kick is going to really hurt. Also, Speeding Bullet can't be used with legs that have boosted strength of any kind.

Corvette legs are a more advanced form of the Speeding Bullet. They're based on a variant of Advanced Myomars, which has to be installed (for the normal cost) . Then, movement augmenting package and power flow control system are installed, boosting the MA by +3 (500e$, HL 3d6) or +8 (upgrade pack, +500e$, +4 HL, requires the basic system). Also, respectively, a +1 / +2 bonus to all movement rolls is applied.

- Mike van Atta

Romanova Cyberlegs aka "Superstylish" cyberlimbs
These were originally presented in Chromebook 3 – a pair of shapely cyberlegs with stiletto-heel feet, granting +1 to Wardrobe & Style.
Okay. Here we are. The Romanovas are just a sample of what we call "superstyle" cybernetics. Cyberwares designed to look good, which implies they are to look like cybernetics, not natural body parts (however, this is up to GM). How the designers do achieve this – by some fancy coloring, or maybe rather by elements made of precious metals or gems used to incrustate the cover –this varies from piece to piece. Most popular are semi-precious gemstones, but if you really want a diamond - incrusted cyberarm, it can be done.
The basic cost is +25% for a +1 W&S modifier (GM's call whether multiple levels of this bonus can be achieved). There's no extra HL nor any spaces are taken. However, Realskinn and it's variants can't be effective (although they can be applied).
While this is simple by rules, it's more complicated in life. First, the bonus is granted only if the "Superstylish" part is visible. A single arm will pass on a human, but not on a 'borg – it should have matching arms (not necessary looking the same, but designed to fit the style together) – most likely along with the body. Legs are usually used in pairs, even on fleshies. Also, since this kind of jewellery can't be easily changed, it's important to wear appropriate clothing if you do not want to spoil the effect…

- Mike van Atta

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

Cyberlimbs as a recoil absorber
If you apply Recoil rules (from Solo of Fortune 2 / Blackhand's Street Weapons) you might

wonder how the cyborg arms work with that effect.

In original rules, cyberarm was treated as an equivalent of a BOD 12., i.e. twice the BOD of an average human. However, this was a bit out of nowhere. So, keep the limit your BOD shows (upping your arm's Strength comes handy here). After all, maybe your arm is going to absorb the recoil, but your meat still will have to keep this damned handcannon on target!

Covering the cyberlimbs

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.

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.

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

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$

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 can be armoured, using a derivative Graded SkinWeave technology, with the same cost and HL values as Graded SkinWeave itself.

Cyberoptics of the world

Cyberoptic master table:					
Model	HL	Options	Price	Source:	Notes:
Standard cybereye	2d6	4	500e$	CP2020	
Remote eye	2d6+2	1	1500e$	Chr3	Can be removed, 100m feed
BugEye	3d6	6	750e$	Chr3	-1 Attr each
Monovisor	3d6	6	650e$	Chr4	Replaces both eyes
QuickChange optic	2d6+3	3	1000e$	P1	
Optical Interface	2d6+2	0	600e$	Chr3	Interface socket inside
OptiShield*	1d6+2	2	300e$	Chr1	SP8

* Please keep in mind that whereas Optishield gives you several advantages of a cyberoptic, it isn't a cybereye. It is not connected directly to your optical nerve, so some other options requiring use of cyberoptic won't work with it. For example, Ambidexterity Chip (advanced variant) or Speedreading Chip won't work. Optishield is more like an implanted pair of smartgoggles or a HUD than cybereye: while it will display things you could see only thorough cybereyes (or smartgoggles), beneath it you'll still have a pair of fleh and blood eyes. Of course, you can go for it and replace them with cybereyes too…

Note: ThirdEye option is a socket for additional eye, not a cyberoptic itself. Under these rules, Third Eye causes an additional +1d6 HL, and -1 ATTR each. You can't have more than two of these in your forehead, but it is not impossible to have more eyes in other places on your head...

Cyberoptic technologies:

Note: some technologies won't go well with particular types of optics. For example, NuTek eyes are too fragile to be safely removable. Also, OptiShields aren't available in this technology.

Standard Technology: just that, it's the stuff described In the Cyberpunk main handbook.

Model	HL	spaces	price	Notes
Standard	100%	100%	100%	Plain vanilla from the basic book

Skeletal Technology: bare camera for that skeletal look of the Terminator. Cheaper than standard, but causes greater Humanity loss (since it doesn't even try to mimic human body parts).

Model	HL	spaces	price	Notes
Skeletal	+1 per die	100%	66%	

Brazilian Technology: this is pretty close to European in general idea, but less durable, and not likely to acheive superhuman performance. However, this resembles natural body parts pretty well.

Model	HL	spaces	price	Notes
Brazilian	50%,+1 per die	100%	75%	

Chinese Technology: it's cheap. Tends to have various problems caused by not up-to-standard materials, or inferior quality, but hey, it's cheap. -1 to all visual awareness rolls (this may, at GM's discretion, apply to attack rolls, vehicle driving rolls – unless interfaced with the vehicle - etc), since these tend to have poor resolution, depth perception glitches, and can sometimes go color-blind. Note: if only one cyber-eye is used, there's a 50% chance you won't be affected in given situation.

Model	HL	spaces	price	Notes
Chinese	100%	100%	50%	

NuTek: cutting edge of modern technology and conceptualism, NuTek implants are a masterful blend of cloned tissue and mechanical cybernetics. Thanks to this, all surgical codes are 1 level less severe, and the implants can use both cybernetic options and nanotech upgrades. Please note that such eyes are as fragile for irritants and damage as your original ones!

Model	HL	spaces	price	Notes
NuTek	75%	50%	100%	

Russian Technology: ugly, clumsy... and surprisingly reliable. Sure, you won't win a beauty contest, but your eyes will work in the Siberian winter, or dusty summer in Caucasus. No matter that you've missed your regular maintenance – they'll keep going.

Model	HL	spaces	price	Notes
Russian	125%	25%	20%	(Chromebook 4)

Outdated Technology: the cybertech of pre-2013 era, these are big, and somewhat clumsy (all surgery codes are +1 level more serious, not above CR, of course), and somewhat obvious as well. They can work with only the most basic options. However, they do often utilize various interesting ideas that haven't caught up in more modern models (like the "frog eye" look of the early Revelation cyberoptic, giving +1 Awareness due to excellent side vision). Note: price for used parts, factory – new samples tend to be 400% more expensive than modern equivalents.

Model	HL	spaces	price	Notes
Outdated	150%	50%	140%	-1 ATTR per eye

Orbital Technology: there's nothing special about Orbital cyberoptics (except their price tag), although most of them comes with EMP shielding standard. 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). For +20%, can be made vacuum-proof (for use with Vacweave)

Model	HL	spaces	price	Notes
Orbital	100%	100%	290% +20% Vacuum proof	EMP shielding Grade 2 included.

European Technology: tends to keep versatility of Standard cybertech, but put extra effort into as human-like feel as possible.

Model	HL	spaces	price	Notes
European	-1 per die	100%	150%	

Japanese technology / Japanese high-tech: whatever you do, we'll make it too, but much smaller! Yet another way of cyberware development, trying to maximize the amount of option spaces. Naturally, it uses specially – designed optionware that has the same price modifier as the optics itself to utilize these extra spaces. Outside of Japan, the parts tend to be available on special order only.

Model	HL	spaces	price	Notes
Japanese	100%	125%	200%	
Japanese Hi-tech	100%	150%	300%	

Problems in CyberParadise: Optishield

Since optishield does hermetically cover your eyes with an SP8 protection, there's no way to access your eyes without cybertech's assistance.

This is good as long as you have to deal with folks trying to stick their fingers into your eyes, or simply airborne dust / insects (if you ever tried to remove such a foreign body from your eye, you know what I mean).

However, your tear ducts have to be redirected to your mouth, so should you cry, the OptiShield wouldn't fill with tears. The problem is, there are other glands that, for example, moisturize the eyeball, and residue from their excretions have to be periodically removed (i.e. you just wipe your eyes – impossible with OptiShield on). Protection against chemicals prevents you also from applying drugs onto your eyeball, should you need medication there.

Sure, none of the abovementioned problems apply, if you have a pair of cybereyes.

Right. Now try to get to them for maintenance purposes, for example refilling the silicon lubricant reservoir that helps the ball move smoothly within you eye socket…

- Mike van Atta

Cyberaudios of the World

So far, we have only a single type of cyberaudio: the standard model (Soviet and Spectrum models are variant technologies).

Cyberaudio master table:					
Model	HL	Options	Price	Source:	Notes:
Standard audio	2d6	6	500e$	CP2020	

Standard Technology: just that, it's the stuff described In the Cyberpunk main handbook.

Model	HL	spaces	price	Notes
Standard	100%	100%	100%	Plain vanilla from the basic book

Skeletal Technology: external microphones for that skeletal look of the Terminator. Cheaper but causes bigger Humanity loss (since it doesn't even try to mimic human body parts).

Model	HL	spaces	price
Skeletal	+1 per die	100%	66%

Brazilian Technology: this is pretty close to European in general idea, but less durable, and not likely to achieve superhuman performance. However, this resembles natural body parts pretty well.

Model	HL	spaces	price	Notes
Brazilian	50%,	+1 per die	75%	75%

Chinese Technology: it's cheap. Tends to have various problems caused by not up-to-standard materials, or inferior quality, but hey, it's cheap. -1 to all audio awareness rolls (this may, at GM's discretion, apply to other rolls, like understanding a conversation), since these tend to have poor sound quality and a lot of white noise in background.

Model	HL	spaces	price
Chinese	100%	100%	50%

NuTek: cutting edge of modern technology and conceptualism, NuTek implants are a masterful blend of cloned tissue and mechanical cybernetics. Thanks to this, all surgical codes are 1 level less severe, and the implants can use both cybernetic options and nanotech upgrades.

Model	HL	spaces	price
NuTek	75%	50%	100%

Russian Technology: ugly, clumsy... and surprisingly reliable. Sure, you won't win a beauty contest (still, the outer ear is usually kept where it belongs... unless the doc had a bad day!), but your audio will work in the Siberian winter, or dusty summer in Caucasus. No matter that you've missed your regular maintenance – they'll keep going.

Model	HL	spaces	price	Notes
Russian	125%	33%	20%	(Chromebook 4)

Outdated Technology: the cybertech of pre-2013 era, these are big, somewhat clumsy (all surgery codes are +1 level more serious, not above CR, of course), and somewhat obvious as well. They can work with only the most basic options. However, they do often utilize various interesting ideas that haven't caught up in more modern models (like the "omnidirectional microphones" of the early Spectrum cyberaudio, giving +2 Awareness due to omnidirectional hearing). Note: price for used parts, factory – new samples tend to be 400% more expensive than modern equivalents.

Model	HL	spaces	price	Notes
Outdated	150%	50%	140%	-1 to balance-affected rolls

Orbital Technology: there's nothing special about Orbital cyberaudio (except their price tag), although most of them comes with EMP shielding standard. 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).

Model	HL	spaces	price	Notes
Orbital	100%	100%	290%	EMP shielding Grade 2 included

European Technology: tends to keep versatility of Standard cybertech, but puts extra effort into as human-like feel as possible.

Model	HL	spaces	price
European	-1 per die	100%	150%

Japanese technology / Japanese high-tech: whatever you do, we'll make it too, but much smaller! Yet another way of cyberware development, trying to maximize the amount of option spaces. Naturally, it uses specially – designed optionware that has the same price modifier as the optics itself to utilize these extra spaces. Outside of Japan, the parts tend to be available on special order only.

Model	HL	spaces	price
Japanese	100%	125%	200%
Japanese Hi-tech	100%	150%	300%

Special case: "Rabbit ear" sensory extension

Containing 4 optic spaces and 2 audio spaces, sensory extension is both a Cyberoptic and cyberaudio. Therefore, if you're planning to buy a foreign rabbit ear, the modifiers from both chapters are applied, respectively. If they are not identical, apply an average value. Please note that "rabbit ears" can't be vacuum-proofed (nor they need to)

Rabbit Ear					
Model	**HL**	**Options**	**Price**	**Source:**	**Notes:**
Standard sensory extension	3d6	4 optical, 2 audio	500e$	CP2020	

Problems in CyberParadise: Cyberaudios and vocoboxes
These have a nasty habit of causing feedback in audio equipment - microphones, loud-speakers and such. The effect is painful to hear ... for everybody, if you were using a vocobox, or for yourself (cyberaudio). The effect is so bad it has been known to stun people for a moment, and - since the problem is audible for the user only, as there's no sound in the outside - level damper doesn't help at all (pain editor does, however).

- Mike van Atta

Vocoboxes of the world

In the basic CP2020 book, there was only Audiovox. Good then there came Interface 1.3 and Chromebook 3, and taught us what cybernetic voiceboxes were.

Vocobox master table:					
Model	HL	Options	Price	Source:	Notes:
BoxAlter	1d6+2	1	400e$	Interface 1.3	
NewThroat	2d6	3	850e$	Chr4	

Standard Technology: just that, it's the stuff described in the Interface 1.3 / Chromebook 3.

Model	HL	spaces	price	Notes
Standard	100%	100%	100%	Plain vanilla from the basic book

Skeletal Technology: metal and plastic for that artificial look of the Terminator. Simpler variants may have a loudspeaker on the outer surface. Cheaper but causes bigger Humanity loss (since it doesn't even try to mimic human body parts). Skeletal vocoboxes sound like computer speech of old.

Model	HL	spaces	price
Skeletal	+1 per die	100%	66%

Brazilian Technology: this is pretty close to European in general idea, but less durable, and not likely to achieve superhuman performance. However, this resembles natural body parts pretty well.

Model	HL	spaces	price
Brazilian	50%,+1 per die	66%	75%

Chinese Technology: it's cheap. Tends to have various problems caused by not up-to-standard materials, or inferior quality, but hey, it's cheap. -1 to all communications rolls, since these tend to have poor sound quality and a lot of white noise in background, and side effects like stuttering are also possible.

Model	HL	spaces	price
Chinese	100%	100%	50%

NuTek: cutting edge of modern technology and conceptualism, NuTek implants are a masterful blend of cloned tissue and mechanical cybernetics. Thanks to this, all surgical codes are 1 level less severe, and the implants can use both cybernetic options and nanotech upgrades.

Model	HL	spaces	price
NuTek	75%	50%	100%

Russian Technology: ugly, clumsy... and surprisingly reliable. Sure, you won't win a beauty contest, but your vocobox will work in the Siberian winter, or dusty summer in Caucas. No matter that you've missed your regular maintenance – they'll keep going. Of course don't mind that your voice can get a deeper tone than you're used to, with that artificial echo..

Model	HL	spaces	price	Notes
Russian	125%	33%	20%	(Chromebook 4)

Outdated Technology: the cybertech of pre-2013 era, these are big, somewhat clumsy (all surgery codes are +1 level more serious, not above CR, of course), and somewhat obvious as well. However, they do often utilize various interesting ideas that haven't caught up in more modern models. However, these do sound somewhat artificial, voice being flat like a computer's. Contrary to Chinese vocoboxes, quality is good, but you can't express emotions by the tone of your voice (which translates as -1 to communication rolls when emotions are involved, usually EMP – based skills) Note: price for used parts, factory – new samples tend to be 400% more expensive than modern equivalents.

Model	HL	spaces	price
Outdated	150%	50%	140%

Orbital Technology: there's nothing special about Orbital vocoboxes (except their price tag), although most of them comes with EMP shielding, standard. 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).

Model	HL	spaces	price	Notes

Orbital	100%	100%	290%	EMP shielding Grade 2 included.

European Technology: tends to keep versatility of Standard cybertech, but put extra effort into as human-like feel as possible.

Model	HL	spaces	price
European	-1 per die	100%	150%

Japanese technology / Japanese high-tech: whatever you do, we'll make it too, but much smaller! Yet another way of cyberware development, trying to maximize the amount of option spaces. Naturally, it uses specially – designed optionware that has the same price modifier as the optics itself to utilize these extra spaces. Outside of Japan, the parts tend to be available on special order only.

Model	HL	spaces	price
Japanese	100%	125%	200%
Japanese Hi-tech	100%	150%	300%

Cyberarmors of the World

Please note that most other armors are Nanotech / Biotech implementations, thus can't be dealt with using these cyberware rules.

Armour master table:							
Model	HL	SP	Notice	REF	ATTR	Price	Source:
Gradied subdermal cowl	1d6/3	4	35	none	none	300e$	Chr2
Gradied subdermal cowl	1d6/2	6	30	none	none	550e$	Chr2
Gradied subdermal cowl	1d6	8	25	none	none	750e$	Chr2
Gradied subdermal cowl	1d6+2	10	20	none	none	1000e$	Chr2
Gradied subdermal cowl	1d6+3	12	15	none	-1 (50%)	1200e$	Chr2
Gradied subdermal cowl	2d6	14	10	none	-1	1400e$	Chr2
Gradied subdermal torso	1d6+3	6	35	none	none	350e$	Chr2
Gradied subdermal torso	1d6+2	8	32	none	none	500e$	Chr2
Gradied subdermal torso	1d6/2+1	10	30	none	none	650e$	Chr2
Gradied subdermal torso	1d6	12	25	none	none	800e$	Chr2
Gradied subdermal torso	1d6+2	14	25	none	none	1000e$	Chr2
Gradied subdermal torso	1d6+3	16	20	none	none	1100e$	Chr2
Gradied subdermal torso	2d6	18	20	none	-1 (50%)	1200e$	Chr2
Gradied subdermal torso	2d6+2	20	15	-1	-1	1450e$	Chr2
Gradied subdermal torso	3d6	22	10	-2	-2	1750e$	Chr2
Torso plate	3d6	25	auto	-3	-2*	2000e$	CP2020
Cowl plate	1d6	25	auto	none	-2*	200e$	CP2020
Face plate	4d6	25	auto	none	-2*	400e$	CP2020
Total body plating	8d6	20	auto	-3	50% loss	6800e$	Chr2
EvilEye facial remount	1d6	6	auto	none	-1	150e$	Chr3**
Jigsaw facial remount	2d6	12	auto	none	-1	250e$	Chr3**
TwoFace facial remount	3d6	18	auto	none	-2	350e$	Chr3**

* original rules (made well before Chromebook 2 and it's graded armors) do not mention any Attr loss caused by these implants. However, I found it wrong – if all these subdermal tricks and cyberfacial goodies affect your Attr, then faceplate and cowl (as well as torso plate) should do as well. I guesstimated Attr loss after similar Subdermal stuff. Use it, or lose it.

** Cyberfacial Remounts seem to be an idea from someone with a weird taste for inhuman cyberware. My first idea was to treat them as Skeletal tech at the very start, no variants available. Yet even these can be made uglier and more blatantly inhuman. And applying some tech principles here could lead to nonsense results. Use with care!

Note: some cybertech will be offering modifiers to Notice Difficulty. These should be applied where there is any Notice Difficulty. A Difficulty of 0 means automatic notice. However, if an Automatically noticeable gear gets some levels in notice Difficulty, you may opt to make it "not instantly recognizable as armor". GM's call here!

Standard Technology: just that, it's the stuff described In the Cyberpunk sourcebooks.

Model	HL	Notice diff.	Ref penalty	Attr penalty	price
Standard	100%	100%	100%	100%	100%

Skeletal Technology: in cyberarmors, this trend (not a fully-developed technology) can be observed in some rare external armor designs. The producers do put extra effort into making the armor elements as robotic as possible.

Model	HL	Notice diff.	Ref penalty	Attr penalty	price
Skeletal	+1 per die	+5	100%	Boosted by+1	100%

Brazilian Technology: Brazilian cyberarmors do not distinguish themselves in any way.

Chinese Technology: Chinese cyberarmors do not distinguish themselves in any way.

NuTek: there are no cyberarmours made in this technology.

Russian Technology: Russian cyberarmors are surprisingly good. They do keep all Western standards when it comes to ballistic resistance, and aren't noticeably uglier that Standard models

(although more obvious). However, the former Eastern Bloc puts faith in titanium inserts blended in, rather than ballistic nylon only. In the effect, any radar or metal detector scan on the user will give the presence of an armor.

Curious enough, the most popular model in this category isn't Russian, but the Deepshield™ series from Polish HSW company.

Model	HL	Notice diff.	Ref penalty	Attr penalty	price
Russian	125%	-10	100%	100%	60%

Outdated Technology: the early cyberarmors were a real pain in the ass. Sure, implanting a bulletproof vest sounded like a great idea, until someone noticed it's going to be uncomfortable like hell... Note: price for used only. Brand new specimen in this technology is going to cost as much as 400% of the Standard price.

Model	HL	Notice diff.	Ref penalty	Attr penalty	price
Outdated	150%	+10	Boosted by+1	Boosted by+1	25%

Orbital Technology: as mentioned in Chromebook 2, Orbital cyberarmors utilize the wonders of Zero-G machining and high-tech materials to create armors with much more elastic junctions, thus reducing mobility penalties.

Model	HL	Notice diff.	Ref penalty	Attr penalty	price
Orbital	100%	100%	Reduced by 1	100%	800%
Orbital	100%	100%	Reduced by 2	100%	1600%

European Technology: European external cyberarmours aren't harder to notice than standard ones, but they pretend to negate the Attr penalty by making armors stylish. So, I have armor, and what about it? Thus, they tend to be styled as either antic "athletic cuirasses" (torso plates) or sculptures (European cowl plate can look like hair, sculpted out of marble). Internal variants tend to make impression of muscular body shapes. Note: it's up to GM whether European designers can squeeze even more style off their technology, reducing Attr penalties even further (if so, -2 penalty should cost 300%, and so on). After all, they are the guys who can persuade the whole world it's en vogue to wear a waste bin this season...

Model	HL	Notice diff.	Ref penalty	Attr penalty	price
European	-1 per die	100%	100%	Reduced by 1	150%

Japanese technology / Japanese high-tech: in Armourware, Japanese show their microminiaturization talent again (that's why Sony's MrStudd never seen good sales) – using the bleeding edge of modern material science and stretched calculations to make cyberarmors that are as tough, but far less noticeable.

Model	HL	Notice diff.	Ref penalty	Attr penalty	price
Japanese	100%	+5	100%	100%	200%
Japanese Hi-tech	100%	+10	100%	100%	300%

Problems in CyberParadise: Cyberarmors
First, keep in mind that these armors are worn under your clothes, which means the clothes will get ruined by the attack, even if it was stopped by the armor. With subdermal armor, this also means there's some skin over it, including blood vessels, and the attack is likely to damage these. While it poses no danger to one's life and health (no more than a shaving cut), the blood is going to stain one's clothes. Second, a microwave emitter's effect isn't going to be stopped by a cyberarmor. It heats and harms you, if the microwaves themselves weren't able to boil your flesh. If you're wearing a cheap model, chance is that metal inserts have been used in it, and they'll heat even better, aggravating the damage (damage x2, GM call).
(continued next box)

Contact poisons will also work their way – either to the skin, under which the armor is hidden, or, in case of external armor / body plating, thorough the plate itself. After all, it has to stop bullets & blades, yet allowing skin to breathe (the material is microporous... and that is enough for a toxin to work. These things usually do have great penetrating ability). Keep in mind that, however, this applies only to toxins that are sprayed onto the target (e.g. with a paintball gun). If the method of delivery is a dart or other projectile, it still has to penetrate external armor. Subdermal armors are ineffective.

Third, if any surgery has to be performed on a person with an implanted armor, the implant has to be at least partially removed. No scalpel is able to penetrate armor plating (although monofilament ones can deal with thin Skinweaves), at least not without using a lot of strength – and thus loosing precision. This means that first aid on an armored body part will be limited to applying a basic wound dressing on the outside. Under field conditions, there will be no way to do anything with internal damage, and even a fully-equipped surgical ward will need to lose precious time removing the armor.

Fourth, it hasn't been said in the books, whether the implanted armors cover both front and rear of the torso. If these are just breastplates, then your back is unprotected. Also, a high-energy projectile attack with good penetration has a nice chance of penetrating the first layer, passing thorough your body and bouncing off the second layer on your back, to pass thorough your body once again, causing a whole lot of mess. A similar problem was observed by troops wearing personal armors in 1990s.

Fifth, remember that should your body drastically change it's size (due to implants like Muscle Grafts, pregnancy, or perhaps just getting fat), your armor has to be removed and resized. Otherwise you have a chance of becoming too big in an armor too small. Sounds fun, but can kill you.

- Mike van Atta

Neuralwares of the World

Neuralware was a particularly tough nut to crack. It consists of many elements that do different things, and the only ones that can't be pointed at and said simply "options" aren't doing much in the mechanical part of the game – they have no option spaces, no SDP, no skill modifiers.

But hey- it took me quite a while to deal with this problem, however, I finally made it.

Effectiveness – in some early stage, this was intended to be a catch-all, universal rule for all cyberware. I went for the simpler rules, but Effectiveness finally made it back it this section. How does it work?

Let's say you have an implant that provides you +2 to some skill. So, +2 is the nominal, 100% effectiveness. So, a cheap copy of your implant would have only 50% effectiveness – it would grant +1 to the said skill.

Okay, but what about the situations when the number isn't even? How to define 50% effectiveness of a +1 implant? There are two ways. Either there's 50% chance the thing would work, every time it is used, or you may roll once, upon installation, to check whether the character will get the +1 bonus, or not. In both cases, we assume the implant is working… it's just a matter of determining whether the boost is significant enough to provide that +1 boost, or it's too weak for that.

Neuralware MasterTable		
Model	HL	cost
Processor	1d6	1000e$
Interface socket	1d6	200e$
Mag-Duct Spots	1d6/2	220e$
Chipware socket	1d6/2	200e$

Standard – do I need to say anything?

Model	HL	Cost	Effectiveness
Standard	100%	100%	100%

Japanese technology / Japanese High-Tech – Once again, Japanese prove to be masters of miniaturization: they were able to equip their neuralware with much more powerful processors than anyone in the West thought to be possible. Those machines are much faster and smarter than their Western counterparts. However, to show all their bells and whistles, they need matching input / output ports, and peripheral equipment (This means that if a regular smartgun gives you +2 to hit, a bleeding edge Japanese one would be +3.Of course, you'll need Japanese processor, Japanese interface plugs and Japanese smartgun link, otherwise you get nothing special... did I mentioned all those bits are 300% priced? Oh, and Japanese smartgun modules for your gun, too!)

Model	HL	Cost	Effectiveness
Japanese	100%	200%	125%
Japanese High-Tech	100%	300%	150%

Chinese: Poor Quality Control – does it sound familiar? The signal comes fuzzy, with loads of interference, the interface sockets have problems with connecting, and all the usual jazz. Of course, 1 piece of Chinese junk is enough to waste half of the system. Still, with a little extra care, a Chinese set of plugs is going to be a good investment for the money paid – provided you want to use it for basic computer linkup, not any fancy optionware (you can pack a Chinese processor with whatever you want, it would still be only 50% effective... OTOH, a Chinese smartgun link in a regular processor would affect only smartgun operating).

Model	HL	Cost	Effectiveness
Chinese	100%	50%	50%

Outdated: it can't work with any neuralware option that wasn't listed in CP 2020. It will be substantially cheaper thus (but hey, after all, these haven't changed that much).It is also crude, which means it's a mixed blessing – these things are unhealthy for one's psyche, but they also can take more abuse than modern parts. If attacked by Black Ice, Outdated Neuralware adds +2 to defense rolls – modern attack programs are made to subtly alter the ways victim's nerves work, whereas versus Outdated 'wares a crowbar would be more appropriate.

Model	HL	Cost	Effectiveness
Outdated	150%	25%	50%

Orbital: Most of the orbital neuralware isn't distinctive, however, many models do come with EMP protection, Grade 2 (very handy thing in the environment where they are used…)

Model	HL	Cost	Effectiveness
Orbiral	100%	390%	100%

European: as usual, smooth, and well-hidden, European neuralwares are also said to be much more user-friendly when it comes to the interface protocols.

Model	HL	Cost	Effectiveness
European	-1 per die	150%	100e$

Skeleton – There's no neuralware being produced in this particular style. *Author's note: it wouldn't be a problem to just apply typical rules here (HL +1 per die, 100% price, 100% Effectiveness). However, there's no reason for this. Simply, I see no way how neuralware can be made more "skeletal" and "robot-like"… Same goes with Russian and Brazilian.*

Russian – whereas Russian neuralwares might look like something a knife-happy surgeon got from an do-it-yourself shop, they match world standards.

Brazillian – there is no distinctive Brazilian style in neuralwares, and processors produced there do match world standard in any aspect.

NuTek – there's no neuralware being produced in NuTek technology.

Cyberweapons of the world

Melee Cyberweapons Master Table

Since the original rules were a bit inconsistent, I've changed a few stats. Mainly, the HL for some cyberweapons was reduced to make it proportional. Please note that according to Chromebook 2, in the Exotic chapter, there's a possibility to install Scratchers & Rippers (apart form regular Natural Claws, which implies those are standard, cybernetic versions) for 1d6 HL less than listed in the CP2020 main book. This is explained as "Low HL due to implantation in a hospital". Which, simply speaking, implies that cyberweapon's HL isn't all that high, just a matter of the usual way of getting these in a ripperdoc's clinic.

Type	HL	Notice** Diff.	Damage	Spaces*	Cost
Stinger	1d6+3	25	Drug, 4 doses	1 finger	400
Air Hypo	1	20	Drug, 3 doses	1 finger	200
Tazer Grip	2d6-2	25	Stun -2	1	180
Lightning Fist	2d6	25	Stun -2 / 2d6+1	1 hand	900
Power Jaw	1-2	-	+2 all bite damage	-	100
Gang Jazzler	2d6+3	25	Special	0,5	600
Scratchers	1d6	30	1d6/3 (1/5 per finger)	none	100
Wirecutters	1	20	1d6/3	2 fingers	50
Sharkweave	1d6+	obvious	1d6/3	cover	4'000
Venom Hand	2d6	20	1d6-1 or poison	1 hand	750
Web Hand	2	20	1d6	1 hand	250
Natural claws (retractable)	2d6	20	1d6	5 fingers	1'000
Natural claws (non-retractable)	1d6+1	15 g / 10 o	1d6	5 fingers	1'000
Big Knucks	2d6	15	1d6+2	1 hand (fingers still allowed)	500
Rippers	2d6	20	1d6+3 (1/5 per finger)	5 fingers	400
BigRipp	3d6***	20	2d6	1	1'850
Retractable blade	1d6	20	1d6+3	1	500
Spike hand	2d6	20	1d6+3	1 hand	500
Bonespike	2d6	25	1d6+4	Flesh only	1'000
Buzz hand	2d6	20	2d6+2	1 hand	600
Gouge master	2d6	20	2d6+3 / 2d6	1 hand	550
Retractable monoblade	1d6+2	20	2d6+3	1	800
Wolvers	2d6+1	20	3x1d6	1	600
Drill hand	3	20	3d6	1 hand	700
ChainRipp	2d6+4	15	3d6	2	1250
High Five Palm Bomb	1d6+3	20 search / 30 g	Per ammo	0,5	355
Hammer Hand	2d6	20	1d10	1 hand	600
Mace Hand	3	15	1d10-2 / 2d6+1	1 hand	300
Talon Foot	2d6	20	1d6	1 foot	600
Spike Heel Foot	2d6	20	2d6	1 foot	500
NewTeeth	1d6/2	Lab only	1-2	mouth	200
Vampires	2d6	15 o / 25 g	1d6/3	mouth	200
Retractable Vampires	1d6+2	20 o / 30 g	1d6/3	mouth	500
Sharkgrin Special	2d6+2	10 o / 20 g	1d6/2	mouth	400
Retractable Sharkgrin	1d6+4	15 o / 25 g	1d6/2	mouth	500
Horns	1d6+2	obvious	1d6/2	none	300
Extended Canines	3d6+2	15 o / 25 g	1d6/2+1	mouth	1'000
Spyke Body Plating	1-3	Obvious	1d3+1 to 1d6+1	Body cover	400-600
Spiked Limb Cover	2	obvious	+1d6 if grappling	Limb cover	200
Extended Sharkgrin	4d6	10 o / 20 g	1d6	mouth	1'400
Cyberjaw K9	3d6+2	obvious	1d6	mouth	2'750
Mandibles, bio	3d6	25	1d6	mouth	4'000
Manibles, cyber	5d6	25	2d6	mouth	1'200

Natural fangs	2d6	15 o / 25 g	1d6	mouth	500
Cyberjaw Cobra	3d6+2	obvious	1d6+2	mouth	2'770
Cyberjaw Needler	3d6+2	obvious	1d6+3	mouth	2'800
Cyberjaw Pitbull	3d6+2	obvious	2d6	mouth	2'870
Cyberjaw Shark Maw	3d6+2	obvious	2d6+1	mouth	2'930
Cyberjaw T-Rex	3d6+2	obvious	3d6	mouth	3'000
Cyberjaw 'skinning	As per skin	20 for RealSkinned	-	-	1 Skin unit
Whip	2d6	15	1d6/2 , 1d6	1	475
Slice & Dice	3d6	20	2d6	1 finger	700
Cybersnake	4d6	Lab only	1d6	1	1'200
Cybersnake Mk.2	4d6	Lab only	1d6 or 2d6	1	1'600
Hollow teeth adaptation	-	Lab only	For poison application	Teeth mod.	+50 per set
Hollow claws adaptation	-	Lab only	For poison application	Claw mod.	+50 per set
Poison Sac	2d6	Lab only	Drug, 4 doses	-	500
Poison Gland - hands	2d6+3	Lab only	Drug (sleep)	-	500 e$
Poison Gland - teeth	3d6	Lab only	Drug (sleep)	-	500 e$

* Spaces apply only if mounted in a cyberlimb.

** Notice: most weapons are obvious once deployed. This applies to the hidden mode only.

*** BigRipp HL is only 50% if mounted on a cyberlimb

Note – I've added a few new bits here, to straighten things out.

Hollow Teeth Adaptation allows any teeth implant (from natural fangs to the most bizarre cyberjaw) to inject poison / drug. Generally only canines have the ducts for poison. Can be used on natural teeth.

Hollow Claw Adaptation does mostly the same for bladed bodyweapon.

Poison Sac is a reservoir holding 4 doses of a drug / poison to be applied by the means of hollow tooth / claw they are linked to.

Poison Gland – has to be implanted into living flesh – does the same, but is able to produce the drug / poison. Two variants: one is linked to the hollow teeth, the other excretes it's content on hand blades (rippers, scratchers etc).

Cost for poison glands varies by drug: Sleep, nausea or somatic glands cost 500e$, Hallucinogen is 800e$ hands / 500e$ teeth, and Biotoxin type 1 is 1'000e$ teeth / 1'100e$ hands.

Searching for cyberweapons:

Most of the time, you want these to remain concealed. It is assumed that the primary method of detection is visual observation. If the weapon is under the cover of a Skinned limb, use Skin's detection value if it's higher. Keep in mind that those values – except for a few actually listed in the books – were simply guesstimated.

Lab only – this cyberware cannot be identified with bare eyes & hands, even if closely inspected – metal detectors, microscopes and such are needed to recognize it.

Observation / glance (o/g) – this is the difficulty of spotting the cyberware during a search / prolonged observation and as a result of accidental / momentary observation.

Standard Cyberweapons – no comments.

Model	HL	Notice Diff.	Damage	To Hit	Spaces	Cost
Standard	100%	100%	100%	0	100%	100%

Skeletal – if you don't care who will learn about your combat implants, these bare-bones Skeletal variants are for you. Ruthless efficiency is the style.

Model	HL	Notice Diff.	Damage	To Hit	Spaces	Cost
Skeletal	+1 per die	-5	100%	0	100%	66%

Brazilian – cyberweapons as such are illegal in Brazil. Those few that are allowed and produced there (fashion statements, like vampires and scratchers) do not differ from Standard models, so it seems there's no cyberweapon produced in this technology.

Chinese – some people are desperate enough to get some form of bodyweapon, to try and buy a Chinese cyberweaponary. As usual, it has one advantage – it is cheap. But the quality control – well, let's better skip this part. The blades are made of substandard material ,so they don't retain the

sharpness, and sometimes bend in use. Same with spikes. Have you ever broken a Sharkgrin Special on someone's neck? You know that you pay for what you get.

Model	HL	Notice Diff.	Damage	To Hit	Spaces	Cost
Chinese	100/%	100%	66%	-1	100%	50%

NuTek – there is no cyberweapon produced in this technology.

Russian – Eastern Europe makes quite a lot of cyberweapons, and makes them pretty nice, especially the simpler ones, like blades and basic mechanical devices. Sure, it's rather good ol' machine-grade steel than composites and carboglass, so showing with such a toy in an airport is going to make it sound like Independence Day… but this is a well-known problem with Russian toys. And if you want Wolvers that look like thay came from a mechanical plough, that's the thing to buy

Model	HL	Notice Diff.	Damage	To Hit	Spaces	Cost
Russian	125%	-10%	100%	0	100%	40%

Outdated – the classics never fall out of fashion. Even, if they are easy to spot, they make kinda fashion statement.

Model	HL	Notice Diff.	Damage	To Hit	Spaces	Cost
Outdated	150%	-10%	100%	0	100%	30%

Orbital – orbital cyberweaponary uses state-of-the-art materials to make weapons very, very hard to detect. While physically they aren't noticeably harder to spot than standard ones, they tend to not show on scanners. An useful ability, if you consider penalties for illegal cyberwaepons possessing.
* +10 notice diff. vs scanning only.

Model	HL	Notice Diff.	Damage	To Hit	Spaces	Cost
Orbital	100%	+10*	100%	0	100%	200%

European – as usual ,Euro cyberweapons tend to blend in and look perfectly right fitting. More than like a glove.
* +10 notice diff. vs non-scanning search only.

Model	HL	Notice Diff.	Damage	To Hit	Spaces	Cost
European	-1 per die	+10%*	100%	0	100%	300%

Japanese – the only distinctive trend in Japanese cyberweapons is to make things smaller, to fit them into cutting-edge Japanese cyberlimbs. To utilize extra spaces in a Japanese cyberlimb, all options (including weapons) must be Japanese of the same (or better) grade, which means the same price modifier is used.

Model	HL	Notice Diff.	Damage	To Hit	Spaces	Cost
Japanese	100%	100%	100%	0	100%*	200%
Japanese High-Tech	100%	100%	100%	0	100%*	300%

Cyberarm Blades
How do I see it

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.

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.

> ***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*

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

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).

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

Ranged Cyberweapons Master table

Type	HL	Notice** Diff.	Type	WA	Damage	Shots	ROF	Rel.	Range	Spaces*	Cost
Weapon mount & link	3	See separate rules								1	100
Finger Mace Sprayer	2	20	P	0	Gas	2	1	ST	1m	1 Finger	150
Gas Jet	1d6+3	20	P	0	Gas	6	1	ST	2m	1	250
Finger Dartgun	2	20	P	-1	Poison	1	1	ST	3m	1 Finger	100
Flashbulb	1d6/2	20	P	0	Blinds, 1d6 min.	-	1	ST	6m	1	250
TriDart Launcher	1d6/2	20	P	0	1d6/2	3	3	ST	3m	1 hand	300
Derringer	1d6	20	P	-1	5mm round	2	1	ST	50m	1 hand	220
One Shot Special	2	20	P	-2	5mm round	1	1	ST	10m	1 finger	250
Dainamax Grapplefist	2d6	20	P	-1	1d6+2 / 2d6+2 crush	1	1	ST	50m	1 hand	1050
Gouge Master	2d6	20	P	-1 / 5m	1d6+3/1d6	-	-	ST	10m	1 hand	550
Popup Sliver Gun	1d6+2	20	P	0	2d6x1d6/2	7	2	UR	40m	1	550
Popup gun	See separate rules										
2 Shot Capacipator Laser	2d6	20	RIF	+3	3d6	2	2	ST	10m	1	800
Flamethrower	2d6	20	HVY	0	2d6, 1d6/2 x2 rds	4	1	ST	1m	1	600
Finger: Self-propelled Grenade	2	20	HVY	0	2d6, 2m	1	1	ST	7m	1 finger	200
Finger Bomb	2	20	HVY	0	2d6+3, 3m	1	1	ST	thrown	1 finger	150
Grenade Launcher	2d6	20	HVY	0	Per ammo	See separate rules					
Micro-Missile Launcher	2d6	20	HVY	+2	Per ammo	See separate rules					
Micro-Torpedo launcher	2d6	20	HVY	+2	Per ammo	See separate rules					
Optic teargas sprayer	2	25	EX	0	gas	1	1	ST	1m	2 optic	200
Optic dartgun	2	25	EX	0	poison	1	1	ST	1m	3 optic	200
Novel Tech Spitfire flamer	4d6		EX	0	Varies	4	1	ST	4m	1	1000
Flasher	1	20	EX	0	20+ REF, blind min	1	1	ST	2m	1 finger	250

Spitting Cobra *	4d6	15 observation / 25 glance	EX	0	1d6 (Acid)	20	1	ST	2m	mouth	400+
Retractable Spitting Cobra	4d6	20 observation / 30 glance	EX	0	1d6 (Acid)	20	1	ST	2m	mouth	400+
Optical Capacipator Laser	3	25	EX	0	2d6	1	1	ST	0,5m	3 optic	800
Blitzkrieg Arc-Thrower	2d6	20	EX	0	3d6, 50% real, 50% stun	4	1	ST	10m	4	1050
Strobe	1,5	20	EX	0	10/15 blind 1d6 hours	-	1/2	ST	2m	1	150
Popup Hand Crossbow	2d6	20	BOW	-2	1d6+2	6	2	VR	25m	4	300

* Spitting Cobra is a variant of the Vampires, and is a subject to Melee Cyberweapon rules.

Standard Cyberweapons – no comments.

Model	HL	Notice Diff.	Rel.	To Hit	Spaces	Cost
Standard	100%	100%	0	0	100%	100%

Skeletal – if you don't care who will learn about your combat implants, these bare-bones Skeletal variants are for you. Ruthless efficiency is the style.

Model	HL	Notice Diff.	Rel.	To Hit	Spaces	Cost
Skeletal	+1 per die	-5	0	0	100%	66%

Brazilian – cyberweapons as such are illegal in Brazil. Those few that are produced there do not differ from Standard models, so it seems there's no cyberweapon produced in this technology.

Chinese – some people are desperate enough to get some form of cyberweapon, to try and buy a Chinese cyberweaponary. As usual, it has one advantage – it is cheap. But the quality control – well, let's better skip this part. Have you ever thought about building a fully-automatic, caseless firearm with explosive-tipped rounds into your arm… and yet let it be a polymer one-shot? Welcome into the realm of Chinese popup huns…

Model	HL	Notice Diff.	Rel.	To Hit	Spaces	Cost
Chinese	100/%	100%	-1	-1	100%	50%

NuTek – there is no cyberweapon produced in this technology.

Russian – Eastern Europe makes quite a lot of cyberweapons, and makes them pretty nice, especially the simpler ones, like blades and basic mechanical devices. Sure, it's rather good ol' machine-grade steel than composites and carboglass, so showing with such a toy in an airport is going to make it sound like Independence Day… but this is a well-known problem with Russian toys. Rostovic / Kalashnikov does make a few interesting models.

Model	HL	Notice Diff.	Rel.	To Hit	Spaces	Cost
Russian	125%	-10%	0	0	100%	40%

Outdated – the classics never fall out of fashion. Even, if they are easy to spot, they make kinda fashion statement.

Model	HL	Notice Diff.	Rel.	To Hit	Spaces	Cost
Outdated	150%	-10%	0	0	100%	30%

> **Extra battery for energy weapons**
> Energy-based weapons can be equipped with additional batteries (or rather, capacitors banks) to increase their „ammo capacity".
> A battery allowing for as much shots as the weapon does have standard takes 50% as much space as the weapon, costs 20% of the weapon's cost, and has HL 0,5.
> -Mike van Atta

Orbital – orbital cyberweaponary uses state-of-the-art materials to make weapons very, very hard to detect. While physically they aren't noticeably harder to spot than standard ones, they tend to not show on scanners. An useful ability, if you consider penalties for illegal cyberweapons possessing.
* +10 notice diff. vs scanning only.

Model	HL	Notice Diff.	Rel.	To Hit	Spaces	Cost
Orbital	100%	+10*	0	0	100%	200%

European – as usual, Euro cyberweapons tend to blend in and look perfectly right fitting. More than like a glove.
* +10 notice diff. vs non-scanning search only.

Model	HL	Notice Diff.	Rel.	To Hit	Spaces	Cost
European	-1 per die	+10%*	0	0	100%	300%

Japanese – the only distinctive trend in Japanese cyberweapons is to make things smaller, to fit them into cutting-edge Japanese cyberlimbs. To utilize extra spaces in a Japanese cyberlimb, all options (including weapons) must be Japanese of the same (or better) grade, which means the same price modifier is used.

Model	HL	Notice Diff.	Rel.	To Hit	Spaces	Cost
Japanese	100%	100%	0	0	100%*	200%
Japanese High-Tech	100%	100%	0	0	100%*	300%

> **Easily removable cyberlimb guns**
> For a +50% space and +25% cost increase, a popup weapon can be made in a quickchange configuration. While quickchange weapons are not interchangeable (except for the very same model), this allows you to remove your cybergun as fast and easy as it would take to get rid of a holster with a regular handgun. Pretty useful, if you have to enter a well-secured facility where guns aren't allowed.
> Especially popular in the areas where popup guns are in fact legal.
> - Mike van Atta

Popup Guns

The name is misleading – most of these weapons do not "pop up" from a cyberlimb. To have the action, a scissor-lift mechanism and hide-away doors would cost you too much money and make the design overcomplicated. KISS the problem.

Keep It Simple, Stupid.

First of all, this kind of weaponry has the primary principle of being hidden. It is either an assassin's tool, or a last-ditch defense weapon. Either way, it's meant rather to be used on a minimum distance, with a surprise advantage.

In most cases a gun does not "pop up" from a forearm – rather, a part of the forearm folds down and away, showing the barrel and other access points if required.

Note: you can apply the same style modifiers as for other cyberweapons, just keep a GM's watchful eye to keep away from obviously nonsense results.

Micromissile / Microtorpedo

These two differ only by the means of environment they are to be used in. Both are fired using compressed air "cold launch", with motor engaging about 1 meter from the user. There is a number of variants of these homing weapons, and they are usually implanted in "batteries". Their advantage, compared to more typical guns, is that you can mount a pretty big one, as there's no need for a barrel, action or magazine. There's no recoil as well. In the effect, the launcher is often little more than a transport canister, which opens up to allow the launch.

The most typical is the 20mm micro, but it has bigger cousins – 30mm and 40mm micros.

Type:	Basic damage	Missile range	Spaces per tube	Spare round, base cost*	Cost per tube
20mm Micro	4d6, 2m	200m	1/4	25e$	225e$
30mm Micro	5d6, 3m	250m	1/2	40e$	450e$
40mm Micro	6d6, 5m	300m	1	60e$	900e$

*I'm using FID micromissiles cost here. The cost given is a "Dumb Rocket", HE warhead, standard range. The standard micromissiles, described in Cyberpunk 2020 are WA +2 Heatseekers, HE, Standard range (basic cost x2). 30mm micros were originally described as Rostovic Wirst Rakate, and the only ammo available in this caliber was Dumb Rocket (200e$ per a 6-pack). 40mm's are D-Roc's invention.

Humanity Loss for micromissile launchers is 2d6 for a battery that takes up to 1 space. Bigger batteries are treated as multiple batteries, and smaller have the same HL as full-space ones.

Grenade Launcher

Why one would want a GL as a cyberarm weapon, is beyond me. Obviously, the first of these were deployed during the 2nd SouthAm conflict, as test samples. Somehow, it did catch up among the people who claim that "Bigger is always better", mostly gang members. This explains why modern cyberarm GLs are often of such a poor quality – they're made for gang members by illegal gunsmiths.

There are two classic GL calibers, 40x46mm NATO (the Western standard) and 30mm Plamya (the Cold War – era Soviet standard, still popular beyond the Iron Curtain) often chosen for it's compact size, since the damage potential is comparable with 40x46mm. Keep in mind that, however, 30mm Plamya are difficult to obtain, even on black market, outside of Russia and a handful other countries that do use them.

Then there's the 25mm Tsunami, high-pressure GL, and Militech 25mm low-pressure GL (the ammo used for U-55 Cowboy launcher).

There's also the new Militech standard, so called "25mm microgrenade". However, since "25mm's" are interchangeable with 10 GA shotgun shells (that is, any weapon capable of using "microgrenades" can use 10 GA shotgun shells, there are also known examples of 10 GA shotguns adapted to fire "microgrenades"), which are of circa 20mm caliber, the "25mm" denominator should be seen more as a part of Militech's marketing strategy. Militech Microgrenade launchers are therefore treated as shotguns with GA of 10.

The caseless, muzzle-loaded 40mm Russian grenades (originally made for GP-25 and GP-30 grenade launchers) are virtually unknown outside of Russia. However, they are one of the best choices, if you really must have a cyberlimb GL.
Note: due to their short barrel, the range of a built-in GL is always 1/3 of the listed for a full-sized variant, and accuracy is -3. If the GL's size is doubled (+50% cost), the longer barrel provides 50% of the regular range and accuracy of -2.

No GL may take more than 50% spaces in a cyberlimb. All these are break-open designs, and there's no space for separate ammo. Loading is manual, taking double the time in case of the 40mm "caseless" muzzleloader, since it has to be literally screwed into the rifling at the base of it's barrel.

Recoil factor: the grenade launchers do pack a punch, and they do pack a kick back as well. Therefore, to keep things somewhat close to realism, a recoil factor has been taken into account. It may look surprisingly high, but remember that regular grenade launchers are universally shoulder arms or even stationary, whereas a cyberarm mount calls for a single-handed equivalent. Some grenade types, meant for automatic GLs, have a stronger propellant charge (meant to provide the weapon with the extra energy required). They are often referred to as "high pressure" grenades (marked with an "#" in the table below). Note: there are high pressure rounds in 40x46mm caliber (meant for NATO – standard automatic GLs), however these are not used in hand-held GL, and shouldn't be pressed into use with a cyberlimb GL (even if technically possible).

Type:	Spaces	Cost	Recoil factor / BOD minimum
Militech Microgrenade	As 10 GA shotgun		12
25mm Militech	0,75	400 e$	15
# 25mm Tsunami	1	500e$	22,5
# 30mm Plamya	1	600e$	27
40mm "caseless"	1	750e$	24
40mm NATO	1,5	500 e$	24 / 36 (#)

Note: there are other GL calibers, like the obsolete Polish 40x47mm "Pallad" system, Russian 43mm "GM-94", Chinese 35x32mm SR "QLB / QLZ" (hi-pressure) and South African 20x42mm "PAW" system. However, they never reached the popularity of the above-mentioned calibers, and thus any cyberlimb GL in any of these calibers must be a one-off construction.

Weapon mount & link

Another piece of hardware introduced during 2nd SouthAm Conflict, this one allows the user to interface a purpose-built cyberlimb "popup" gun (anything from a one-shot Finger Special, to a 40mm GL) – price is the same as for a cyberlimb weapon. It counts as a built-in for game purpose.
What is different is that it can be disconnected and re-connected in a moment. The mount itself is usually non-regulated by law (the weapon modules are another story), and when not in use, it can be covered by a special shield of cyberlimb cover material (diff. 20 to identify what's on). Of course, when a gun is attached, everything is obvious. Due to the same reason, HL is so low.

Firearms

Like with the cyberarm blades, no gun can take more than 50% spaces in a cyberlimb (i.e. no gun bigger than 2 spaces can be installed in an average, 4-space, BOD 6 Cyberarm), including the barrel, action, magazine and whatever else.

The calculations are made for handgun rounds. Rifle cartridges are considered to be 2x as big as a handgun round of the same caliber. Shotgun cartridges - except for .410 GA - are considered to be rifle cartridges (and big ones!), they also produce more recoil, thus enforcing a more durable construction. .410 GA are 50% bigger, and enforce 150% cost increase. Thus, if considering a rifle (or shotgun) - caliber cyberarm gun, double the space and triple the cost requirements.

Heavy weapon calibers, like .50 BMG, aren't even taken into account.

Keep in mind that the length of the round doesn't matter when barrel size is discussed, only for action size.

> **Volume space? Length space? What the heck?**
> I know – I stated in the beginning that 1 space = 1 space. 375 cubic centimeters, mold them as you wish. The problem is, the guns can't be molded much. The barrel has to be straight metal pipe, otherwise it would be better to not have it, period. But if we put a 10mm pipe thorough our standard 5x5x15 cm cylinder "space", there's a lot of empty space left. Therefore the concept of length space – it eats a lot of length, but not much volume. Some of it is left for other applications (a magazine, for example).
>
> *- Mike van Atta*

Types of action

These do include minimal barrel length possible for holdout weapons. The cost is calculated in comparison to the ammo price in that caliber.

Barrel size:

You can't cram a barrel into your arm that has caliber bigger than your BODx2 in millimeters. It's not only the volume, you have to take into account other factors as well (recoil absorption, heat dispersion, material stress) in the problem of adapting the volume to such a long, straight pipe.

Barrel takes 0,5 volume space per every space of length in both handgun and rifle calibers (including the .410 GA). Shotgun calibers call for a 1 volume space per every space of length.

Suppressed barrel (that is, one equipped with a muffling shroud) takes twice as much volume spaces per every space of length as normal.

Barrel costs 20% of the action's price per every 0,5 length space, 60% if suppressed.

Action size:

Break-open / derringer. Takes 0,25 space (mulitiple barrels are possible, but should be treated as separate guns). Basically, a firing chamber and pin. Reliability is VR. The cost is equal to 5 ammo boxes.

Revolver. 0,5 space base. In fact, it consists only of the ammo cylinder and firing pin. Cycled (i.e. drum rotated) by electric motor, or myomer muscle flex. Although it would be possible to make a bigger diameter drum, it is considered to be highly impractical. Reliability is VR. Cost is 15 ammo boxes. Revolver action has the merit (and flaw) of not requiring additional ammo space.

> **Aiming with cyberlmb guns**
> First of all – you can't aim with them. Remember that cyberarm weapons lack iron (or any other, in fact) sights.
> This can be easily countered by installing a laser sight or a smartgun rig (normal cost).
> If you don't have a neural processor for smartgunning, you can use the LimbLink option – it's basically a stripped down smartgun module to be used with cyberlimb guns (+2 accuracy – a correction to the original Chromebook specs).
> *- Mike van Atta*
>
> On the lasersight, it could be equipped with an insert that allows you to switch target patterns for different weapons(Red dot, dot with a halo, crosshairs, brackets, ring sight(for shotguns), etc.), more expensive ones could have color patterns(red, green, blue, inside out or outside in) and perhaps different colors(purple, yellow, coral, could also have multiple colors that shift), just to get the "style" aspect. Also, for stealth sniping, you could have non-visible-light lasers(infrared, ultraviolet), although you would have to be careful, if your target has IR or UV in their goggles/optics, because they'd give your position away, like a common lasersight in fog or smoke.
> *- Snowtiger*

Autoloader, 0,5 space. Take note that this is the only type capable of fully-automatic fire, if designed to do so. It fires from a closed bolt (like most modern SMGs), and is cycled not by it's own blowback / recoil, but built-in electric motor. Reliability is ST, UR if autofire capable. The cost is 20 ammo boxes for an autoloader, 60 for an autofire – capable weapon (ROF 20).

Barrel length:

When you buy Action only, you get action only – i.e. no barrel. Unless you want your own variant of High Five Palm Bomb (action only, no barrel) you need some barrel. The longer the barrel, the better range and accuracy you will get.

For extra accuracy and range, a longer barrel can be installed (since it's the barrel only, it takes less space, but for the purpose of determining how big the gun is, double these values). Barrel cost: +20% gun cost per 0,5 space length of the barrel 60%, if suppressed).

Barrel lengths (in length spaces):
0,25 is holdout barrel (somewhat shorter than 2").
0,5 is short handgun barrel (about 3")
0,75 is long handgun barrel (about 4½")
1 is Dirty Harry's 6".
1,5 goes for a SMG-sized barrel. This is the longest one you could cram in if you don't have abnormally long limbs.
2 is a sub-carbine barrel,

+0,5 space to get a proper-length handgun barrel (+15 cm). Suitable for machine pistols and short shotguns as well. Keep in mind it would count as full 1 space for calculating weapon's overall size.

+1 space to get a barrel of a mid-sized SMG (+30 cm).
A carbine barrel would need +1,5 space.
Assault rifle-sized barrel calls for +2 spaces.

Any cyberarm gun (except for shotguns) can be equipped with a silencer. It doubles space requirements for the barrel (i.e. a 1-space worth of barrel is going to take 1 full space, not 0,5 as without it) and triples the cost. Keep in mind that most barrels are too short to effectively suppress a rifle round!

> **Shotgun bores by gauge**
> Approximate values:
>
> 10 GA = 19,5mm
> 12 GA = 18,5mm
> 16 GA = 17mm
> 20 GA = 15,5mm
> .410 GA = 10mm
> *- Mike van Atta*

Feeding the ammo:

Autoloaders do use box magazines:

- External - no space or cash cost, the gun is equipped with a conventional magazine well. A magazine well can be made to accept any commercially available magazine type (e.g. have a 10mm autoloader, fed from Minami 10's mags) You stick a box magazine into it (or even a belt canister, if you're really crazy). Advantage: doesn't take spaces, easy to reload, can be made to accept any one commercially available magazine type. Disadvantage: can't be hidden (how you hide a 30 -round box sticking out of your arm?). Unwieldy when in use. Belt-fed guns fall into this category.

- Internal magazine: number of bullets = 150/ caliber in millimeters per space taken, round the result down. If the magazine is integral, this is the exact result. If it is detachable, reduce the capacity by 10%. Integral magazines have to be refilled, whereas detachable ones can be swapped for full ones (which is much quicker). Only handgun rounds can be used this way (rifle rounds are too long!). The magazine is placed parallel to the barrel, like in P90 SMG, and the bullet is rotated 90 degrees just before it enters the lock. Note that you can take a mag that is several spaces big. The really large, integral mags are usually helical design, with barrel through their core. Magazine rig costs 20% gun price per space if integral, 25% if detachable. According to SoF 2, detachable magazines for personal weapons (handguns, rifles, shotguns etc) are 0,5 e$ / round if caseless, 1e$ / round if cased ammo.

> **Magazine quick calculation:**
> *Derringer*: no magazine at all.
> *Autoloader*, external feed: no magazine.
> *Autoloader*, internal feed, integral: 150 / caliber (mm) = ammo capacity, round down.
> *Autoloader*, internal feed, detachable:
> [150 / caliber (mm)] -10% = ammo capacity, round down.
> *Revolver*:
> [BOD / caliber (mm)] x5 = ammo capacity, round down.
> If the result <3, revolver feed is impossible.
>
> For rifle calibers, halve the capacity due to big, bottle-necked casings.
> *- Mike van Atta*

Revolver ammo capacity:

- The cylinder is going to be the most limiting factor. Whereas there is a number of cubic centimeters that can be fiddled with, the cylinder has to be small enough to fit into the arm. Take the BOD of the limb and divide it by the caliber of the round in millimeters. Then multiply the result by 5. What you get is the maximum number of bullets in the given caliber you can fit in such an arm (since you can't stuff in a 6 and a half of a bullet, discard any fractions when you get here). If the result was less than 3 bullets, the arm can't accept a revolver in that caliber - go for a derringer. Note that obscure calibers are often used to max out ammo capacity.

Range:

Range depends on the type of ammo used as well as barrel length. Below are general guidelines (GM's call on fine details). Keep in mind that this is the range on which you can count to hit something – the projectile remains lethal on much longer range.

Barrel length / Ammo type	Handgun	Rifle	Shotgun
Holdout	15	20	10
Handgun, short	40	75	15
Handgun, long	50	100	20
Handgun, king-size	65	150	25
Submachinegun	150	250	30
Sub-Carbine	200	300	40

Accuracy

Due to the lack of sights, and general prevalence of concealablility over combat performance, popup guns aren't usually very accurate. Typical Accuracy is 0, -1 per every barrel length below optimum (Handgun for non-autofire hangun caliber weapons, Submachinegun for autofire capable, Assault Rifle for rifle and shotgun calibers), down to maximum -3.

A longer than required barrel gives out +1 accuracy (but no matter how much longer it is, it won't be more than +1).

You can add another +1 if the gun is precision made (double the overall cost).

Humanity Loss

Standard is 2d6 HL, my call is to add +1d6 if the weapon is autofire-capable, +1d6 if rifle / shotgun caliber.

Notice

Standard Awareness score required to find a popup gun is 20.

Limiting factors:

There are two technical problems that do limit gun's size:

1. Length. Barrel length (in length options) plus action's size can't be more than the limb's 50% space capacity.
2. Recoil. You'll find the rules for recoil in *Blackhand's Street Weapons*, but the general rule of thumb is to not have a gun with recoil bigger than your limb can handle. Keep in mind that all cyberlimb guns are, by their very nature, 1-handed firearms as per *Street Weapons'* rules.

Exotic ranged weapons as popup guns

While there were rules for installing firearms in your artificial shoulders in CP2020, there was a good list of exotic weaponry that could prove useful in such a situation. Some of them being not even illegal. But how to implement them?

There are two general categories: projectile weapons, and non-projectile (usually, energy) weapons.

Projectile ones work in a fashion similar to ordinary guns – there's a mechanism, usually some type of a barrel, and some action. It needs a magazine. However, all that stuff usually can be smaller and lighter than in a regular gun, and doesn't put as much stress on the construction (recoil, propellant residue, hot gases).

Non-projectile are even easier to convert – no conventional action, often no barrel (just some kind of an emitter) and a minimum amount of moving pieces.

Model	HL	Notice Diff.	Spaces	Cost
Projectile exotic weapon	1d6	20	0,75 for a P conc, 1,5 for a J	150% of the weapon listed cost
Non-projectile exotic weapon	1d6	25	0,5 for a P conc, 1 for a J conc	110% of the weapon listed cost

Note: space requirement can be cut down by 25% by reducing ammo capacity by 50% (or equivalent).

Note: HL can is reduced by 25% if the weapon is of non-lethal nature only (stuns / immobilizes, but causes no real damage – if the weapon is capable of firing various types of ammo, assume it is of a potentially lethal nature)

Some CP2020 exotic weapons I find well-suited to the use as cyberlimb weapons. Non-lethal are marked with an asterisk (*):

Non-projectile
- HF jammer (if we consider it to be a weapon)
- Techtronica Microwaver I & II

Projectile
- Arasaka restraint caster*
- Avante needle gun,
- Entrex power squirt
- Militech taser*
- Mitsubishi taser*
- Nelspot Wombat (and other paintball guns)
- Pursuit beanbag gun*
- Pursuit stundart pistol (actually a firearm, a .45 break-open...)*
- StreetTech Burst (a firearm)
- Tsunami Airhammer

Neuralware Analogs of Audio / Video Options

I did wonder since quite a while: why you have to install yourself a cyberaudio set to get an implanted walkie-talkie, i.e. Radio Communicator? Sure, for augmented hearing you need cyberaudio – your Mk.1 ears aren't capable of hearing ultrasounds, nor of dampening a level of a sound too loud. But radio? If your nerves are wired (thanks to Neural Processor), all you need is to add a radio to it. It will feed off your nerves… and to your nerves. No need for bulky, HL-consuming cyberaudios / optics.

Still, you have to remember, not all options can be made equivalent. Infrared, for example, can not: it is a specialized sensor / receptor that sees spectrum normally nor accessible for a human eye. You don't have it, you don't have the IR vision.

Some options are capable of feeding data from audio / optics (recorders, cameras, and the like). Those are a tricky business. While they have no problem with registering the info from your nerves, your eyes and ears may be giving data of inferior quality. For example, if you are near-sighted, all images of distant objects are going to be blurred. Why? Because the cameras (your eyes) are faulty, and they give out bad vision! Of course, in 2020+ getting your eyes / ears repaired and brought to more or less perfect state is something medical science is capable of. Of course, even if you are going to let a scalpel- (or rather, laser) wielding, knife-happy medic meddle with your eyes (*eeeck*!), it isn't guaranteed that you'll receive a 20/20 vision (remember Tiger's problem in "Burning Chrome"? He finally gave up and bought a pair of cheap cybereyes…).

The Rules: First, since we're well used to the idea that you need Cybeoptics / Cyberaudio to get any of these options, I suggest to make it a song of the future. In 2020 it isn't invented / available yet, but I think it'll become popular in the future, so you can begin to slowly introduce such tricks in time.

You need a neural processor to have any audio / video analog installed. The recorder options (cameras, voice recorders, etc) will need an chipware socket or interface socket to hold a chip they'll be recording onto. The rest of the stuff is being built into the processor itself, much like Linkages or Pain Editor, or Tactile Boost – mere coprocessors. The number of co-processors you can have built into your processor isn't limited.

Cost is 200% of the equivalent option's listed cost, HL is the same as listed (after all, you get the same ability, just in a different way). So, a Radio Link (100e$, 1 HL in a cyberaudio version) will be 200e$ and 1 HL (Neuralware version).

Below, you will find a list of possible Neuralware Analogs of Audio / Video options. Those marked with an asterisk can be hampered by poor hearing or bad eyesight. Remember that a Wearman will require a chipware socket / interface socket to house the music chip!

Audio:
Radio Link
Phone Splice
Scrambler
Bug detector
* Voice Stress Analyzer
Wearman
Radar detector
Homing tracer
Tight beam radio link
Wide band radio scanner
* Micro-recorder link
* Digital recording link

Optics:
* Targeting Scope
Times Square Marquee
Times Square Plus
Video Imager
* MicroVideo
* Digital Camera
* Dodgeball
* VideoCam / Transmitter
Time/Date Display
Cyberoptic Compass
* Live Feed optic

Nanotech of the world

Nano's from the various places in the world can't be dealt with using these rules – you could apply the typical modifiers, but that wouldn't be making any sense.

The only difference mentioned by the sourcebooks is in price – nanotech in the orbit is at least 10% cheaper than groundside. Also, in the orbit new nano's are more likely to be available.

To make more differences and add flavor to the nanotechnology, use the Universal Effectiveness' Rule described in the next chapter.

Universal Effectiveness' Rule

Every increase of effectiveness by 1% raises the cost by 2%.
Every decrease by 1% lowers the cost by 1%

Okay… What is Effectiveness Rule?
It is a catch-all, simple (and thus lacking the finer points) rule for creating modified cyberware in CP2020. Originally, I meant it as a universal principle for Cyberwares of the World. But I found it to be too generic, too blunt (as I said, it lacks finer points) and completely not fitting into pre-established practice for local variants of cyberware. So I present it here as an optional, supplemental rule that will allow you twitching and fiddling with all kinds of cyberware, including those – like Implants or Biotech (and Nanotech) that I hadn't dealt with.

What is effectiveness? Well, it is the bonus that a particular cyberware does provide. That's the basic understanding. However, all specifications listed are subject to the rule.
For example, if we have a Toxin Binder (+4 vs. toxins, 1d6/2 HL, 3000e$), it has also money cost and Humanity cost. We can alter the Humanity cost, and / or the bonus added to BOD in case of poisoning. This would be affecting two different types of effectiveness. And it will affect the money cost.
We can make either superior Toxin Binders (+6 vs. toxins, that is +50% effectiveness in that area) or inferior ones (+2 vs. toxins, i.e. -50% effectiveness in that area).
Why I am speaking about Areas? Because all listed characteristics of cyberware have to be taken into account (apart from price, which is treated separately). So, we have Effect (+2) and HL (1d6/2) here, each counting as 100% of their initial value, for a total of 200% (a cyberarm would have much more characteristics: BOD, SDP, Spaces, Damage dealt, Humanity – a total of 5x100% to be potentially altered). But since we change only one of these, by 50%, it means a ¼ change on the whole biotech (+25%). Since 1% increase of overall effectiveness requires 2% increase of price, our sample Toxin Binders will be 50% more expensive.
Effect: Toxin Binders II, +6 vs. poison, 1d6/2 HL, 4500e$.

Humanity can be a little tricky. When the HL has a fixed value, it isn't a problem. If it is rolled, a +/-1 on a d6 roll becomes a potentially 16,5% difference. I suggest that a following scale should be used:
+/-1 (16,5% alteration), then +/-2 (33% alteration) then +/-1d6/2 (50% alteration). Of course, if we have an implant with a 2d6 HL and we want to knock 1 point off the total, it becomes an 8,25% alteration. Pay attention to that!
Minimal HL is 0. Under no circumstances should a cyberware allow regaining Humanity thanks to a negative value of a roll!
Also, I suggest to not allow changes bigger than +/-50% in any characteristic of a cyberware.

Warning: as I wrote above, these rules are crude, heavy-handed guidelines. Use them with caution. The guidelines I applied to general Cyberwares of the World could have been used to create (as a logical result of an application) things like NuTek neuralwares, for example, or Brazilian cyberarmors. The reason why they weren't is that I couldn't find a rational explanation to how such an interface or torso plate would look like, and work like.
You could easily create dozens of cyberware variants using Effectiveness. But before you do, you have to think about whether they would be realistic!
Designing Cybertech in game
Sometimes, a player character with Cybertech skill high enough would like to upgrade or even build something from scratch. While it is difficult, it is also possible. Here, I give some sample Difficulty values effectiveness. Note that reducing effectiveness is still a problem – you want to tune the implant down so it will be cheaper (or you could stress other abilities up, later), but still working!

Difficulty:	Modification:
Easy	+1% / -2%
Average	+3% / -6%
Difficult	+5% / -10%
Very Difficult	+10% / -20%
Almost impossible	more than +10% / -20%

EMP hardening

Standard cyberware is 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

Special Cases

There are some types of cyberware that aren't widely used… well, it's questionable whether they're available at all. Whether they exist, in fact. As for now, there are two such types: Biomechanical cybernetics (from When Gravity Fails sourcebook) and Modular cybernetics (from King of Concrete Jungle adventure book). Both these types are more technologically advanced than what we're used to in 2020, so it's up to GM whether to introduce them, or not.
There are also two types of cyberware (optical chip systems and NOFAR compression systems) from Cybergeneration: MediaFront. These shouldn't even exist in 2020, but are presented here too, if just for completeness sake. Note: IMHO, both NOFAR and optical chips should be treated as +100% effectiveness boost, these are just the tech-talk to justify the bonus.

Biomechanical cyberwares: limbs, optics, audios and vocoboxes are available in this technology. Also, linear frames in this technology do exist (however, linear frames are not covered in Cyberwares of the World). For full dscription of what biomechanicals can and cannot do, read When Gravity Fails sourcebook. Here, I'll only say they are far superior to standard ones, and whether they might seem similar to NuTek technology, biomechanicals outclass these too. Note that HL s always the minimal amount that could be rolled out (i.e. a 2d6 HL biomechanical arm will always have HL of 2).

Type	SDP	HL	Damage	Spaces	Price
Biomechanical limbs	special	minimal	100%	1	200%
Biomechanical sensory organs	NA	minimal	NA	50%	200%

Optical chip systems: optical and audio cyberware (as well as some data-processing options, including computers, but no cyberspace decks) can be made in this technology. Optical chips are faster than silicon-based standard ones, and thus provide +1 to all actions involving their use. Keep in mind, however, that they are also more fragile, and if treated roughly there's 50% chance of malfunction (but that's hard to meet with sensory cyber…)

Type	HL	spaces	price	Notes
Optical chip-based sensory organs	+1 per die	100%	200%	

NOFAR compression systems (for No-fault Fuzzy Analog Replication) – the new standard of audio / video compression, NOFAR can be used in cyberoptics, cyberaudio and computers, as well as cyber A/V equipment (still cameras, movie cameras, etc) for a +1 bonus. This can be combined with Optical chip technology for a cumulative bonus of +2, with a total cost of 300%.

Type	HL	spaces	price	Notes
NOFAR Compression sensory organs	+1 per die	100%	200%	

Modularware (modular cybernetics, from King of the Concrete Jungle adventure) – this stuff has been developed in Canada, and is illegal in the US, EU (except for France). Modularware is completely made of electro-mnemonic ceramics and plastic, and it is well-suited to operate in the freezing cold of the North, not to mention it is almost undetectable by regular means of cyberware detection (although Arasaka Scanway detectors are often reprogrammed to point it out). Modularware can reshape in response to a proper control signal, coming from an option package (subprocessor). Modularware cannot be used to construct Full Body Conversions.

Note: surgery is CR in every case, and failure costs the subject 1d6 REF and BOD.

Note: IMHO, it is an overpowered, munchkin piece of gear, without any real basing in the C-punk tech level. I wouldn't allow it in my games.

Type	SDP	HL	Damage	Spaces	Price	Notes:
modular limbs	100%	75%	100%	50%	133%	SP 25
Modular torso	100%	25%	-	25%	20%	SP 21
Ceramic Jaw & Skull module	-	1d6+1	-	1	1500e$	SP 12

Power supply:

Let's face it: cybernetics isn't going to run on wishful thinking. It needs electric power. And a lot of it. Calculate battery or fuel cell 1 per cyberlimb, or 2 partial limbs, or 4 independent hands / feet. Four are needed to power an internal skeleton, but most other cybernetics are going to run on a single, common battery 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

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. Theoretically, they last for a month, although if the cybernetics in question sees a lot of activity, it can wear sooner. In military applications it is used to change these weekly. When the hydrogen runs off, there is no longer electricity to power the implant, and it falls like a marionette with cut strings. This method of powering is also quite expensive, with 100e$ /cell. 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 people 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 - one hooks up to power line, and recharges his

> 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*

batteries. It takes 4 hours with 220V current (6 with 110V) A full load in the batteries is enough for 72 hours of normal activity. Next 72 hours the cybernetics in question remains active, but gradually losing power, which leads to loosing performance Used mostly in 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 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. This damage stops as soon as the N-Cell is disposed of or removed from the vicinity of the affected beings.. 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.

Taking damage
Cyborgs don't feel pain, do they?

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

The answer is: "no, they don't". Or at least – their cybernetic parts do not. You can disconnect the pain receptor interface. You will feel hits, pressure, and so on, but it wouldn't cause pain.

However, it doesn't mean your cyberlimb can take hits without adverse effects until it shuts down. No. On your flesh parts, 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 cybernetics. Bullets and blades do penetrate the 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 you 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.

> **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?

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 short circuit is quite likely…).

Cybernetics and Ageing

How can cybertech be used to elongate a person's living, and reduce ageing effects? We have loads of cyber, made for combat, lots of performance enhancements, but what about cyber-geriatrics?

Somebody could say that we do not have ageing rules. Wrong: there are such, thanks to Vim van Gruisen's point-based character generation system, available from Blackhammer's Datafort:
Characters have to check for aging effects at years 25, 28, 31, 33, 35, and for every year thereafter, twice for each year over 40. For each test they had to pick a physical stat (REF, MA or BODY - you can add STR if you use that). Then roll a D10, if you roll equal to or lower than that stat, lower it by one point.

Ageing is a complex process, and I'm not a gerontologist. However, as you can surely observe, the point is that the people become less and less fit – not as strong, as dexterous, as fast as they used to be. Their joints aren't that flexible, their muscles that strong, their hearts can't pump blood

so well, etc. But "*metal is better than meat*" – a cybernetic heart is not going to degrade the same way as a meat one would.

Something else to keep in mind - a lot of aging is in the brain, not simply the body. As those receptors get older and change (due to changes in the neurochemistry) the person may need their cyberware adjusted, or in some cases adjustment might not even be enough. More importantly - if Grandpa has Parkinson's, having musculature and reflexes that make him faster and stronger will be WORSE, not better. If his

nervous system is better but his brain (myelin sheathes, etc) is sending out bad signals, that just means that when he twitches, things (including his body) are more likely to get broken. Of course, a co-processor that prevents or at least reduces the twitches would likely be useful. Perhaps an another chip for Gramps' neural processor.

I'm not sure how many problems of aging would be solved or helped by standard cyberware, but I suspect there will be a whole new category of cybernetics dedicated to holding at bay the ravages of time for the lucky few that can afford it. Cyber-livers, kidneys, hearts, stomachs, and lungs will be commonly used to replace failing organs of those who want something better than a stock replacement when the old part wears out. MBL will probably be used to combat osteoporosis - or exoskeletons for the more extreme nano will probably be developed (or at least tried) to remove accumulated poisons, undo wear and tear, and fortify joints, ligaments, and other soft tissues that degenerate with the years and miles on an old, old chassis. The question then becomes, once a person has spent a fortune on keeping the body intact (and biosculpt to look the part) how long before the brain itself (the most complicated, delicate, and poorly-understood component) stops being able to interface with all those fancy modifications?

I work in a nursing home I see the effects on the elderly. I would really hate to see an elderly person who has dementia, that has cyberlimbs, go crazy. I have seen people go for days without sleeping and these are people who are like 90 years old. Yes they get given drugs but they shrug them off like it was nothing. and when they go crazy, I tell you they get some amazing strength from somewhere.

- *Shakalina*

In 2020, such a person would have performance inhibitors (hardware or software) installed in their cyberware. Therefore they wouldn't be any stronger than ordinary people with meat limbs. Remote disablers aren't a good option – a sudden switch-off could lead to a possibly dangerous injury.

- Mike van Atta

Them Rules

There are two general categories of ageing-affecting cybernetics:
- stuff that reduces ageing, that means – loss of performance. For example, loss of dexterity, physical fitness, and so on. This gives you bonus on ageing rolls.
- Stuff that delays ageing, i.e. you don't have to make these ageing rolls that soon, just like you were younger than you are.

Cyberware that reduces ageing:

Note: you test against your flat, natural stat. The boost itself isn't going to "age" and therefore be lost.
- REF: ref boost (Deep Space): every time you test your Ageing Effect on REF, add the boost level (usually +2) to the roll result. Improved neural pathways will keep your coordination higher than for other people of your age.
- BOD: muscle & bone lace: every time you test your Ageing Effect on BOD, add the boost level to the roll result. As described in Listen Up You Primitive Screwheads, this does not only enhance your muscle, but also cover your bones and joints with a layer of Kevlar fabric, preventing breaking and joint degeneration (no arthritis, yuppee!).

Pretty likely what we see as "performance enhancing" in the game, are basically treatment cyber for different age related illnesses that someone found to have a enhancing effect on healthy adults.

- Hobgoblin

- MA. It's basically due to degradation of your muscles and overall fitness – therefore I'd say Muscle & Bone Lace should apply here as well.
- Euro BioEngineering Permanent Stat Increase: work in analogical way.

Cyberware that delays ageing:

This stuff makes your body to skip some years. For example, if a cyber is listed to substract 1 year from your age, you count as being one year younger for the purpose of ageing rolls (e.g. roll in year 26, instead of 25, 29 instead of 28, etc).

Artificial limbs. If you have some limbs replaced with cyberware, your metabolism has less burden to bear, and thus your body is likely to last longer.
- Full cyberlimbs: -1 year for each 2 (or equivalent).
- Partial limbs: -1 year for each 3

Independent arms / feet: -1 year for 4 pieces.

- · Artificial organs (applies only to cybertech, not biotech): these do not age and weaken with your body. A properly maintained cyberheart is going to work perfectly much, much longer than a biological one, and isn't prone to heart attacks. There's no risk of cancer in these organs as well.
- Artificial heart, lungs, liver: -1 year each.

Nanotech: these work for the whole organism, not only acting in emergency situations, but also keeping the organism healthy.
- Hemological replacement: -1 year
- Anti-plague nanotech: -1 year
- Diet-mite: -2 years
- Enhanced antibodies: -2 years
- Toxin binders: -2 years
- Nanosurgeons: -3 years
- Nomad full-spectrum booster: counts as nanosurgeons, toxin binders, enhanced antibodies and anti-plague nanotech all in one, i.e. –8 years.

Note:

There are some types of cyberware that should aggravate ageing effects, since they push the body beyond it's limits without providing extra means. These can have a reverse effect:
- Kerenzikov Boost, increases ageing effect on REF, so does Boostmaster.
- Adrenal Booster accelerates ageing by +1 year (a normal human experiences adrenaline rush pretty rarely, whereas one with Adrenal Booster can call in his/her all-out 3x a day).
- Any type of boosted metabolism (like the Sabre Serum from Interface, or Boosted / Overdrive Metabolism from Hound's Blackhammer Datafort). Refer to each of these item's specific rules.

> **Ageing and drug abuse**
> Since we're at it…
> Some drugs (or other factors) can cause a permanent stat reduction. If such a person lives to the point where their organism begins to show the effects of ageing, things are going to get messy: you test against your original stat value (i.e the one not reduced by drugs / other factors, although reduced by age if that already had place), but should a reduction occur, you reduce both your original value, and the one you currently do have (including reductions caused by drugs).
> *- Mike van Atta*

So, when it starts to affect me?

Pretty simple: as soon as you get it. If you got Nanosurgeons at the age of 18, it will delay your ageing rolls from then on. It's a little troublesome when we deal with character generation. First of all, there are dates in Cyberpunk Chronology, pointing when the stuff became generally available (eg. No nanotech was commercially available before 2013). My general rule of thumb says also that something isn't listed in the main book, it wasn't available before, let's say, 2018.

Of course, this is the GM's decision on when exactly the cyber in question became available, and then when the character had a chance to get it.

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
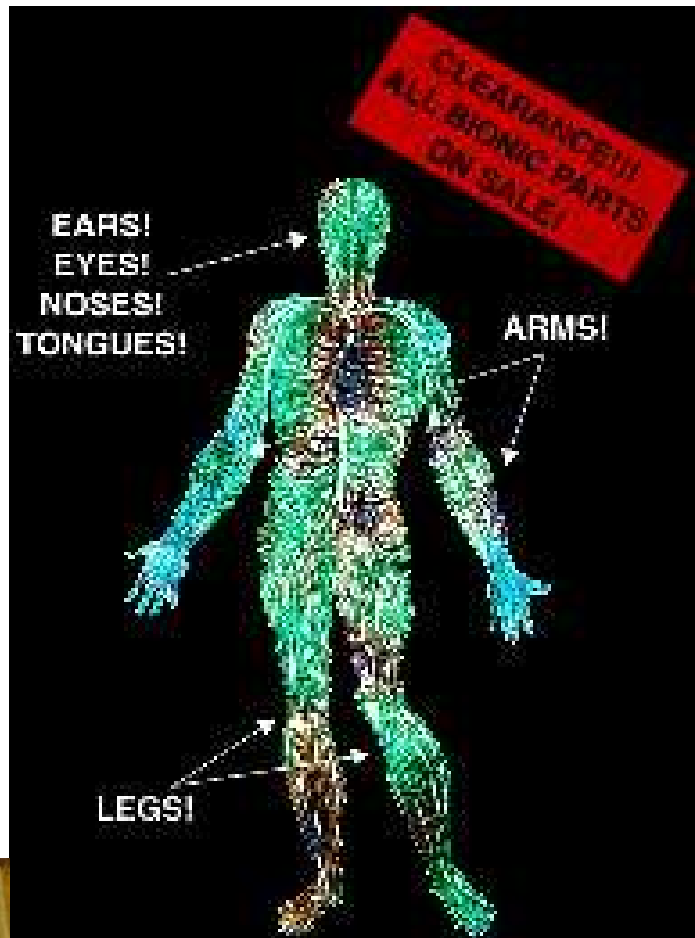8. SyCust
9. Pacesetter
10. Maas Biolabs

Come! We have them all:

The Cyberwares of the World

Japanese cybereyes, Russian cyberarms, Orbital cyberlegs… Also, outdated wares (right from our bargain bin!), cheap Chinese stuff, and a few other ideas!

"We have it all.
It's a modern city."

CLEARANCE!!!
ALL BIONIC PARTS
ON SALE!

EARS!
EYES!
NOSES!
TONGUES!

ARMS!

LEGS!

This long-promised companion booklet for CheapFBC covers regional variants for cyberlimbs, cyberoptics, cyberaudio, vocoboxes, implanted armor and neural cybernetics, along with hints on how to make almost any regional variant to existing cyberware…