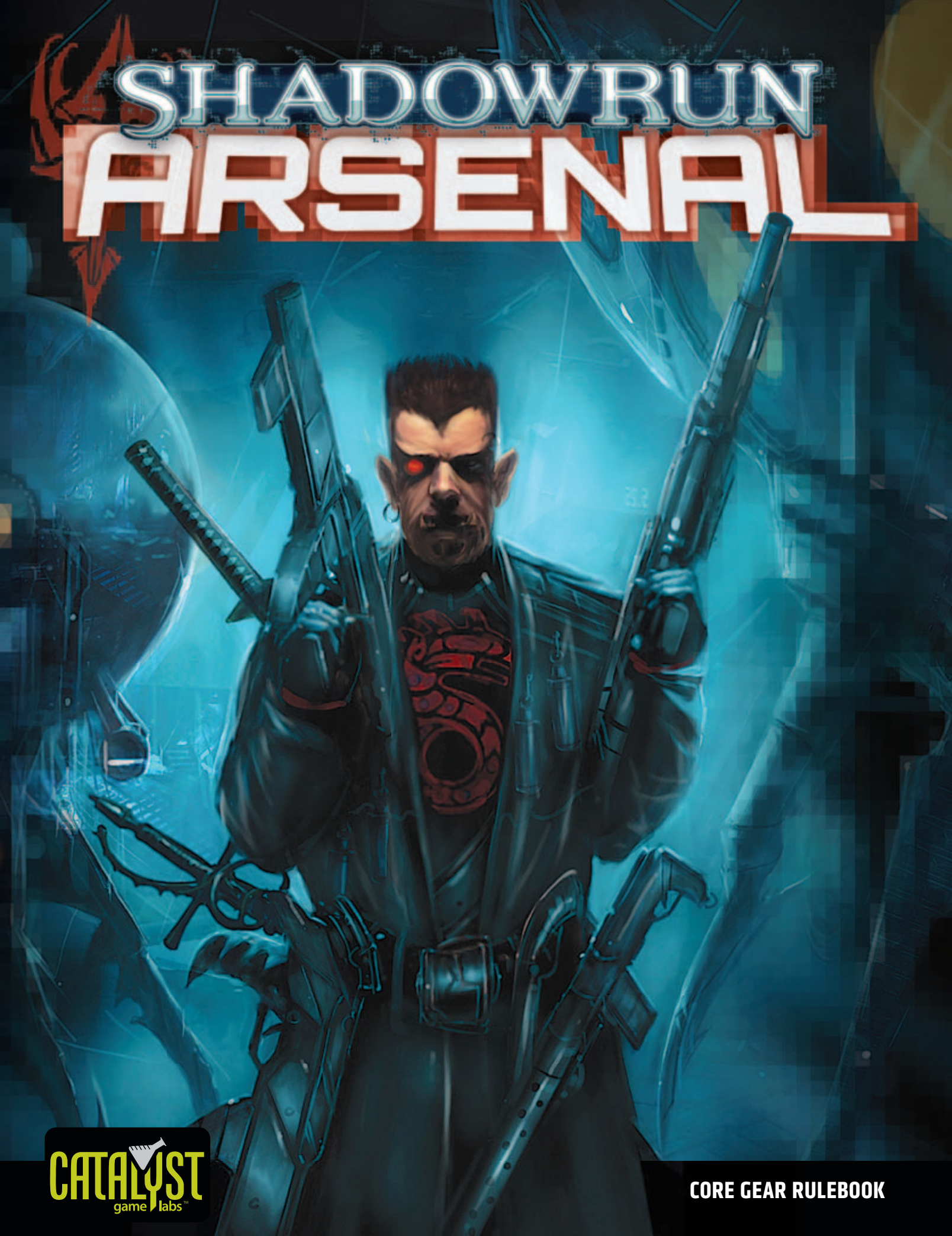
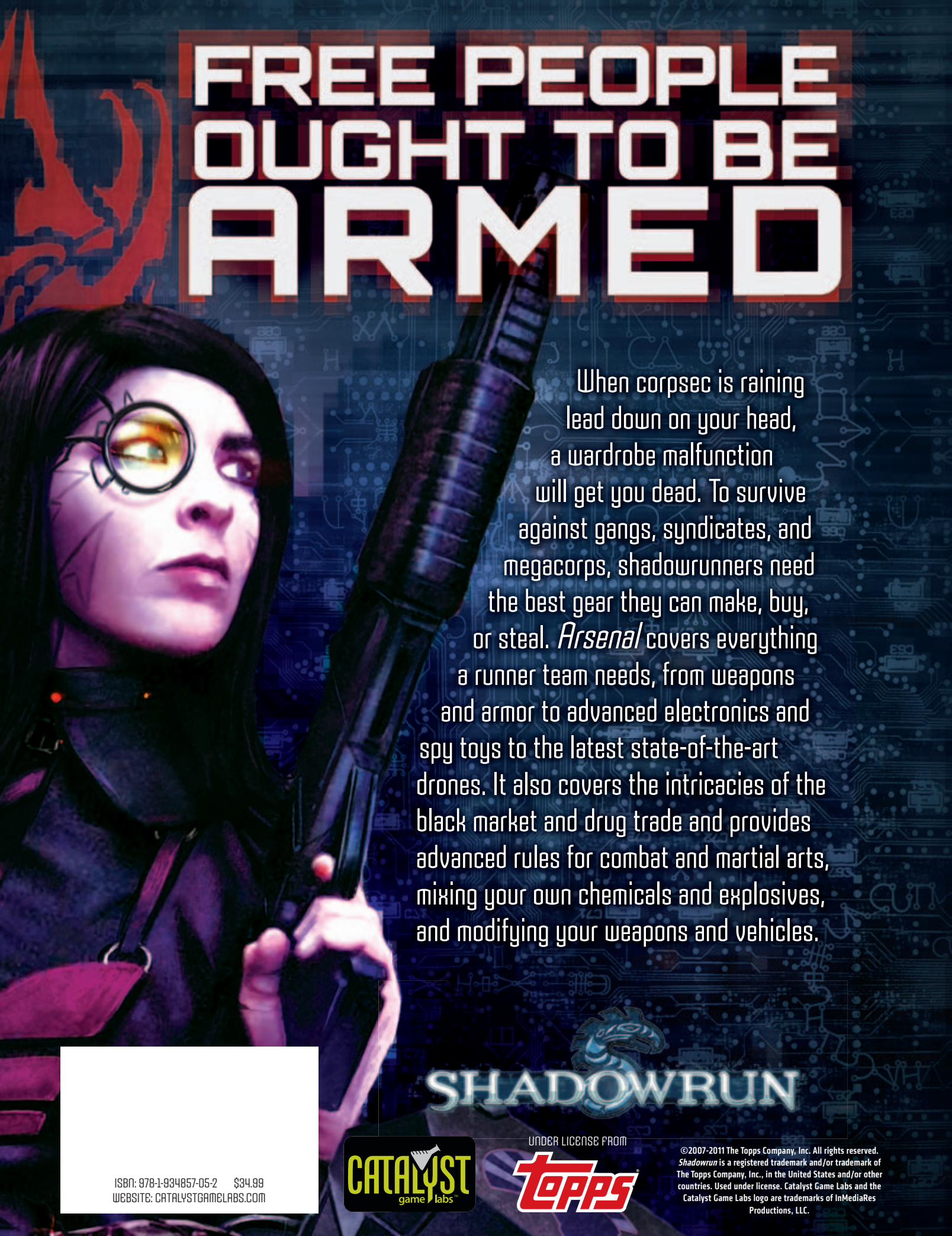


SHADOWRUN ARSENAL



FREE PEOPLE OUGHT TO BE ARMED

A character with long black hair, a glowing yellow eye, and a large black gun. The background is dark blue with circuitry patterns and a red flame-like shape on the left.

When corpsec is raining lead down on your head, a wardrobe malfunction will get you dead. To survive against gangs, syndicates, and megacorps, shadowrunners need the best gear they can make, buy, or steal. *Arsenal* covers everything a runner team needs, from weapons and armor to advanced electronics and spy toys to the latest state-of-the-art drones. It also covers the intricacies of the black market and drug trade and provides advanced rules for combat and martial arts, mixing your own chemicals and explosives, and modifying your weapons and vehicles.

SHADOWRUN

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ARSENAL



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... TABLE OF CONTENTS ...

JACKPOINT LOGIN	4	Grenades, Mortar Rounds,		Advanced Substance Abuse	73
THE UNDERGROUND		Rockets, and Missiles	36	Delivery Systems	73
ECONOMY	5	Rockets and Missiles		Tolerance	73
Getting the Gear	6	Exotic Weapons	38	But I Wanna Get High!	73
Gray Markets	6	Exotic Melee Weapons	38	Cutting Drugs	73
Black Markets	6	Exotic Ranged Weapons	39	Mixing Drugs	73
Underworld Infrastructure	8	RUNNING GEAR	42	Drugs of the Sixth World	73
Finding a Dealer	9	Armor & Clothing	44	Awakened Drugs	76
Working the Market	11	Armor Rules	44	Magical Compounds	77
WEAPONS	13	Armor Clothing	45	Using Chemistry	78
Melee Weapons	14	Personal Armor	48	Creating Chemicals	78
Blades	14	Armor Suits	48	ChemTech	80
Clubs	16	SecureTech PPP-System	49	Compounds	80
Improvised Melee Weapons	17	Armor Modifications	50	Toxins	83
Projectile and Throwing Weapons	18	Military-Grade Armor	50	Demolitions Equipment	85
Projectile Weapons	18	Environmental and Survival Gear	51	Explosives	85
Thrown Weapons	18	Arctic Survival Equipment	51	Older Explosives	86
Arrowheads	19	Camping and Outdoors Gear	53	Detonators	87
Improvised Throwing Weapons	19	Desert Survival Equipment	53	Explosive Accessories	88
Firearms	20	Space Gear	54	Advanced Demolitions	88
Tasers	20	Toxic Environment Gear	55	General Demolition Rules	88
Hold-out Pistols	20	Underwater Gear	55	Breaching and Cratering	90
Light Pistols	21	Runner Toys	57	Cutting	93
Machine Pistols	22	Electronics	57	Improvised Explosive Devices	94
Heavy Pistols	22	Electronics and Sensor Options	58	Cooking Your Own	94
Submachine Guns	24	Parachutes	59	Booby Traps	95
Assault Rifles	26	Sensors	59	VEHICLES AND DRONES	96
Sport Rifles	27	Security Devices	61	Transportation	98
Sniper Rifles	28	Odds and Ends	62	Running the Grid	98
Shotguns	28	Spy Toys	63	Propulsion	98
Machine Guns and Cannons	29	Disguised Equipment	63	Vehicle Security	99
Grenade, Mortar,		Manatech	64	Legalities	99
and Missile Launchers	31	CHEMISTRY	68	Paying for a Ride	99
Weapon Accessories	32	Drugs	70	Sea, Air, and Space	100
General Accessories	32	The Drugs Flow In,		Smuggling	100
Recoil Compensators	34	The Drugs Flow Out	70	Uses and Abuses of Drones	101
Ammunition	34	Busted	71	Vehicle and Drone Rules	102
Firearms Ammunition	34	Bad News	71	Device/Software Ratings	102
Target Designators	34	Getting the Monkey	71	Drone Sizes	102
Miscellaneous Ammunition	35	Off Your Back	72	GridGuide	102



Mechanical Arms and Legs	102
Operation Time	103
Pilot Capabilities	103
Safety Systems and Crashing	103
Takeoff and Landing	103
Transportation Costs	103
Used Vehicles	104
Vehicle Anonymity	104
Vehicle Repair	104
Vehicle Security	104
Vehicle Sensors	105
Vehicle Weapons and Recoil	105
Vehicle Equipment	105
Vehicle Listing	106
Groundcraft	107
Watercraft	111
Aircraft	112
Military, Security, and Medical Craft	114
Drones	116
Vehicle Weapons	123
Main Guns	123
Launch Weapons	124
GEAR AND VEHICLE MODIFICATIONS	126
Basic Modification Rules	128
The Plan	128
Materials and Tools	128
The Modification Test	129
Slots, Slot Maximum, and Overmodification	129
Desktop Manufacturing	130
Vehicle Modifications	131
Vehicle Mod Notes	131
Vehicle Modifications List	131
Weapon Modifications	148
Weapon Mod Notes	148
Weapon Modifications List	148
MORE WAYS TO DIE	154
Martial Arts	156
Martial Arts Specialization	156
Martial Arts Styles	156
Maneuvers	158
Advanced Combat Rules	161
Additional Ranged Combat Modifiers	161
Holding Weapons	161
Indirect Fire	162
Recoil and Strength	163
Throwing Back Grenades	163
Wielding Two Weapons	163
Hazardous Environments	163
Desert Hazards	163
Polar Hazards	164
Space Hazards	165
Toxic Zones	167
Underwater Hazards	169
TABLES	172

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Connecting Jackpoint VPN ...
 ... Matrix Access ID Spoofed.
 ... Encryption Keys Generated.
 ... Connected to Onion Routers.
 > Login

 > Enter Passcode

 ... Biometric Scan Confirmed.
 Connected to <ERROR: NODE UNKNOWN>
 "Forget hackers, I have my buddies Smith & Wesson:
 innovators of the point-and-click interface."

JackPoint Stats
 63 users currently active in the network

Latest News
 * <sticky> This private p2p MoSoSo network is now gamma. There isn't software anywhere that doesn't have a fault, though, so report any glitches to me. - FastJack

Personal Alerts
 * A critical update is available for your ComStar Firewall
 * You have 9 new private messages
 * You have 2 new re-routed, anonymized, sanitized messages from "WyrmTongue"
 * You have 1 new response to your Jackpoint posts
 * Your call to CrashCart is still on hold
 * Your Roomsweeper is low on ammo
 * Your Right Cybereye is reporting a stress fracture and impaired operability

First Degree
 Am-mut is online and in your area.
Your Current Rep Score: 55 (95% Positive)
Current Time: April 20, 2071, 1416

- PREFERENCES
- FEEDS
- TASKS
- LINKS
- HISTORY

Welcome back to JackPoint, omae; your last connection was severed: 32 seconds ago



Today's Heads Up

Ever wonder what the difference between the gray and black market is? Curious how modern-day drugs are standing up to BTLs? Wondering what the latest and greatest gun/car/toy is? Look no more. We've compiled a thorough guide to gear of all stripes and hope to get it under the Arsenal tag for easy reference. [\[Link\]](#) [\[Guests\]](#)

Incoming

- * A new street drug seems to be creating a lot of buzz. Catch the latest gossip on its effects and the rise of the outfit behind it. [Tag: [Ghost Cartels](#)]
- * Ever wonder how your team's hacker kicks so much Matrix ass? Find out everything you need to know in our upcoming guide to Matrix ops. [Tag: [Unwired](#)]

Top News Items

- * Responding to a sudden influx of new street drugs, the Denver Zone Defense Force announced a new crackdown on smugglers and crime syndicates attempting to circumvent border patrol checkpoints, with particular focus on the vast tunnel complex left from the failed subway project of the 2050s. [Link](#).
- * Two minors are in custody today after an attempted denial of service attack on several businesses throughout the Tokyo metropolplex last week. Analysts have described the teenagers' efforts as juvenile and unsophisticated, despite reports that several megacorporate nodes remain offline today. [Link](#).
- * Tir officials are declining allegations that Peace Force troops opened fire on a group of civilians approaching the restricted Crater Lake zone in the pre-dawn hours earlier this week. Viral footage allegedly shot by a citizen journalist continues to circulate throughout the Matrix, showing a group of several unarmed individuals moving slowly, as if sleep walking, before they were gunned down by Tir troops without warning. [Link](#).
- * The New European Economic Community has announced it would implement a series of major economic sanctions against France in the coming months for attacks presumably launched by French military units against unidentified private facilities in the corporate-controlled SOX territory on Christmas Day. [Link](#).

- CHAT
- MESSAGES
- FILES
- POSTS
- NEWS
- SEARCH

Active

- ✓ Firewall
- ✓ Antivirus
- ✓ TeamWatch Filter
- On/Receiving
- Commodore
- Excellent
- ✓ Signal
- Active
- ✓ Hidden Mode
- Local Map

ARSENAL
 Invited Guests
 <none>
 Posts/Files tagged with "Arsenal":
 * The Underground Economy
 * Weapons
 * Running Gear
 * ChemTech
 * Vehicles and Drones

[CONTINUE](#)
[ADVANCED SEARCH](#)
[SAVE](#)

[\[More\]](#)

... THE UNDERGROUND ECONOMY ...

The fashion filling the alleys of Cairo was years ahead of anything Natalie Dark had found in the Tir, but she wasn't in town to buy dresses. The customized augmented reality environment chip she'd slotted at the airport was guiding her north along the dark twists of old town. Green arrows mapped the way past smoke-filled black doorways to one that was painted red in her augmented universe. Even before she knocked, the security grate slid open.

"What does this traveler's parched lips crave?" said a guttural voice in heavily-accented English.

"Salmon Coffee," she said sweetly. Good to know they didn't leave everything to AR. A talented hacker could have ridden her net traffic all the way to the front door, but if she expected to get past security she would still need a password.

The door creaked when it opened and the air trapped behind it filled the narrow alley with the stink of old cigarettes and what Natalie suspected was patchouli oil. The first person to greet her could have been mistaken for a wall. He ran a wand across her body, stopping twice to feel for concealed weapons.

"Girl's gotta be safe," she conceded. The troll's only response was to hand her another CARE chip and wave her through. Inside, the place looked like any other Stuffer Shack she'd seen across the globe—except that the shelves here in old town alley were more empty than full. Natalie could count the number of customers on one hand and still have fingers left over. Aside from the living mountain at the door, a tattooed dwarf seated at the checkout counter was the only other employee. She slotted the new CARE, pausing as her Kensama eyes responded to the shift in reality. In virtual space, the aisles were filled with gun racks. Ares on the left, Heckler and Koch on the right. She walked from aisle to aisle, searching for what her crew needed. By the time she reached the counter, her checklist was all crossed off, except for one last item.

"Your collection of spices is excellent, but do you have anything with a little more kick?"

The dwarf studied her briefly and then spoke in a faint Arabic accent, "I do not think we carry what you are looking for."

"Strange. Am-mut was certain that you did."

The dwarf was silent, expectant.

"She also reminded me that Shiva never touches the sun." Another password, another layer of security—the last that Natalie knew. She wondered how far down this rabbit hole went.

The dealer nodded and handed her another chip.

GETTING THE GEAR

Posted By: Am-mut

The gear that keeps us alive on a run can't be found in your local Stuffer Shack, and the little equipment you can scrounge up legally is light years behind what corp security is packing. Without the underground economy to level the playing field, shadowrunners wouldn't stand a chance.

The underground economy can be summed up in two colors—black and gray. Black markets are wholly illegal exchanges that traffic goods ranging from signal scramblers to nuclear warheads. Gray markets are lesser known legal redistribution networks that provide surplus goods to depressed markets. Both types of markets can be advantageous to a shadowrunner who knows how to use them.

GRAY MARKETS

As you might expect, gray markets are somewhere in between black markets and totally legal merchandising. The products being sold are generally legal (or at least quasi-legal) but lack any official connection to the company that made them, and they are sold outside of normal distribution channels. The products also tend to be new, though they are occasionally modified or refurbished.

Gray markets exist because things don't cost the same in every city or country. Depending on where your feet hit pavement, you might pay as little as 70¥ for top of the line nanopaste trodes, or you might pay 150¥. The price difference usually has to do with local market demands, variable tax rates, and shipping costs. This is especially true with items that get slapped with a local sin tax—a 3¥ pack of smokes in one city might well cost you 10¥ in another, where cigarettes are more heavily taxed.

Your standard gray marketeer makes a living buying those cigs for as little as possible in one place (say 3,000¥ for 1,000 packs), usually paying retail but sometimes wholesale. He then imports them to another place—usually legally but sometimes smuggling to evade tariffs) and sells them for a profit but at a reduced amount from the standard local market price (say 8¥ a pack, undercutting the operation and grossing 8,000¥, for a net profit of 5,000¥). In other words, the gray marketeers play their part by moving goods from country to country (or sometimes just city to city), buying low and selling high while still undercutting the target market, and taking advantage of the economic disparity between two places.

It used to be that the corps had a big use for gray markets, as a way to unload pallets of overstock that weren't selling and were instead accruing warehouse costs. They'd find a shady dealer to take it off their hands at a discount, and the gray marketer would find someplace else to sell it. That's less prevalent these days, thanks to the standard practice of monitoring product distribution via RFID-tags. The moment a product is pulled off a shelf, the RFID tag attached to it notifies the distribution network that another product should be manufactured in order to replace it. This means that modern corps know exactly how well their stuff is selling at any given time, and they can increase or slow down their production to keep pace.

- The bulk of the unlicensed gear you find at gypsy fairs comes from corporate distributors. The distributor will strip the tags off the gear, and then arrange for it to fall into the hands of a gray marketeer who

has paid an under-the-table fee to the distributor. Once the deal is done, the distributor will report the gear as stolen and recoup insurance benefits. It's called double dipping.

- Cosmo

Gray market distribution is still useful, though, for corporations that wish to profitably dispose of faulty merchandise. Refurbished items and even product recalls have to go somewhere, natch? Gray market distributors gobble them up and redistribute the products to customers who don't realize they may be buying inferior goods. Keep that in mind the next time you buy body armor from an unlicensed vendor.

- Military accords over the past few decades have led to a ban on the stockpiling of weaponry. If standing armies are to stay on the cutting edge, they have to replace their weapons with new models. They are supposed to destroy the old ones, but fortunately for arms dealers, most standing armies only pretend to destroy their weapons, instead reselling them to the manufacturer, who in turn sells the guns on the gray market to security firms and other licensed buyers. The military then uses the unaccounted-for-credit to finance black operations.

- Kay St. Irregular

The big advantage of gray markets, to everyone of course, is that they tend to rely on anonymous credit exchanges. For the buyer, certified credsticks are par for the course. For the gray marketers and corps, their exchanges are often handled via traceless methods, if nothing else to avoid paying taxes.

- It's worth noting that *tax havens* are also considered part of the gray market. Tax havens are places with minimal or no local taxation, usually protected by secrecy laws to deter outside tax authorities, which are used to hide financial transactions. The corps love these places, but any shadowrunner that plans to make big nuyen without attracting attention should learn to love them too. Some of the favorites are Konigsberg, New Monaco, Vanuatu, Malta, Bermuda, and the Cayman Islands, not to mention numerous Matrix-only banks. If you need help setting up an account, well, that's what I do.

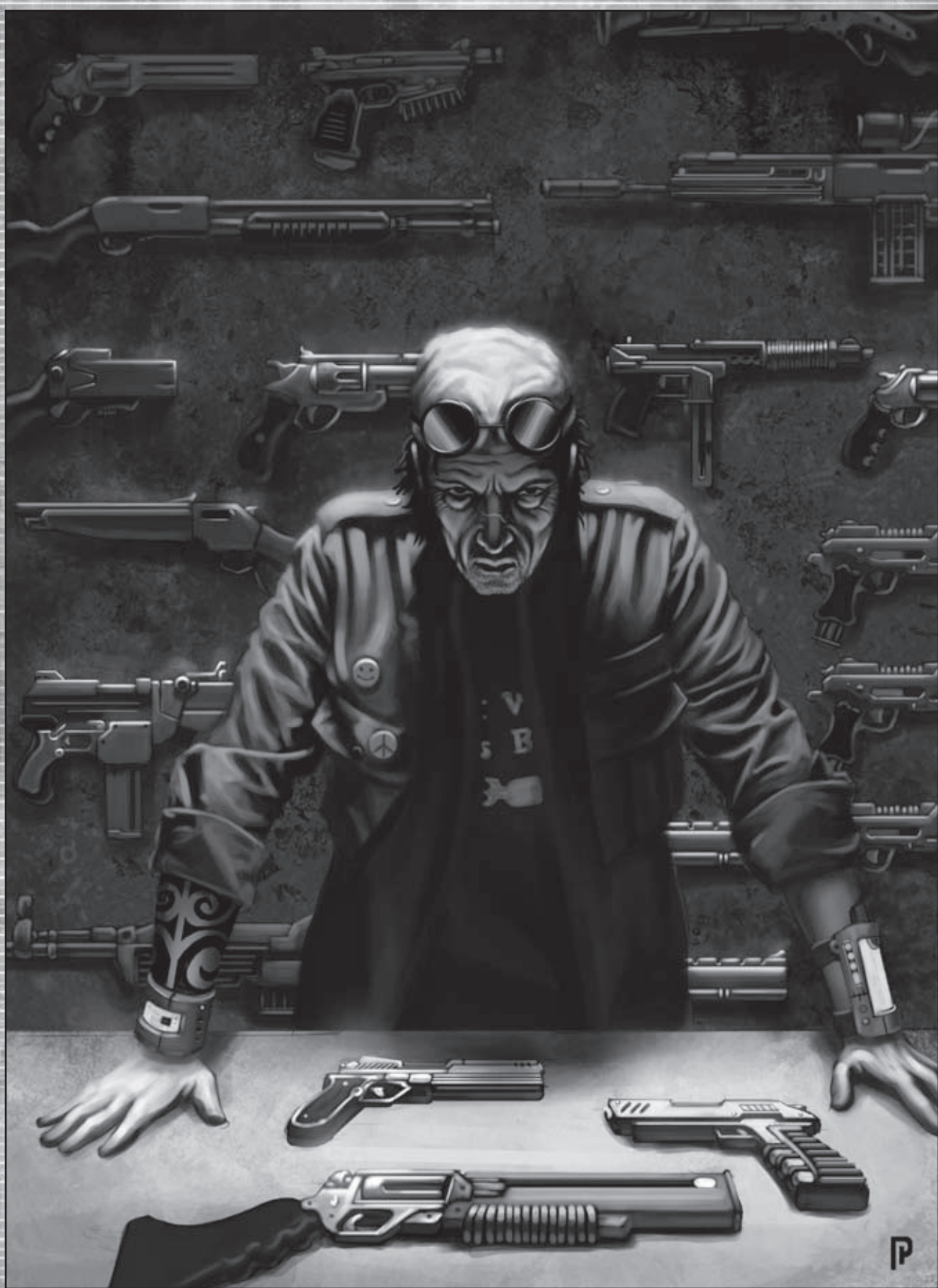
- Mr. Bonds

BLACK MARKETS

According to *Edgeworth's Guide to World Economy*, a black market is any sort of illegal financial exchange, but to hear it from Lone Star, all we sell are illegal weapons or stolen goods. In actuality, black market goods vary drastically depending on local legalities and who runs the market.

Underworld syndicates such as the Mob and the Yakuza have survived for decades running the basic staples of illegal markets. They favor recreational electronics and drugs, pirated media, hijacked high-price goods, people (prostitutes and worse), and of course, weapons. However, black markets don't end with organized crime. It is common to find stockbrokers dealing in financial taboos such as insider trading schemes. A feminist selling illegal abortion drugs out the back of a street clinic is as much a black market as international arms dealers showing off tanks and missiles to terrorists. Info brokers trade in classified information, hacker gangs distribute





P

restricted and pirated programs, chop shops trade in stolen vehicles, drones, and parts—and those are just a few examples. These markets exist at every level of society. If you know the right people, you can stumble on to a market in virtually every major city.

Like all markets, black markets are driven by the economic principle of supply and demand—but there's a lot more to it. Items that are pirated or counterfeit are intended to undercut the retail price of legit goods, so expect the street value to be a step lower. Same goes for second-hand and stolen gear; the idea is to move such items quickly, and there are no guarantees on quality, so be sure to haggle. Legality is a major factor also. There are many laws on the books that the cops rarely enforce, so dealers trading in such restricted goods have little to fear. Finding a pirated simflick isn't hard to do in any neighborhood, and so the costs tend to remain low. Finding something that the cops actively enforce, like BTLs or weapons, tends to run a bit higher; the dealers pass their operational costs on to the customer. If an item is especially hard to get, such as a few units of orichalcum or a sniper rifle, you'll have to break out that ebony credstick you've been saving for a rainy day.

Naturally, certain conditions breed black markets. Anyplace the standard distribution chain has broken down—war zones, feral cities, places hit by natural disasters—you'll find a thriving black market as profiteers make available hard-to-get or rationed goods. Without a local free market, it falls to the black and gray markets to provide basic goods like toilet paper or orange juice that would otherwise be strictly controlled or hoarded by people with power and money.

The corps take advantage of black markets too. Arms manufacturers aren't going to pass up on the killing they can make by selling to shady weapons merchants off the books. The underground marketplace also gives them a chance to field test new gear, without having to worry about bothersome things like safety regulations or warranties.

UNDERWORLD INFRASTRUCTURE

The underground economy mimics the legit economy—you have manufacturers, shippers, distributors, and retailers. They just tend to be known by other names: Johnsons, fences, smugglers, fixers, and dealers.

The Syndicates

In most locales, the black market economy is dominated by local organized crime syndicates. Recognizable commodities such as weapons, technology, stolen vehicles, drugs, gambling, organs, slaves, and stolen identities have always been the financial backbone of criminal organizations. This is a large part of the reason that these syndicates are always at one another's throats. Competition between the syndicates and product availability work as economic indicators of price. If the Triads are selling guns at a lower price than the Mafia, the Triads are going to see more customers. As a result, the Mafia either has to lower its prices or eliminate the competition.

- At its heart, a criminal syndicate is just another corporation. The only difference is that the Mafia admits that they'll kill anyone who cuts into their profit margin, while corporations prefer to imply consequences.
- Cosmo

Though criminal syndicates have a tendency to stick their hands into everything that's illegal, different groups specialize in different market segments. This helps keep them from annihilating one another. The Mafia has a longstanding history as a supplier of stolen vehicles and parts, high-end electronics, drugs, hijacked goods, and BTLs. With an extensive web of corporate connections, the Yakuza have become popular as money launderers and as biotech and weapon suppliers. Triads are the foremost black market drug suppliers in the world, and are also skilled with illegal software and talislegging. The Vory are heavily into designer drugs, metahuman trafficking, and identity theft. This will vary according to the each city, of course, so talk to the locals to find out who's the best supplier for what.

Niche Markets

Black markets are not the exclusive stomping grounds of organized crime syndicates. The syndicates exist at the top of the food chain, but usually allow other smaller sellers to swim in their pools. Sometimes it is easier to let the smaller sellers do the work, with the syndicates focusing exclusively on supply and distribution. The risk of operating in areas controlled by other factions also leads larger organizations to operate through independents. The syndicate provides the independent operator with goods and lets him take all the risk. Some independents even play the field, buying gear from three or more major syndicates, though such dealers risk making dangerous enemies if they suddenly refuse a deal for a better offer. Quite a few of the small-time sellers avoid dealing with the syndicates entirely, preferring not to be embroiled in underworld politics, and also to avoid the attention of the authorities, who tend to focus on the bigger fish.

- Occasionally a large group of niche marketeers will pull together to operate out of one location. Seattle's Crime Mall and Tokyo's Chosun Alley are two prime examples. The joining of resources allows them to reduce the cost for security and pool contacts together in order to recruit more clients.
- 2XL

Independents who become involved in black marketeering usually do so because they have access to illegal products and associates who are willing to purchase them. We function as niche marketeers, specializing in one type of product, be it guns, spy gear, stolen identities, or what have you. We usually don't have as much product and therefore charge slightly more than your bulk suppliers. We make up for the price difference, however, with other improved aspects of the sales experience, such as customer service, security, and product quality. In fact, we particularly shine in this latter area—after all, would you rather buy that combat drone from some Mafia goon who can't even rig his own zipper, or from a tech-wiz who knows that drone better than his girlfriend? We also often get the latest products or best teslas from inside sources, rather than waiting for something to “fall off of a truck.” This means that a niche marketeer will have access to products that generic black market operations won't.

Though rare, some independents also focus on the stuff that's too weird or obscure for the bigger mobs to deal with. Need to acquire a forgery of a nineteenth-century painting? A gene-tweaked chimerical house pet? A deep sea diving vessel? You'll need to find a specialist, and she won't be cheap.





Smugglers

Smugglers deserve special mention here, as they are the crucial lifelines of many black market operations. You can't sell that crate of AK-97s to that gang of orphaned street kids if your smuggler doesn't make the drop, can you?

Most syndicates have well-entrenched smuggling operations that are efficient and well-financed, and that already account for a certain percentage of goods to not make it past the border security. When you're an independent, however, you're often desperately reliant on your smuggler contacts to make it through with no losses. It can be devastating to lose even a single shipment—your insurance sure as hell won't cover it.

Thankfully, there are also a lot of unaffiliated border-running crews out there, and the good ones are worth every penny. Smuggling is a thriving biz, so they tend to have their own fixers, service staff, and way stations. They also tend to be competitive, which means you can often get a good deal by auctioning a run off to the lowest bidder.

Everybody Gets a Cut

Let's face it, in order for many black markets to thrive, there has to be complicity at every level of the system, from corps to the government to the police and down through the organized crime syndicates. Someone at each level is getting a piece of the action, in exchange for which they ignore what is going on in front of them.

This is a good state of affairs, as it means they're all invested in letting the situation continue as is, without interference. As a side effect, this means that everyone involved gets a little shaky when someone comes along and rocks the boat. This could be an unbrilliant cop sticking his nose where it don't belong, a new player in town who's moving in on someone else's racket, or a corp pumping out a new shady product at a price that's undermining the existing market. Things can get ugly very fast in this biz, and losses aren't always measured in credit.

FINDING A DEALER

Black market dealers are different from regular businesses in one fundamental way: we select our clients. It is unlikely that you will find out about a black market without somebody first telling you about it. Black markets are strictly word-of-mouth operations. Regardless of whether they work out of a storefront or are a purely cyberspace operation, this extra layer of security helps keep law enforcement agents and competitors from discovering where the black market is.

The first step to getting in is to make an inquiry. Either talk to a local contact or post a message to a secured forum like JackPoint. Depending on the type of equipment being sold, the marketeer will either let you in based on the credentials of your contact or your shadow network rep score, or they'll do a background check on you to make sure you aren't law enforcement and can afford the gear you are looking for.

From there on out, the particulars of the deal will be up to the style of the seller. You may be asked to attend a meet in some discreet location, anywhere from a back alley to an abandoned warehouse or a dark forest trail. You bring the cred, inspect the goods, and make the exchange, most likely under the watchful eye of the dealer's back-up security. Sometimes the dealer will go

for an exchange in a very public area—makes it easier for their drop-off agent to make a getaway in the confusion of a crowd. In sprawls with large z-zones, or when dealing with entrenched mob operations, you may simply be invited to some fortified location, armed with a Matrix access code or password that should be sufficient to get you in the front door. At my shop, codes change daily. If you show up with an outdated password, you'll be denied entrance or worse.

- Am-mut is being a touch glib, but black market security is no laughing matter. The dealers I've frequented over the years employ a variety of visible and hidden security measures. There is always a guard at the door, but you can be sure he isn't the only security on hand. There'll usually be drones, magical security measures, and booby traps to watch for as well. They aren't just looking out for police raids, either—they're wary of rival dealers that might try to shut them down or street gangs that might try a smash-and-grab, knowing the dealer won't sic the cops on them.

- Hard Exit

- Speaking of booby traps, a runner I knew tried to break into a Barrens apartment that was being used as a drop site for black market drugs. The moment he kicked in the door he was nailed with an aerosol variant of Cold Slab that had been housed in the door frame itself. When the security people arrived, the poor guy was still lying there looking quite dead. You can imagine what happened next.

- Jimmy No

Out of tradition or perhaps necessity, older established black marketeers use public storefronts as their sales offices. For example, you may find the local weapons dealer operating out of the basement of a Stuffer Shack. While the wage slaves stuff themselves full of soy upstairs, those with the proper passcodes get a face to face with the dealer down below.

- Mama Shango in New Orleans uses a laundromat as her storefront. Customers who know what to look for just slip through a curtain in the back, walk up a few steps to a white-faced man standing by the second floor entrance, give the proper password and, *voilà!* You're inside one of the most prestigious magical emporiums in the CAS.

- Lyran

- You forgot about the part where the white-faced man—who just happens to be a zombie—and the other spirits guarding the entrance scan you astrally to detect your intent. If you mean to cause trouble, you may not make it back down those stairs alive.

- Ethernaut

With the advent of wireless networks, the traditional physical storefront has become an endangered species. Dealers now negotiate business through an AR storefront and a complex web of Matrix go-betweens, where each contact uses the strength of his reputation to get the buyer closer to a sale. Finally, the buyer is put in touch with an intermediary who delivers the goods and takes receipt of the payment.

- Heck, I know one dealer who deals exclusively via the Matrix, and simply send his goods to clients via legit overnight delivery services.





INCOMING FEED.....

Nothing like getting a package full of plastic explosives delivered to your doorstep.

- Turbo Bunny
- Warez crews also detest physical meets. You purchase the software, and you're either directed to a limited duration download node or an agent shows up at your commlink bearing gifts.
- Glitch

Some lucky sprawls feature their own black market bazaars, usually safely nestled away deep inside z-zones where even corporate strike teams think twice about going. These places usually have a little bit of everything, but even here the vendors will be discreet about what they display. If you want the quality or hard-to-get goods, you'll still need to know who to ask and how to ask them. Otherwise, you're stuck making your choices from the used and unreliable gear on display.

The better markets are the ones that don't have fixed locations—they appear and disappear in new locations practically overnight, magically evaporating seconds before the police show up. Bazaars of this sort tend to be better stocked, since you need to be in-the-know just to find the place. Usually there's a circle of affiliated agents who are the only ones who know where and when the next roving market will appear. You'll need to gain their trust to get on the announcement list.

Paying the Fiddler

Part of the reason that people come to black markets is to ensure anonymity. Since using your PAN to beam creds from your personal account is not an option, you'll need to come up with another way to pay for what you buy. A lot of shadowrunners resort to certified credsticks in this situation, but certsticks are a shrinking market. The innovation of the wireless Matrix eliminated the credstick the way the credstick eliminated paper currency.

Bartering is an option. I have customers who bring me gear that I need in order to get the gear they need. Bartering of services works the same way. Black marketeers are constantly in need of shadowrunners, be it for security, smuggling, or even to get hold of new toys. Your talents are your advantage in this situation. There isn't a black market dealer alive who would turn away a B&E expert or a highly skilled spellslinger. Of course, there are marketeers who will only accept certain types of services in exchange for what you need.

- Castan Redstone, a dwarven marketeer out of Bangalore, prefers sex as payment. Not just any sex, mind you; the little guy has a fetish for male trolls. He'll take the standard payments as well, but unless you're paying in troll, the price is going to go way up.
- Traveler Jones

Corporate bonds are another popular form of payment. In short, a bond is an IOU from a corporation that matures over time. They're untraceable because, like certsticks, they can be issued anonymously.

Then there's always the old standby: information. When dealing in info, don't expect to get your gear the moment you pass the data on to the dealer. Most of us are smart enough to find out if the info is good before releasing our gear. A black marketeer stays in business by knowing as much as he can about his competition, his product, and local law enforcement. If you can give a marketeer valuable information in any of these areas, that's as good as gold.

- Which raises another form of payment—precious metals. So long as countries continue to treat precious metals as a store of value, gold will be as good as, well, gold.
- Mr. Bonds

WORKING THE MARKET

I didn't start out in the business as an arms dealer. I started as an employee, working security in an operation that sold small arms out of a farmer's market. I listened to what went on around me, and after a time I was able to start something small on my own. I warn you, starting your own black market is not a task to be undertaken lightly. There are several factors that go into making a business work.

First off, you need to have a product to sell. You also need someone willing to buy it. Hurdling the obstacles between the two is the key to running a successful black market.

Finding Something to Sell

In order to do the work we do, we need access to materials that are not exactly legal. A lot of the items we deal with in this line of work end up on the black market and ultimately in the hands of other runners like ourselves. A seller is someone who has access to products that can make a profit on the market. Even if we aren't aware of it, we fit this role whenever we come upon extra product or take something out of someone's datastore or lab.

- I can attest to that. I was hired by a Johnson to hit a Renraku lab on the outskirts of Chiba and trash their data. Along the way, I found this wiz assault weapon that looked like something out of the *Mars Chaser* trid show. I sold the piece to a fixer for a good chunk of nuyen. Couple of weeks later I find myself in a shootout with another shadowteam. Their shooter pulls out the gun I stole and uses it to punch a hole right through my arm. At least I know it works.
- Ma'fan

More often than not, a marketeer is getting his product from another dealer. The supply isn't always located where the demand is. Smugglers make a living by selling products between regions. But where do all these products come from? Independent suppliers, corporate Johnsons, syndicate counterfeiting factories, corrupt governments, renegade military officers—you wouldn't believe the number of people out there looking to make a few nuyen. The most surprising deal I've brokered was between a drug dealer and a university chemistry professor who was trying to sell designer drugs.

BLACK MARKET JARGON

Accountant: An accountant is the link between the "bank" and the supplier. The accountant can also serve as an account manager for frequent customers.

Armorer: A personal body armor specialist. This term also refers to individuals who sell military vehicles.

Arms Dealer: A high volume black marketeer who generally specializes in military-grade equipment.

Auctioneer: These individuals run a special type of black market known as the auction (See *Auction*, p. 12).

Bag Man: In syndicate operations, the one responsible for collecting money from lower-level black market vendors.

The Bank: Also referred to as "the money," this is the financial party responsible for bankrolling the operation.

Bladesmith: A specialist in edged weaponry.

Chop Doc: A black market dealer in organs and used implants.

Chop Shop: A black market dealer in vehicle parts.

Face: In large-scale operations, the first person you meet is usually called the face. This individual has the job of enticing you to buy from the dealer. The face is a salesman and a con artist, always looking to make the best deal for his employer.

Fence: A black market middleman whose primary role is to move merchandise from the independent seller to the black market. Part of a fence's job is to know where the black markets are and who pays the most for new merchandise.

Fixer: Fixers are generally resellers. They have access to a network of markets and specialists. A fixer makes money by purchasing a product from a black market and reselling the product to the runner at a marked-up price. The price you get depends on your relationship with your fixer.

Gunrunner: Part courier and part fence, these individuals have access to weapons in bulk. They take the weapons and sell them in another location, often another country. Some gunrunners sell their gear to fences, while others eliminate the middleman and sell direct to end users.

Gunsmith: A specialist in weapon customization. A gunsmith is a minor black market dealer. Some operate legal businesses while others dabble in illegal custom work. They don't carry product in bulk, but are the best option when looking for rare weaponry.

Info Broker: Someone who specializes in buying and selling hot data.

Continued on page 12

Urgent Message...



Finding a Buyer

There is always someone who wants to buy what you're pushing, but can they afford it? Are they even legitimate buyers? I ran headlong into this problem when I first opened up shop. I acquired several cases of military grade explosives and sought to sell them to a local gang, the Sons of Ra. The gang was embroiled in a war with a Korean Jo-pok outfit that was trying to move into the area, so they needed my product. The problem was, they couldn't pay enough for me to profit from the exchange. I used the contacts I had established working in the market to send out feelers for other buyers. The Jo-pok was interested, as was another buyer willing to pay more than either party. Being a novice, I took the buyer's interest at face value and didn't do my research. The buyer turned out to be the company that the explosives were stolen from, and they weren't interested in paying.

When I recovered, I was able to glean valuable lessons from the experience. You always find out who your buyer is, make sure you have payment in hand before you release your product, and above all else, do business on your terms and on your ground.

- Which reminds me: never store your merchandise where you sell it. This makes your storefront an easy target for theft. Storefronts should only carry sample merchandise.
- 2XL

Choosing Your Location

A black market exists as a storefront, Matrix front, or both. Storefront locations are known as fixed markets. They have a physical address that people in the know can locate. The advantage to this type of setup is that you have an established presence in the area. Often, fixed markets have integrated security networks throughout the neighborhoods in which they exist. There are rabbit holes to hide in and lookouts to warn if law enforcement is en route. In most cases, a storefront black marketeer has an arrangement with local law enforcement to look the other way while they do business. Fixed markets always have relationships with the local gangs, who provide additional protection in exchange for products. If you are good to the people of the neighborhood, they may come to appreciate your presence and will protect you from outside interference.

Floating Markets

My black market began with a small ring of friends exchanging information about who needed what gear and how we could get it. I set up a Matrix drop where potential customers could reach me, but we built our client base from people we knew and their associates; a network of customers I could trust. Still, the exchange location would change from customer to customer; never the same place twice. The majority of floating markets function in this fashion. Identity malls and other data exchanges don't require a face to face. Transactions are made online and the customer is provided with the location of a password-protected node from which they can retrieve data on where their merchandise is located. My mar-

BLACK MARKET JARGON (CONT.)

Johnson: A corporate agent with clearance to dump product on the black market. Johnsons are at the beginning of the supply chain, providing the marketeers with the products they need.

Laundryman: Slang for money launderer. Marketeers employ laundrymen to help customers pay and to make it appear that the marketeer's income comes from legitimate sources.

Mule: A black market courier (see *Pigeon*), typically carrying drugs.

Pigeon: A courier for black market sales. The pigeon delivers the goods and returns the payment to the marketeer.

Specialist: This is a catch-all category reserved for niche marketeers, those who only sell one type of product.

Street Hustler: The lowest type of black marketeer, the street hustler carries a variety of low-risk illegal items. These are generally overstock items purchased when the market was flooded. What the street hustler has depends on what the market has had a lot of over the past few weeks.

Syndicate Dealer: Any black market dealer operating in the employ of an organized crime syndicate.

Warez Crew: A hacker gang that deals in pirated and illegal software.

Urgent Message...

ket used abandoned buildings as drop sites. In exchange for a few Uzis, local gangs protected the site until the client showed up. A tremendous upside to a floating market is how quickly it can be broken down and moved. Remember, you aren't the only seller in the market. The shadows are filled with marketeers, and each one has their place in the food chain.

Auction

A last type of black market I should mention is the auction. This is an invitation-only experience where an auctioneer sells off illegal merchandise to the highest bidder. There is an auction in Morocco that meets on the last Saturday of each month. Other auctions are less predictable. Usually, interested parties are contacted a few days in advance, giving them time to pull together their money. You receive a list of items to be sold and directions. Specific security procedures vary, but the security is always very tight. Auctions are bidding wars. If nobody is interested in the item you want, you can get it for next to nothing. On the other hand, if it's popular it's bound to be very expensive.



"Krasnaya Anya?"

Red Anya almost pulled her sidearm right then to shoot the fool, but figured that the *razorborzoi's* boss might be annoyed if she killed his messenger boy. There was no reason she had to make his life easy, however. He was but a dog serving a master.

"Da," she said, thickening her German with a Russian accent to almost incomprehensibility. "Your boss told you the words to say?"

The samurai looked to his side, twitching his left hand as if to play with the spurs that this particular Vory boss loved to have sewn into his pets. Anya's commlink politely informed her that the dog was hitting her with sensors along with the ID code. She waited for a moment, letting him get a good look and verifying the code, before ordering the link to give her jammer a hard burst.

He almost stumbled back, his radar-sensor vision blacking out in the harsh jammer burst, before reaching up to physically reset his commlink behind his ear.

Doesn't even know how to handle a sensor storm. Anya felt what little respect she had for the dog shrink away, also impacting the respect she held for the one holding its leash.

"The boss said to make sure!"

She turned, not deigning to answer, and pulled up the box she knew he would want to look at. "In those cases," nodding to a small stack of nondescript shipping cases in the back of her Zugwagen's shipping container, "are the newest Heckler and Koch UMPs. Ten machine pistols, thirty clips, and ten kits. But here," she lifted the lid off the box she had her hands on, "is the item for your boss."

The *razorborzoi* whistled low. She had to admit it was a fine looking rifle, though a bit too shiny for her tastes.

"As asked, I found a former Walther designer who still had the plans. The shop pulled the bore and replaced it with a larger and heavier one to take the ammunition your boss wanted. We re-did the chamber so it fires electronically, then added the slides and wireless sling. Also forged a drum to hold more rounds than the clip. But he told you all this, right?"

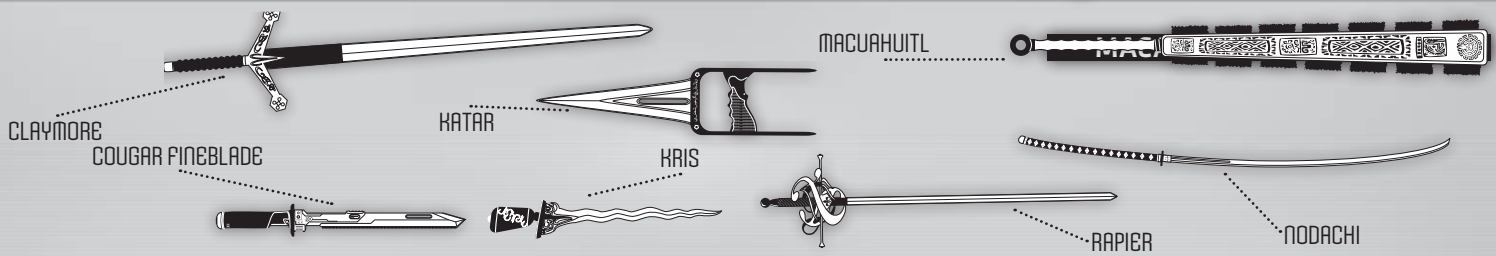
Despite his artificial eyes, Anya could see the avarice there.

"Here, feel it. You can message him how well crafted it is." She held out the rifle to him, stock end outwards.

The samurai didn't hesitate, grabbing it by the grip, happy to have such a weapon in his hand. Then the razors spiked out of its grip, through his hand. He screamed, but the rifle remained pinned to his hand, despite his frantic flailing—long enough for the follow-up taser charge to build and release.

Anya leaned over the paralyzed but twitching body, jamming her cherished Vis pistol into his ear.

"So, little dog, he told you everything to expect, did he? But he didn't tell you about the security he asked for? So tell me, who do you really run errands for?"



MELEE WEAPONS..... BLADES • CLUBS

MELEE WEAPONS

Despite the fact that firearms are the dominant personal weapons in the 2070s, you shouldn't underestimate the potential of melee weapons. In today's high-density sprawls, you might not realize that you've run into your worst nightmare until you're close enough to shake its hand. Melee weapons are used in hand-to-hand combat and range from those popular with street thugs—knives, bats, and knuckles—to the more specialized weapons wielded by martial arts experts.

All the weapons in this section use the statistics listed for melee weapons on p. 314, *SR4A* and conform to the melee combat rules as described on p. 156 of *SR4A*.

Some weapons must be wielded with two hands to be efficient. If the situation does not allow for a weapon to be used as it was intended or if other hindrances appear, the gamemaster may apply modifiers to the character's dice pool.

BLADES

All weapons in this section are used with the Blades skill (see p. 122, *SR4A*). At the gamemaster's discretion, more unique bladed weapons may require the Exotic Melee Weapon skill (see p. 38 of this book and p. 122, *SR4A*).

Bayonet (on rifle): See *Weapon Accessories*, p. 32, for further description.

Ceramic Knife: This extremely lightweight knife is entirely made of ceramic materials for use in sports like scuba or mountaineering. Because ceramic knives are undetectable by MAD scanners, they are popular with shadowrunners, corporate enforcers, federal agents, and others who prefer hidden weaponry.

Claymore: This Scottish two-handed sword is about 1.5 meters long. Many trolls are fond of this weapon, since their size and strength enables them to wield it with ease.

Cougar Fineblade Knife: This knife has a solid reputation as the world's premier combat knife. It is available in a short-bladed version, approximately the size of a normal knife, and a long-bladed version about the length of a human forearm. Due to sophisticated edging technology and state-of-the-art molecular bonding, the double-edged blade is almost impossible to blunt.

Katar: This punching dagger from northern India, also known as a Bundi dagger, is very effective in piercing personal body armor. The handle of this weapon is shaped like the letter H, with the horizontal bar as the hand grip, and a wide-based triangular blade that sits on the top of the H.

Kris: In Indonesia, the kris is widely believed to be spiritually in tune with its owner and to protect or aid him against his enemies. After the Awakening, these wavy-bladed knives have become quite popular as foci, especially in Southeast Asia.

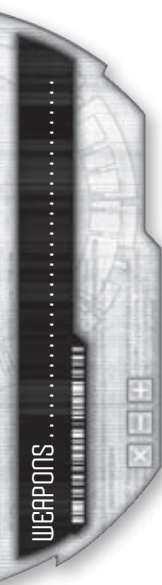
Macuahuitl: The macauhtl is a traditional Aztec weapon popular among the elite in Aztlan. A regular warrior's weapon in ancient times, it is used primarily for ceremonial duties today. It consists of a heavy wooden shaft studded with razor sharp obsidian slivers forming two sharp and deadly edges.

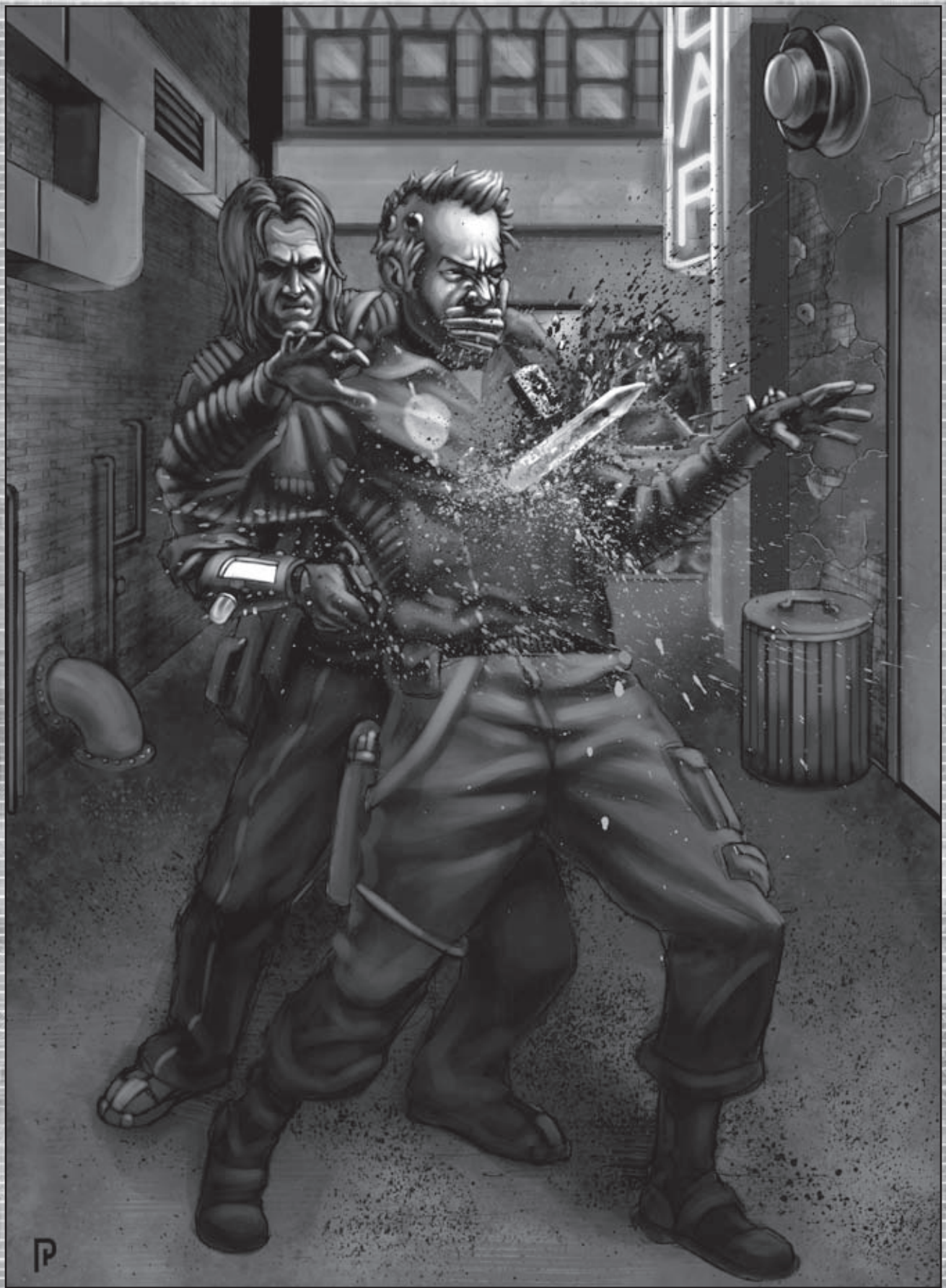
If the final Damage Value recorded to a target's Condition Monitor (see *Applying Damage*, p. 162, *SR4A*) is half the target's Impact armor or less, assume that some of the obsidian slivers broke off or were damaged and reduce the weapon's DV by 1.

Nodachi: Nodachi are large, two-handed Japanese swords historically used by foot soldiers against cavalry and on open battlefields.

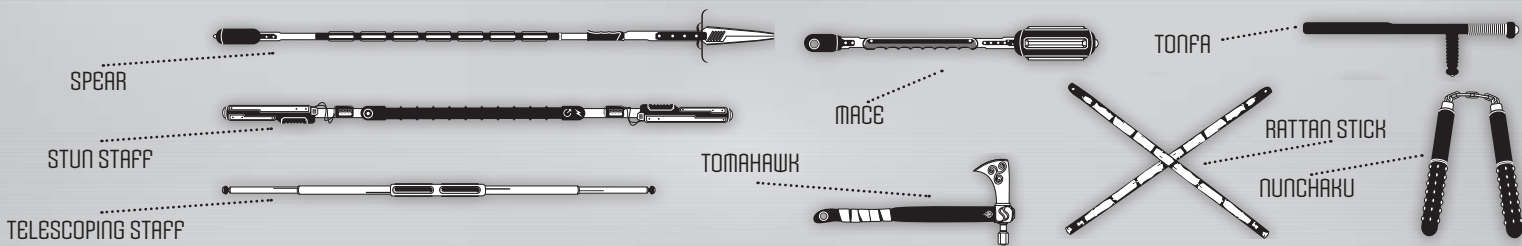
Rapier: The rapier is a slender, sharp pointed blade, often including an elaborate hilt and handguard. Since classic fencing has become a high society prestige sport due to the so-called Grand Tour of the European nobility and corporate elite, these light and elegant weapons are quite popular with higher-level corp managers and can become deadly in the hands of a skilled fencer.

Blades	Reach	Damage	AP	Availability	Cost
Bayonet (on rifle)	2	(STR/2 + 1)P	—	3	40¥
Ceramic Knife	—	(STR/2 + 1)P	—	4	75¥
Claymore	2	(STR/2 + 4)P	-1	8R	900¥
Cougar Fineblade Knife					
Short Blade	—	(STR/2 + 1)P	-1	5R	550¥
Long Blade	—	(STR/2 + 2)P	-1	7R	900¥
Katar	—	(STR/2 + 2)P	-2	9R	750¥
Kris	—	(STR/2 + 1)P	—	10R	1,000¥
Macauhtl	1	(STR/2 + 2)P	—	14R	3,000¥
Nodachi	2	(STR/2 + 4)P	-2	12R	2,500¥
Rapier	1	(STR/2 + 2)P	-1	4R	550¥





P



MELEE WEAPONS..... BLADES • CLUBS

Spear: The spear is one of the oldest weapons known to mankind, used for hunting, war, and sports over the last 400,000 years. Nowadays, spears are used by some tribes living in Africa, South America, and Australia, and as a traditional hunting or ritual weapon by some Native Americans, but are rarely seen in modern sprawls. Traditional spears consist of a wooden pole with a spearhead made of stone, bone, metal, or sharpened and fire-hardened wood, while modern spears are usually constructed of composite plastics or metal alloys and sometimes even have telescopic poles. A spear can also be thrown (using the Throwing Weapons skill, the range table of shuriken, and doing the same damage as in melee combat).

Tomahawk: This traditional Native American hand axe can also be thrown (using the Throwing Weapons skill, the range table of shuriken, and doing the same damage as in melee combat) or used as general purpose tool. The blades of authentic tomahawks are still chiseled from stone and such tomahawks have become quite popular in the Native American Nations as symbols of their wearers' cultural heritage.

Vibro Blades: The serrated blade of this weapon vibrates at a rate of more than 20 times per second, sawing as well as slicing its way through an object or person. This feature creates an audible humming when activated, preventing this weapon's use in stealth attacks. Each vibro blade has a battery life of 2 hours, and takes 1 hour to recharge. If using an unpowered vibro blade, reduce the DV by 2 and ignore the AP modifier. Extra batteries can be purchased for 25¥ each. Removing or inserting a battery into a vibro blade each require a Complex Action. The weapon can be activated manually or set to activate when the wielder grips the handle.

Victorinox Memory Blade: The memory blade is the latest product of the Swiss Victorinox company, famous for its Swiss army knives. The weapon consists entirely of a special form-memory steel alloy that remains flexible and bendable as long as it is at least partially covered by its special sheath. Once completely drawn, the blade hardens within seconds and becomes a double-edged combat blade. After the blade has been put partially back into its sheath, it becomes flexible again. The memory blade was developed for the Swiss army, which began outfitting its combat troops with this weapon—built into the standard belt—by 2068.

The weapon's sheath can be sewn into a piece of clothing or put in some other appropriate place to provide the wearer with

The Victorinox corporation is a traditional Swiss manufacturer, founded nearly 200 years ago as a knife manufacturer to provide the Swiss army with weapons. The production of high-quality knives and blades—from military combat blades to kitchen knives and cutting tools for workers—has always been the corporation's primary business concern (they produced nearly 32 million knives and blades in 2070). The traditional concentration upon blade manufacturing has not prevented the corporation from diversifying their production line in the early twenty-first century to add watches, weapon accessories, luggage, outdoor clothing, and body armor to their product offerings. Each and every Victorinox product is of high quality and has to pass strict quality controls.

Victorinox AG is a private corporation, whose shareholders are all descendants of the original founder. The Swiss state also takes a great interest into this corporation and has prevented several takeover attempts within the last 20 years.

Corporate Profile: Victorinox Ag . . .



an easily accessible and non-encumbering melee weapon. If the weapon's grip is concealed too, it is quite difficult to discover (Concealability modifier of -4, see p. 311, *SR4A*). The memory blade requires a complete Combat Turn to harden or become flexible again.

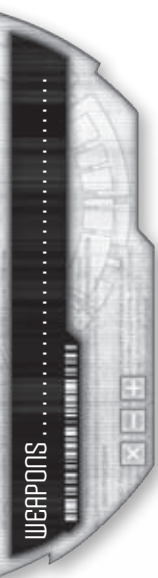
CLUBS

To employ these weapons, use the Clubs skill (see p. 122, *SR4A*). If the gamemaster chooses, certain blunt weapons that require vastly differing fighting techniques might use the Exotic Melee Weapons skill instead (p. 122, *SR4A*).

AZ-150 Stun Baton: Since orks and trolls have proven able to withstand the jolts of standard stun batons during past riots, this high-energy stun baton was designed to be used against these tougher metahumans during riot control. The AZ-150 delivers a bigger jolt than the standard stun baton, but carries only enough charge for 8 uses. The baton can be recharged at a rate of one charge per 30 seconds. It deals Electricity Damage (p. 163, *SR4A*).

Jupiter Taser Club: Designed for riot control cops who might also need to zap a suspect at range, this stun baton features

Blades	Reach	Damage	AP	Availability	Cost
Spear	2	(STR/2 + 2)P	—	4	150¥
Tomahawk	1	(STR/2 + 2)P	—	4	150¥
Vibro Blades					
Knife	—	(STR/2 + 2)P	-2	6R	1,000¥
Sword	1	(STR/2 + 4)P	-2	8F	2,000¥
Victorinox Memory Blade	1	(STR/2 + 2)P	-1	14R	1,250¥



a built-in one-shot taser. When firing the taser, use all the standard rules for tasers (p. 20).

Mace: A mace is an advancement of the club with a reinforced shaft and a large weighted mass—often studded or spiked metal—as a head.

Nunchaku: The nunchaku was developed on the Japanese island of Okinawa in the seventeenth century. It is composed of two short lengths of wood, metal, or plastic connected by a cord or chain. A nunchaku can be used to strangle an opponent and is also used in the karate and some escrima martial arts styles.

Rattan Stick: Rattan sticks are about 60–70 centimeter long sticks made from the so-called “rattan palms.” Southeast Asia’s rattan sticks are thin and very flexible, but despite their light weight they are also quite robust and commonly used in the arnis martial arts techniques.

Stun Staff: One or both ends of these long two-handed staffs possess shocking points to deliver electrical charges just as normal stun batons do. Stun staffs are used by security forces when inconspicuousness is not necessary and the aim is to intimidate opponents right from the start. Stun staffs have 15 charges and recharge at a rate of one charge per 10 seconds when plugged in. They deal Electricity Damage (p. 163, *SR4A*).

Telescoping Staff: When collapsed, this weapon is quite easy to conceal (Concealability modifier +0). A quick spin telescopes both ends of the staff out of the handle, multiplying the overall length.

Tonfa: The tonfa is a very versatile weapon consisting of an approximately 50 centimeter baton with a one-sided crossbar of about 15 centimeters. Like many other melee weapons popular today, the tonfa was originally a peasant weapon on the island of Okinawa. Nowadays, tonfa are used as multipurpose police weapons and within several martial arts.

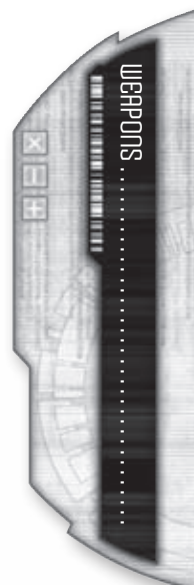
IMPROVISED MELEE WEAPONS

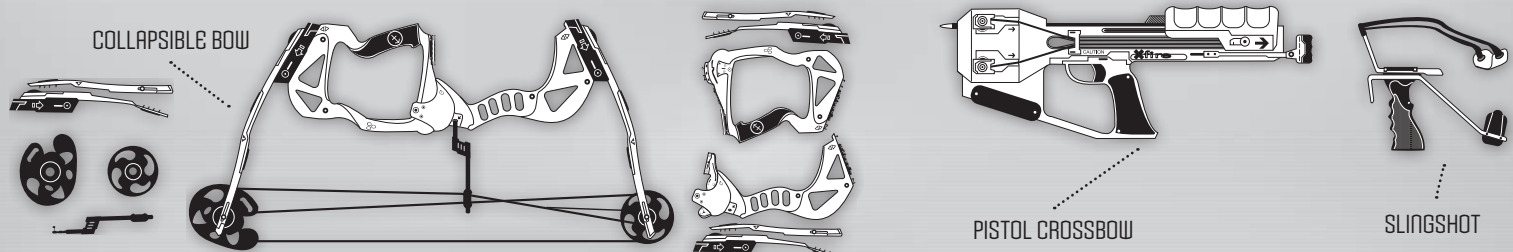
It’s not the melee weapon that kills people; it’s the metahuman wielding it. Nearly any apparently harmless object (as well as many that are obviously dangerous) can be used as an improvised weapon when the shit hits the fan. Be careful during your next pub brawl or backyard fight, because you never know what your opponent might try to smash you with or stick into your eye.

The Improvised Melee Weapons table offers a sampling of possible weapons and their potential effects. Gamemasters can adjust these effects as appropriate and apply negative dice pool modifiers of up to –3 when the item is exceptionally clumsy.

Clubs	Reach	Damage	AP	Availability	Cost
AZ-150 Stun Baton	1	7S(e)	–half	4R	800¥
Jupiter Taser Club	1	6S(e)	–half	8R	1,200¥
Mace	1	(STR/2 + 3)P	—	4	120¥
Nunchaku	1	(STR/2 + 2)P	—	6R	75¥
Rattan Stick	1	(STR/2)P	+2	4	20¥
Stun Staff	2	6S(e)	–half	6R	650¥
Telescopic Staff	2	(STR/2 + 2)P	—	—	100¥
Tonfa	1	(STR/2 + 1)P	—	4	50¥

Improvised Melee Weapons	Reach	Damage	AP	Skill Used
Baseball Bat	1	(STR/2 + 1)P	—	Clubs
Bottle (unbroken, first use)	—	(STR/2 + 1)S	—	Clubs
Bottle (broken, after first hit)	—	(STR/2 + 1)P	—	Blades
Chain	1–2	(STR/2 + 1)P	—	Exotic Melee Weapon (Whip)
Chair	—	(STR/2 + 2)S	—	Clubs
Fork or Utensil	—	(STR/2)P	—	Blades
Frying Pan	—	(STR/2 + 1)P	—	Clubs
Folding Spade	1	(STR/2 + 2)P	—	Blades
Metahuman Body	1	(BOD/2 + 2)S	—	Unarmed Combat
Pistol	—	(STR/2)P	—	Clubs
Pool Cue	1	(STR/2)P	+2	Clubs
Potted Plant	—	(STR/2 + 1)P	—	Clubs
Rifle Butt	1	(STR/2 + 1)P	—	Clubs
Sledge Hammer	1	(STR/2 + 3)P	—	Clubs
Steel Pipe	1	(STR/2 + 1)P	—	Clubs





PROJECTILE AND THROWING WEAPONS.....

PROJECTILE AND THROWING WEAPONS

Even if bows and crossbows rarely appear on the battlefields of the 2070s, projectile weapons still have their place in the modern world. Whether it's the snot-nosed brat with his slingshot or a Sioux Wildcats SpecOps soldier with his custom-tailored compound bow, these weapons' lack of complicated mechanics, easy handling, special mission requirements, and large number of sport archers keep them alive.

PROJECTILE WEAPONS

AquaDyne Shark-XS Harpoon Gun: This harpoon launcher fires barbed, CO2-propelled arrow-like metal projectiles. The Shark-XS and other harpoon guns are primarily used for fishing, but many divers also carry them to defend against dangerous underwater animals or Awakened critters (or even other metahumans).

The harpoon gun uses light crossbow ranges underwater and pistol crossbow ranges when fired outside of the water. It features an internal magazine (m) holding up to 5 harpoons in addition to the one loaded and can be fired just like a firearm using the single-shot firing mode.

Collapsible Bow: This bow can be completely disassembled to easily fit into a standard-size suitcase. Due to modern materials and sophisticated fittings, the bow's accuracy does not suffer from this unfavorable design, though the force of its pull must be limited compared to a standard bow. Breaking down the collapsible bow requires 3 complete Combat Turns, while reassembling the bow takes 5 Combat Turns.

Pistol Crossbow: The pistol crossbow is a small crossbow with a pistol handle, designed to be held and shot with one hand. While it inflicts only minimal damage, its compact size and good concealability in combination with its silent operation make it an ideal weapon for use in high-traffic public areas or high-security sectors. Pistol crossbows are often used with injection bolts (p. 316, *SR4A*).

AquaDyne is a small corporation from Hamburg (AGS) specialized in quality diving equipment. It started as chain of diving shops in the city of Hamburg and along the German North Sea Coast. In addition to catering to recreational divers buying brand-name products for their next Caribbean trip, AquaDyne also sold high class diving equipment to professional divers working in the hazardous North Sea. Due to the direct feedback about problems with diving equipment failing under those circumstances, AquaDyne started modifying and later manufacturing their own diving equipment customized for hazardous, dangerous, or otherwise difficult diving sites. Nowadays, about seventy percent of their sales are self-manufactured heavy-duty diving products.

AquaDyne's products cover nearly the whole range of diving equipment, including diving computers, bathometers, regulators, flippers, dry suits, and even harpoon guns and modular armored diving suits.

Corporate Profile: AquaDyne Inc. . . .



Slingshot: Modern slingshot versions incorporate a wrist brace to aid in accurate aiming and in reducing the arm's movement. They can be used to fire either hard projectiles, like ball bearings and marbles, or soft projectiles, such as capsules filled with contact toxins or drugs (see p. 83 and p. 254, *SR4A*) or even RFID chips.

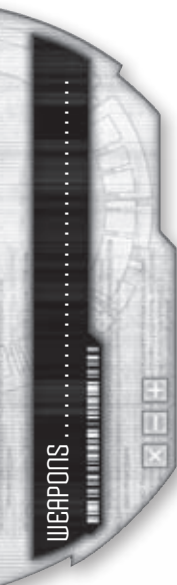
A slingshot uses shuriken ranges. If firing hard projectiles, use the damage code listed, while capsule rounds usually do no damage but can provide other effects depending on the possible payload.

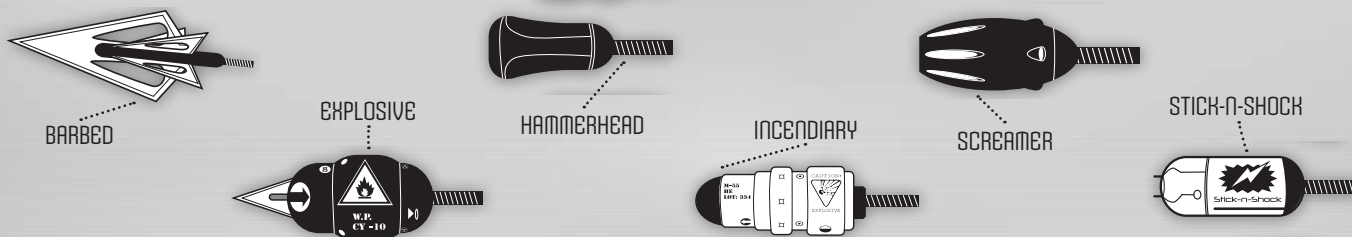
THROWN WEAPONS

Boomerang: Boomerangs are curved, wooden throwing sticks that were used by ancient tribal hunters worldwide for hunting. In the Sixth World, Australia's native Aborigines are the most well known users of these traditional weapons. While traditional hunting boomerangs are not designed to return to the thrower but rather to hit the target, modern boomerangs used for sports and entertainment usually are built to do so (and often do less or Stun damage).

Projectile Weapons	Reach	Damage	AP	Availability	Cost
AquaDyne Harpoon Gun	6P	-1	6R	600¥	
Collapsible Bow	(STR Min. + 1)P	—	4R	Rating x 125¥	
Pistol Crossbow	2P	—	4R	250¥	
Pistol Bolt	—	—	4R	3¥	
Injection Bolt	—	—	8R	30¥	
Slingshot	(STR/2)P	—	—	30¥	

Ranges (in meters)	Short (+0)	Medium (-1)	Long (-2)	Extreme (-3)
Pistol Crossbow	0-5	6-15	16-30	31-50





PROJECTILE AND THROWING WEAPONS . . . ARROWHEADS

Boomerangs use the ranges of aerodynamic grenades. Throwing and catching a returning boomerang requires a Throwing Weapons + Agility (2) Test.

Harpoon/Javelin: While a javelin is a spear made for throwing, a harpoon is a spear-like weapon with a barbed head used for spear fishing and hunting large sea creatures. Modern versions of both weapons are made of plastics and metal alloys, while traditional versions consist of a wooden shaft and a head made of bone or stone.

Harpoons may also be used as melee weapon, using the Blades skill and doing the same damage as the thrown weapon with a Reach of 2

Net: Nets can be thrown to trap and subdue an opponent. Modern nets are made of durable, lightweight, and hard-to-cut hybrid weaves weighted around the edges.

When thrown upon an opponent, the rules for subduing (see p. 161, *SR4A*) apply with the following exceptions: To “maintain the grapple,” the attacker must first move to his target. To break free of the net, the subdued character rolls Agility + Unarmed Combat (rather than Strength + Unarmed Combat) against a threshold equal to the attacker’s net hits. The attacking character may not use the net to inflict Stun damage, but may get a better grip or knock the defender down as normal.

Nets use half the range of throwing knives (round up).

ARROWHEADS

These special arrowheads may be used in place of regular arrows or crossbow bolts.

Barbed Heads: These arrows have additional barbs attached to their heads that make the removal of the arrow difficult. To remove a barbed arrow without doing further damage to the target, a First Aid + Logic (2) Test is required. Removing the arrow without succeeding in that test inflicts an additional box of Physical damage.

Explosive Heads: Explosive arrowheads carry small charges in their tips designed to explode and fragment on impact. The rules for explosive rounds (see p. 323, *SR4A*) apply to these arrows.

Hammerheads: These blunt arrowheads are design to stun rather than kill the target, inflicting Stun damage rather than Physical. They are less effective against armored targets, however.

Incendiary Heads: These arrowheads pack a small quality of white phosphorous that ignites upon the arrow’s impact, setting the target on fire. The arrowhead contains enough white phosphorous to burn for 3 Combat Turns, causing 4 DV of fire damage each turn (see *Fire Damage*, p. 164, *SR4A*). Items worn or carried by the target or coming into contact with the burning phosphorous may also catch fire.

Screamer Heads: The body of this arrow is essentially a pipe that creates a high-pitched whistle as it flies through the air. It is not made to cause harm, but rather to deliver signals by using different pipes to create different kinds of sound or to distract people by drawing their attention towards the area where a screamer head is fired.

Stick-n-Shock: Arrows or crossbow bolts with this kind of arrowhead use the same rules as Stick-n-Shock ammunition described on p. 324, *SR4A*.

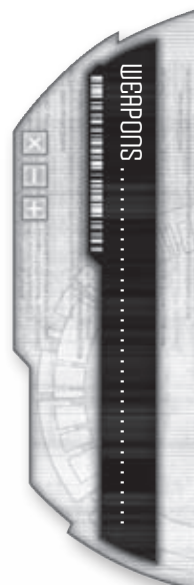
IMPROVISED THROWING WEAPONS

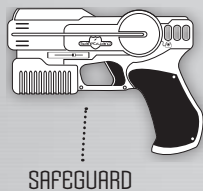
As in the case of improvised melee weapons (see p. 17), a metahuman can grab nearly any item within reach and throw it at his opponents. Depending upon the nature of the item thrown, the effects can vary from distracting at best to quite deadly (meatballs might be fun to throw, but a nightstand hurled by a strong ork is much more effective).

The Improvised Throwing Weapons table offers a sampling of possible throwing weapons and their potential effects. Gamemasters can adjust these effects as appropriate and apply negative dice pool modifiers of up to -3 to the Throwing Weapons Test for clumsy or exceptionally heavy items.

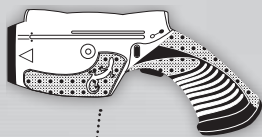
Throwing Weapons	Damage	AP	Avail.	Cost
Boomerang	(STR/2 + 1)P	—	4	50¥
Harpoon/Javelin	(STR/2 + 2)P	—	6	125¥
Net	—	—	6	350¥

Special Arrowheads	Damage Modifier	AP	Avail.	Cost
Barbed Head	—	—	5R	7¥
Explosive Head	+1	—	9F	10¥
Hammerheads	— (Stun)	+2		
Incendiary Head	—	—	12F	55¥
Screamer Head	(-2)S	+2	2	5¥
Stick-n-Shock	6S(e)	-half	6R	





SAFEGUARD



PROTECTOR



SCOUT



NEEDLER



ÉLAN



PALM PISTOL

FIREARMS TASERS • HOLD-OUT PISTOLS

FIREARMS

TASERS

Tasers are weapons that use an electrical charge to inflict Electricity Damage (see p. 163, *SR4A*). Tasers can only be equipped with top-mounted accessories and require the Pistols skill to use.

Cavalier SafeGuard: The SafeGuard uses less powerful conductors than other tasers, but compensates for this disadvantage with an increased ammunition capacity and a top-mounted laser sight.

Defiance Protector: The Protector has become the perfect ladies' companion in insecure areas. This compact taser features a top-mounted laser sight for easy targeting and a gecko grip (see p. 149). The gecko grip makes it nearly impossible to snatch the taser away from the person holding it, and allows it to be attached to nearly any surface (for example under a car's dashboard or to a bedpost). The gecko grip can be activated or deactivated via the user's PAN or by simultaneously pressing two separated buttons, making it possible to release the weapon from its surface even without an active PAN but efficiently preventing its abuse in combat.

Jupiter Taser Club: See p. 16.

HOLD-OUT PISTOLS

Hold-out pistols are very small firearms built with the priority of easy concealment rather than firepower or ammunition capacity. Hold-out pistols cannot mount any accessories. Firing a hold-out pistol requires the Pistols skill.

Cavalier Scout: The Cavalier Scout is perhaps the world's most compact semi-automatic pistol and can easily be concealed in a pocket. It even features a pocket clip on its frame to keep it in place.

Fichetti Tiffani Needler: The Tiffani Needler is a handgun for social climbers and is available in a wide variety of colors and styles. Fichetti also offers the Needler with a special color changing coating, enabling its owner to easily manipulate its color via their PAN (+250¥), especially for those who wish to coordinate their weaponry with their evening wear or their latest hair style. The Needler can only fire flechette rounds.

Fichetti Tiffani Self-Defender: The Tiffani Self-Defender is the predecessor of the Tiffani Needler, also available with the same color-changing option. Unlike the Needler, however, the Self-Defender can fire any kind of ammunition available for hold-out pistols.

Morrissey Élan: Composed entirely of polyresin materials, the Élan cannot be detected by magnetic anomaly detectors (MADs) and thus may be the epitome of concealability. Since style and fashion are at least as important to the weapon's manufacturer as efficiency, it is shaped to look like an extension of its user's hand. It cannot fire flechette rounds.

Walther Palm Pistol: This European over-under-barrel hold-out design holds two rounds that can be shot at once with +1 DV and a -1 Recoil modifier.

Tasers	Damage	AP	Mode	RC	Ammo	Availability	Cost
Cavalier SafeGuard	5S(c)	-half	SA	—	6 (m)	—	275¥
Defiance Protector	6S(c)	-half	SA	—	3 (m)	4	300¥
Jupiter Taser Club	6S(c)	-half	SS	—	1 (m)	8	1,200¥

Improvised Throwing Weapons	Short Range	Med. Range	Long Range	Ext. Range	Damage	AP
Baseball/Billiard Ball	0-STR x 2	To STR x 4	To STR x 6	To STR x 10	(STR/2)P	—
Bowling Ball	0-STR/2	To STR	To STR x 1.5	To STR x 2	(STR/2 + 2)P	—
Brick/Paving Stone	0-STR x 2	To STR x 3	To STR x 4	To STR x 6	(STR/2 + 1)P	—
Chair	0-STR	To STR x 1.5	To STR x 2	To STR x 2.5	(STR/2)S	—
Combat Axe	0-STR	To STR x 2	To STR x 3	To STR x 4	(STR/2 + 3)P	—
Knife (any)	0-STR	To STR x 2	To STR x 3	To STR x 4	(STR/2)P	—
Metahuman Body	(STR - BOD)/2	—	—	—	(BOD)S	—
Molotov Cocktail	0-STR x 2	To STR x 3	To STR x 4	To STR x 5	5P*	-half
Pistol	0-STR x 2	To STR x 3	To STR x 4	To STR x 6	(STR/2 + 1)S	—
Potted Plant	0-STR/2	To STR	To STR x 1.5	To STR x 2	(STR/2 + 1)P	—
Sword	0-STR	To STR x 2	To STR x 3	To STR x 5	(STR/2 + 2)P	—

* (starts fire, see p. 164, *SR4A*)





PIREARMS LIGHT PISTOLS

LIGHT PISTOLS

Light pistols are the most common noncombat pistols and are primarily used for personal protection by civilians. They can mount barrel- and top-mounted accessories and require the Pistols skill to fire.

Ares Light Fire 70: The Ares Light Fire 70 is one of the most common pistols on the market. A special barrel-mounted silencer developed exclusively for the Light Fire 70 is also available, applying an additional -1 dice pool modifier to the modifier usually provided by silencers (+250¥; see p. 322, *SR4A*).

Beretta 101T: This pistol is used as light sidearm by many security personnel, since it is very easy to maintain.

Beretta 200ST: The Beretta 200ST is a light pistol capable of burst fire. Using it in this mode can strain the weapon, however, so users should only do so in emergency situations. Since Beretta was able to obtain an official classification of this weapon as a light pistol without further limitations, it is quite popular with security agencies in countries where heavy pistols require additional licenses.

Burst firing the Beretta 200ST requires a Complex Action. The weapon includes a detachable shoulder stock.

Ceska vz/120: Produced by the Czech weapon manufacturing conglomerate Ceska Zbrojovkain Prague, this “light service pistol” is in wide use among East European security and paramilitary forces.

Colt Asp: This revolver is advertised as a cheap and effective weapon and is, in fact, a solid performer in all respects. However, due to the comparatively light ammunition it fires and the limited ammo capacity when compared to light pistols, the Colt Asp is rarely used, though it is popular with low-level gangs, societal dropouts, or similar desperate individuals. It cannot mount a standard silencer.

Fichetti Executive Action: Marketed as a gun that “fires so fast it doesn’t have time to recoil,” the Executive Action can be used in burst fire mode. Despite the fact that the weapon features no recoil reduction at all and standard recoil rules apply, the Executive Action has been an ongoing success due to the skills of Fichetti’s marketing division.

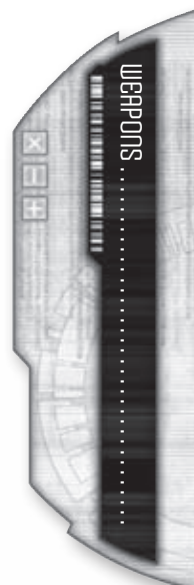
SA Puzzler: The Shiawase Armaments Puzzler is completely composed of polyresin materials and thus cannot be detected by MAD scanners. The gun can be easily be broken down into about 20 component parts that mimic jewelry, writing instruments, and other commonly carried items, making the weapon quite easy to transport illegally.

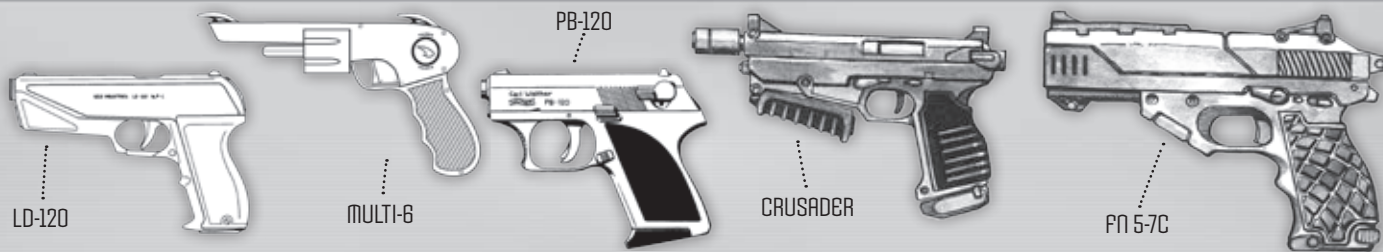
Recognizing the various components as belonging to a gun requires an Armorer + Logic (3) or Perception + Intuition (4) Test. Assembling or disassembling the Puzzler into the concealable component parts requires an Armorer + Logic (6, 1 minute) Extended Test each time.

Hold-Outs	Damage	AP	Mode	RC	Ammo	Availability	Cost
Cavalier Scout	4P	—	SA	—	7 (c)	6R	375¥
Fichetti Tiffani Needler	6P(f)	+2	SA	—	4 (c)	5R	500¥
Fichetti Tiffani Self-Defender	4P	—	SS	—	4 (c)	4R	350¥
Morrissey Élan	4P	—	SA	—	5 (c)	7R	450¥
Walther Palm Pistol	4P	—	SS/BF	—	2 (b)	4R	175¥

Light Pistols	Damage	AP	Mode	RC	Ammo	Availability	Cost
Ares Light Fire 70	4P	—	SA	—	16 (c)	3R	350¥
Beretta 101T	4P	—	SA	—	12 (c)	4R	200¥
Beretta 200ST	4P	—	SA/BF*	(1)	20 (c)	7R	550¥
Ceska vz/120	4P	—	SA	—	18 (c)	4R	350¥
Colt Asp	4P	—	SA	—	6 (cy)	3R	175¥
Fichetti Executive Action	4P	—	SA/BF	—	18 (c)	12R	700¥
SA Puzzler	4P	—	SA	—	12 (c)	15F	900¥
Seco LD-120	4P	—	SA	—	12 (c)	3R	250¥
Taurus Multi-6	4P/5P	—	SA/SS	—	6 (cy)	6R	200¥
Walther PB-120	4P	—	SA	—	10 (c)/15 (c)	9R	400¥

* Burst fire on this weapon requires a Complex Action.





FIREARMS HOLD-OUT PISTOLS • MACHINE PISTOLS

Seco LD-120: The Seco LD-120 is a modern remake of the Israeli LD-100 pistol, which was originally designed as weapon to be worn by every Israeli citizen. It boasts an integral top-mounted laser sight.

Taurus Multi-6: The Taurus Multi-6 is a reliable revolver specially designed to handle a wide variety of ammunition. Popular with hunters, who use it as a sidearm, it can fire light pistol rounds with a semi-automatic (SA) rate of fire for a base DV of 4P, as well as heavy pistol ammo in single-shot (SS) mode for 5P base DV. The Multi-6 cannot mount a standard silencer. Gamemasters may also reduce the effects of ammunition-related glitches or critical glitches when the character is using this weapon.

Walther PB-120: The PB-120 is a rugged and small light pistol and has come to be the sidearm of choice for most military and paramilitary aircrews. Walther also offers extended 15-round clips for this pistol for “situations when 10 shots just aren’t enough,” even if most customers tend to use more heavy armaments when expecting trouble. The extended clips cost 12¥ each and have the same Availability as the basic weapon.

MACHINE PISTOLS

Machine pistols resemble submachine guns, but are significantly smaller and lack the sheer power and abundance of accessories of their larger cousins. They have a top and a barrel mount and require the Automatics skill to use.

Ares Crusader: The Ares Crusader’s large ammo capacity and easy handling (due to its extended clip and integral barrel-mounted gas-vent system 2 recoil compensation system) make it one of the world’s most popular weapons of its class.

FN 5-7C: As easy to maintain as it is to shoot, the 5-7C is often issued to military non-combat personnel. The weapon’s efficient design provides 1 point of recoil compensation.

PPSK-4 Collapsible Machine Pistol: The PPSK-4 (Pistolet Pulemnot Sptsialnyj Kemenova, or “Kemenov special submachine gun”) collapsible machine pistol was developed by Feliks Kemenov after his collapsible pistol model (see p. 23) proved to be a success during field testing. It uses the same mechanical principles and materials as the PSK-3 pistol, includes a folding stock and a laser sight, and cannot mount other accessories. The weapon must be unloaded and the stock must be folded to collapse or reassemble the weapon.

The weapon cannot mount any other accessories. Recognizing the weapon in its collapsed state uses the same rules as the PSK-3 heavy pistol.

HEAVY PISTOLS

These handguns are significantly larger than their light pistol relatives and generally viewed as the workhorses of the pistol class. They can be equipped with top- and barrel-mounted accessories and require the Pistols skill for firing.

Browning Ultra-Power: The Browning is the Ares Predator’s primary competitor as the toughest heavy pistol. It is more compact than the Predator and includes a built-in top-mounted laser sight. Browning regularly offers limited production runs with special design options (chromed, ebony handle, and so on) that are very popular with collectors (and cost 500¥ or more).

Cavalier Deputy: The Deputy is a very reliable revolver favored by rough retro-types for its wild-west style. Its bullets are less devastating than those of the Ruger Super Warhawk, but the Deputy is able to fire much more quickly. It cannot be equipped with a standard silencer.

Colt Government 2066: This weapon uses an electrically induced spark to detonate the bullet’s propellants (see *Electronic Firing* modification, p. 150). Due to the removal of most moving parts of the firing mechanism, the Colt Government 2066 has quickly earned a reputation as being exceptionally reliable.

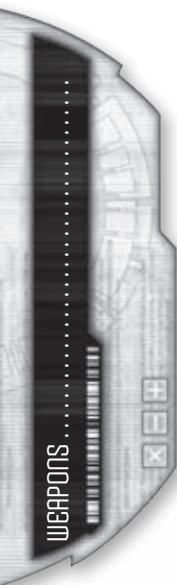
Eichiro Hatamoto II: The Hatamoto II is a single-shot defensive firearm that fires a large-bore shotgun round. This weapon is built to threaten (and eventually take down) even orks and trolls, and is recommended for good marksmen only.

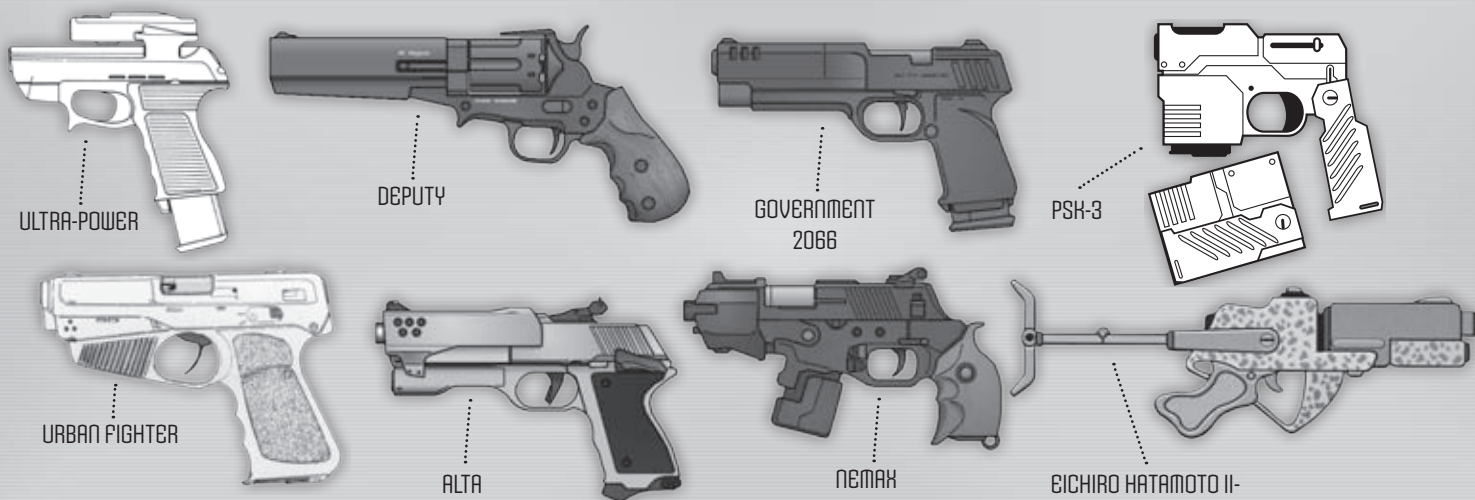
HK Urban Fighter: This heavy pistol was introduced as supplement to Heckler & Koch’s *Urban Combat* submachine gun (see p. 25). It also consists entirely of nonmetallic components and cannot be detected by MAD scanners. Since the gun’s ammunition is fed by airtight sealed plastic ammo clips, the ammunition counts as hermetically sealed in regard to its detection by olfactory scanners (see p. 262, *SR4A*).

Sealed ammo clips are only available as complete clips (double the ammunition’s costs and increase the Availability by +8), while a special ceramic silencer for the gun costs 500¥. The Urban Fighter possesses an internal smartlink system and cannot be further modified.

Morrissey Alta: The Morrissey Alta is the flagship of Morrissey’s production line of pistols that are designed not only for their effect but also for style. While it is quite small and built with an elegant exterior, it also packs the punch of a heavy pistol. The Alta features a built-in underbarrel laser sight.

Machine Pistols	Damage	AP	Mode	RC	Ammo	Availability	Cost
Ares Crusader	4P	—	SA/BF	2	40 (c)	7R	700¥
FN 5-7C	4P	—	SA/BF	1	20 (c)	8R	600¥
PPSK-4 Collapsible Machine Pistol	4P	—	SA/BF	(1)	30 (c)	20F	2,800¥





FIREARMS HEAVY PISTOLS

Morrissey Elite: The Elite is the smaller version of Morrissey's Alta heavy pistol. Due to its even smaller size (Concealability Modifier -1), it uses light pistol ranges but keeps the other stats of a heavy pistol.

Nitama NeMax: The NeMax is designed as a weapon for high-security areas where no other weapons are allowed. It features an internal smartlink system, a basic safe target system, and a biometric safety system, preventing the weapon from being abused within the security areas or harming valuable persons.

PSK-3 Collapsible Heavy Pistol: This weapon (PSK stands for Pistolet Sptsialnyj Kemenova, or "Kemenov Special Pistol") uses sophisticated mechanics and form-recognizing materials to enable the weapon to be collapsed into a solid block of metal, vastly reducing the overall weapon size and making the metal block hard to recognize as weapon. It was originally developed for the Russian secret police UGB by Feliks Kemenov in 2061 and has

found its way into the shadows since the weapon's "Top Secret" status has been compromised (rumors are that the security breach was set up by the GRU military intelligence agency due to internal struggles between the two Russian intelligence services).

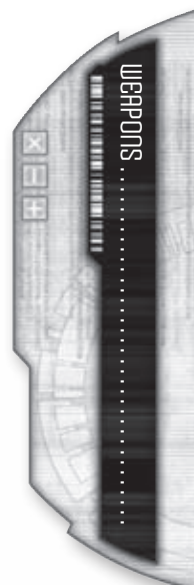
The weapon collapses and reassembles itself at the press of a button (requiring a Simple Action) and needs to be unloaded to do so. The PSK can only mount a special silencer (same Availability as the weapon and costing an additional 700¥) and no other accessories.

Recognizing that something is odd about the block of metal the weapon collapses to requires a Perception + Intuition (4) Test. If this test succeeds, the weapon is either recognized if the character knows about this kind of weapon (gamemaster's discretion—this knowledge is rare) or the weapon may be unfolded by tinkering with it and succeeding in an Armorer + Logic (1) Test.

Heavy Pistols	Damage	AP	Mode	RC	Ammo	Availability	Cost
Browning Ultra-Power	5P	-1	SA	—	10 (c)	4R	300¥
Cavalier Deputy	5P	-1	SA	—	7 (cy)	4R	225¥
Collapsible Heavy Pistol	5P	-1	SA	—	10 (c)	18R	1,050¥
Colt Government 2066	5P	-1	SA	1	14 (c)	6R	500¥
Eichiro Hatamoto II	7P	-1	SS	—	1 (m)	10R	800¥
HK Urban Fighter	5P	-1	SA	—	10 (c)	14F	1,400¥
Morrissey Alta	5P	-1	SA	—	12 (c)	7R	850¥
Morrissey Elite	5P	-1	SA	—	5 (c)	6R	450¥
Nitama NeMax	5P	-1	SA	—	10 (c)	16R	1,700¥
PSK-3 Collapsible Pistol	5P	-1	SA	—	8 (c)	18F	2,300¥
Ruger Thunderbolt	5P	-1	BF	2	12 (c)	12R	750¥*
Savalette Guardian	5P	-1	SA/BF**	1	12 (c)	7R	800¥
Walther Secura	5P	-1	SA	—	12 (c)	5R	300¥
Walther Secura Kompakt	5P	-1	SA	—	9 (c)	7R	400¥
WW Infiltrator	5P	-1	SA	—	15 (c)	16F	1,100¥

* Does not include cost of integral laser sight or smartgun system.

** Burst fire on this weapon requires a Complex Action.





FIREARMS HEAVY PISTOLS • SMGS

Ruger Thunderbolt: The Thunderbolt was developed by Ruger in cooperation with Lone Star's Technical Research Department due to the needs of the security corporation. Despite the fact that the weapon has been sold to other licensed buyers for years now, some Lone Star officers still view the weapon as their "private property," so shadowrunners should keep their licenses updated to prevent being harassed during searches or at checkpoints. Each weapon possesses a special chamber system that provides 2 points of recoil compensation and comes equipped with either an internal smartgun system (+400¥) or a built-in underbarrel laser sight (+100¥). The Thunderbolt can only fire narrow bursts (p. 153, *SR4A*).

Savalette Guardian: If you need even more punch than the Ares Predator or Colt Manhunter can offer, this chrome-steel-finished weapon might be your weapon of choice. The Savalette Guardian can fire a single three-round burst by using a Complex Action. Its recoil-decreasing design provides the equivalent of 1 point of recoil reduction and it comes with a built-in smartgun system.

Walther Secura: The Walther Secura is the standard sidearm of the German police forces and many European security providers. It can be bought either as basic model without further features or as a smartlinked version (+150¥).

Walther Secura Kompakt: This is the compact version of the Walther Secura. It was constructed to be carried by CID officers, undercover operatives, and others who prefer concealability over large ammo capacity.

The Walther Secura Kompakt uses light pistol ranges and has a Concealability modifier of -1. It is also available as standard or smartlinked version (+200¥).

WW Infiltrator: This heavier variant of the SA Puzzler (see p. 21) is distributed by the Ares subsidiary Weapons World. The weapon is made of polyresin materials and can be broken down into parts resembling toiletries and traveller's luggage items. Identifying and assembling or disassembling the Infiltrator uses the same rules as the SA Puzzler.

SUBMACHINE GUNS

Submachine guns can be equipped with top-, barrel-, and underbarrel-mounted accessories, unless otherwise noted. They cannot use silencers but may use sound suppressors. A character firing a submachine gun uses the Automatics skill.

Ares Executive Protector: The Executive Protector is a special detachable submachine gun built into a briefcase. It was designed by Ares for bodyguards or people working undercover who nevertheless need a discreet and disguised firepower punch.

When carried in its briefcase housing, the weapon is triggered by pressing a firing stud in the handle. It fires through a concealed barrel port on the briefcase's side. Smartlinked versions do not even

feature the firing stud, because they are fired via the user's PAN or touch link (see p. 333, *SR4A*). A simple mechanism also allows the user to detach the Protector SMG by breaking away the briefcase trappings with a Simple Action. In either mode, the weapon requires the Automatics skill to use. When fired within its briefcase housing, the uncompensated recoil of the weapon is doubled.

The Ares Executive Protector is only available for caseless ammunition, comes with a special briefcase housing (over a dozen various designs are available; each additional housing costs 300¥, special custom designs are available upon request) and may also be bought in a smartlinked version (+500¥). The weapon also features an integral sound suppressor and may only mount underbarrel accessories. A folding stock may be used when the weapon is broken away from the briefcase, providing 1 point of recoil compensation.

At the gamemaster's discretion, someone familiar with the standard Protector briefcase style could visually identify one with a successful Perception (3) Test. If the briefcase is opened, its true nature becomes obvious.

Beretta Model 70: The Beretta Model 70 is one of the oldest submachine guns still in production. Despite its age, the weapon's high reliability, large ammo capacity, built-in top-mounted laser sight and barrel-mounted sound suppressor form a package still in demand today.

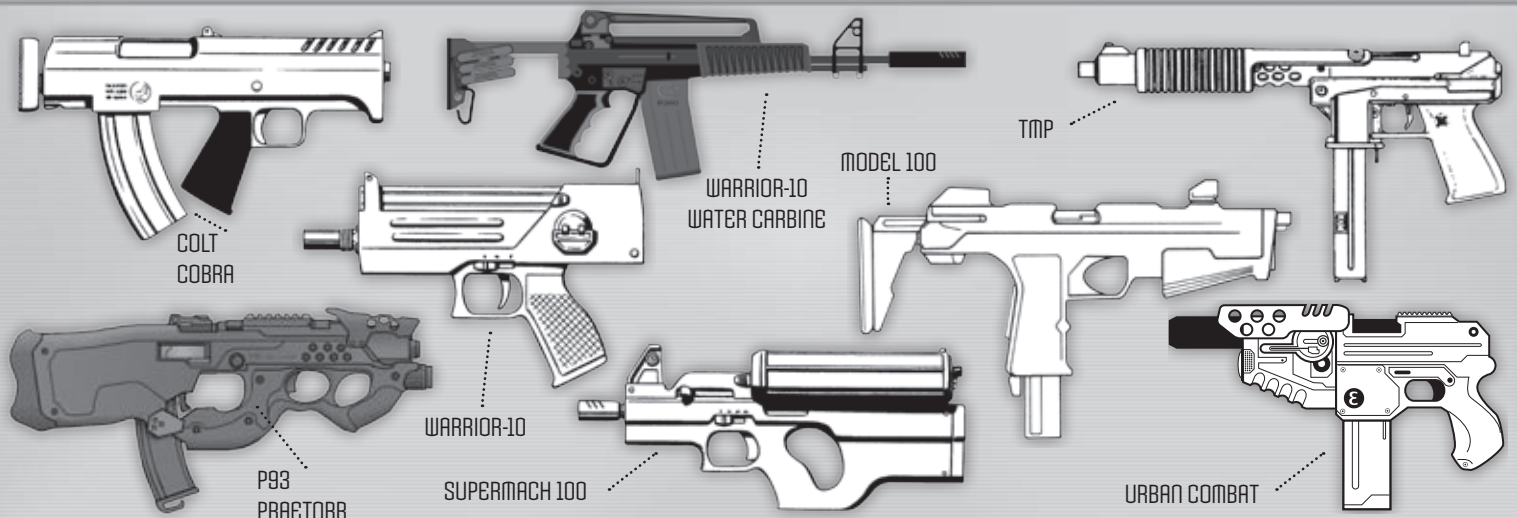
Colt Cobra: The Colt Cobra series, with its unique design and wide range of accessories, is quite popular among security forces worldwide. The weapon comes in three varieties. The standard version, the TZ-110, comes with a folding stock and a barrel-mounted gas-vent 2 system. The TZ-115 substitutes a top-mounted laser sight for the gas-vent system, while the TZ-118 features an internal smartgun system instead of the gas vent. Both variants retain the folding stock of the basic model.

Colt M24A3 Water Carbine: Designed for underwater combat, this weapon's firing chamber is completely sealed. Air is drawn from a diver's scuba tank or another air source through an inlet valve in the butt and into the firing chamber, allowing regular ammunition to be used underwater. Positive pressure from the air source ensures that no water rushes in during firing, and a purge valve flushes out any water taken in while changing clips.

The water carbine uses only caseless ammunition and ignores any side effects applied to firearms during water combat if connected to an appropriate air supply. When out of the water or used without an air supply, the Colt M24A3 functions as a normal weapon.

FN P93 Praetor: The P93 is a bullpup submachine gun developed for the Corporate Court-controlled United Nations peacekeeping forces. During the riots following the Second Matrix Crash in 2064, it became obvious that many of the so called "blue helmets" were ill-equipped for military riot-suppression operations, something the Corporate Court began to remedy by





FIREARMS SMGS

ordering Fabrique Nationale to develop a weapon that could be issued to all forces under their command.

The Praetor features a special chamber system that provides 1 point of recoil compensation, an integrated stock, and a flashlight (optional low-light version +100¥). The weapon is also available with an electronic firing mechanism (+200¥; see *Electronic Firing* modification, p. 150). It cannot mount underbarrel accessories.

HK Urban Combat: This submachine gun consists entirely of nonmetallic components and is undetectable by MAD scanner systems. It is a high-tech and high-quality gun that is built in comparatively low supply, since the groups it is geared to (discreet security agents, heavily armed bodyguards, and corporate operatives) are definitely not a mass market. However, due to the weapon's high price and a constant demand, H&K views it as a success. The Urban Combat includes an internal smartlink, a fixed barrel-mounted sound suppressor, and offers 2 points of recoil compensation due to a special internal hydraulic recoil compensation system. The Urban Combat cannot be further modified.

Ingram SuperMach 100: The SuperMach 100 is a so called high-velocity "super machine gun" (see p. 26). Even though the weapon's penetrating power is slightly inferior compared to that

of other submachine guns, it makes up for this disadvantage with an unsurpassed rate of fire.

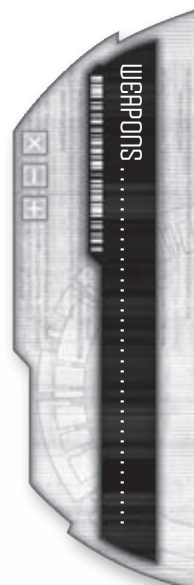
The SuperMach 100 features a special recoil-reduction design that provides 3 points of recoil compensation and a folding stock. A standard 40-round and an expanded 60-round clip are available (the latter costing 25¥ and increasing the Concealability modifier by +1). The weapon cannot mount barrel or underbarrel accessories.

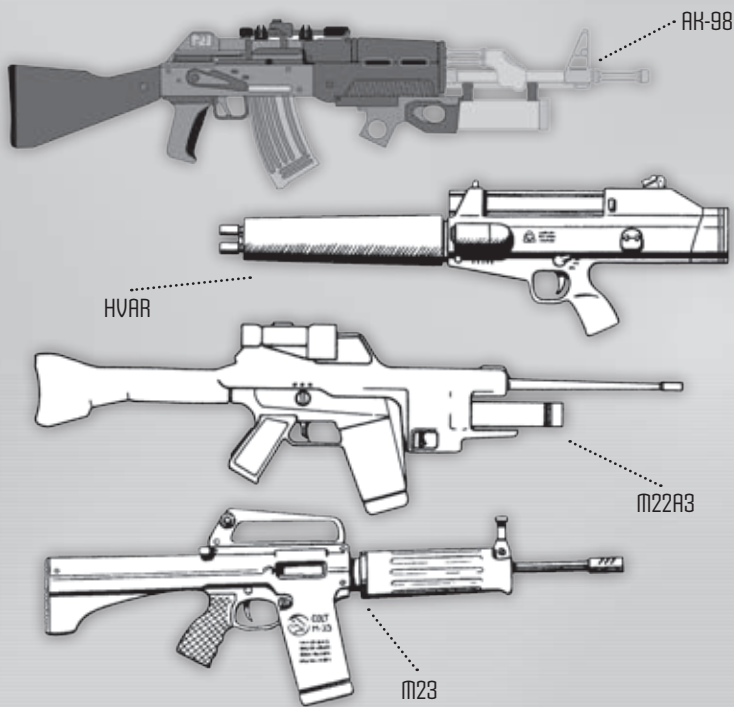
Ingram Warrior-10: The Ingram Warrior-10 is considered to be one of the most reliable SMGs in service. It is especially easy to modify and used by smaller mercenary groups that consider its lack of accessories and full-auto mode as minor drawbacks compared to the ability to easily modify their weapon for the mission at hand.

Sandler TMP: Being the most inexpensive submachine gun on the market, the Sandler TMP is a weapon for the cost-conscious. It includes a top-mounted laser sight and a folding stock.

SCK Model 100: Shin Chou Kogyo Corporation's highly reliable SCK 100 has become the synonym for Japanese corporate security, since almost every Japanacorp's security force, including Renraku's infamous Red Samurai, relies heavily upon this weapon. The SCK 100 features an internal smartlink and a folding stock.

Submachine Guns	Damage	AP	Mode	RC	Ammo	Availability	Cost
Ares Executive Protector	5P	—	SA/BF/FA	(1)	30 (c)	9F	1,000¥
Beretta Model 70	5P	—	BF/FA	—	35 (c)	5R	650¥
Colt Cobra							
TZ-110	5P	—	SA/BF/FA	2 (3)	32 (c)	5R	550¥
TZ-115	5P	—	SA/BF/FA	(1)	32 (c)	5R	475¥
Z-118	5P	—	SA/BF/FA	(1)	32 (c)	5R	650¥
Colt M24A3 Water Carbine	5P	—	SA/BF	—	30 (c)	10F	1,200¥
FN P93 Praetor	5P	—	SA/BF/FA	1 (2)	50 (c)	11F	650¥
HK Urban Combat	5P	—	SA/BF/FA	2	36 (c)	16F	2,400¥
Ingram SuperMach 100	4P	—	SA/FA	3 (4)	40 or 60 (c)	9F	975¥
Ingram Warrior-10	5P	—	SA/BF	—	30 (c)	4R	400¥
Sandler TMP	5P	—	BF/FA	(1)	20 (c)	4R	350¥
SCK Model 100	5P	—	SA/BF	(1)	30 (c)	6R	750¥





FIREARMS ASSAULT RIFLES

ASSAULT RIFLES

Assault rifles can be equipped with top-, barrel-, and underbarrel-mounted accessories, unless otherwise noted. They cannot use silencers but may use sound suppressors. A character firing an assault rifle uses the Automatics skill.

AK-98: This rugged design is an AK-97 assault rifle with an integrated underbarrel grenade launcher.

Ares HVAR: The Ares HVAR (“high-velocity assault rifle”) is another example of high-velocity weapons (see sidebar, above), trading large calibers for a high rate of fire.

In addition to the special recoil-reduction design common to all Ares high-velocity weapons, providing 3 points of recoil

These special firearms (also called super machine guns) have a very high rate of fire, using specially designed barrels and cartridges to prevent overheating and excessive recoil. Only submachine guns and assault rifles can be constructed as high-velocity weapons.

When fired in full-auto mode, high-velocity weapons can only fire *long bursts* or *full bursts* (see *Full-Auto Mode*, p. 154, SR4A). Unlike normal firearms, high-velocity weapons can fire two long bursts in a single Action Phase. All other rules for firing long bursts apply as noted on p. 154, SR4A.

When used to fire full bursts, high-velocity weapons use 12 bullets instead of 10 and thus impose a -11 dice pool modifier instead of -9. When used to fire narrow bursts, a +11 DV modifier to the attack applies, while a wide burst applies a -11 dice pool modifier to the defender’s dice pool. When used to attack multiple targets, a high-velocity weapon can attack two targets with two long bursts, three targets with one long and two short bursts, or four targets with four short bursts (using a full burst to attack multiple targets is the only legal way to fire short bursts with a high-velocity weapon). All other rules for full bursts, as described on p. 154, SR4A, apply. The rules for *Suppressive Fire* (see p. 154, SR4A) remain unchanged.

compensation, the Ares HVAR includes an internal smartgun system and a rigid stock with shock pad. It cannot be equipped with barrel- or underbarrel-mounted accessories.

Colt M22A3: Since its introduction in 2048, the M22 has been a very popular weapon due to the features it packs. The M22A3 has a special gas vent system, which is built into the barrel and provides 1 point of recoil compensation, as well as an integral top-mounted imaging scope and an underbarrel grenade launcher.

Tech Profile: High-Velocity Weapons ...



Assault Rifles	Damage	AP	Mode	RC	Ammo	Availability	Cost
AK-98	6P	-1	SA/BF/FA	—	38 (c)	8F	1,000¥
Grenade Launcher	Grenade	—	SS	—	6 (m)		
Ares HVAR	5P	—	SA/BF/FA	3 (4)	50 (c)	11F	2,400¥
Colt M22A3	6P	-1	SA/BF/FA	1	40 (c)	9R	1,600¥
Grenade Launcher	Grenade	—	SS	—	6 (m)		
Colt M23	6P	-1	SA/BF/FA	—	40 (c)	5R	750¥
HK G12A3z	6P	-1	SA/BF/FA	2	32 (c)	9F	1,750¥
Nitama Optimum II	6P	-1	SA/BF/FA	1	30 (c)	10F	2,200¥
Underbarrel Shotgun	7P	-1	SA	1	5 (m)		
Sernopal vz/88V	6P	-1	SA/BF/FA	2	35 (c)	8F	1,650¥
Steyr AUG-CSL						13F	4,000¥
Assault Rifle	6P	-1	SA/BF/FA	1	40 (c)		
Rifle	7P	-1	SA	1	20 (c)		
Submachine Gun	5P	—	SA/BF/FA	1 (2)	25 (C)		
Light Machine Gun	6P	-1	BF/FA	1	50 (c) or belt		

WEAPONS



Colt M23: The Colt M23 is a stripped-down version of the M22 assault rifle, lacking any accessories. It's a good choice for those who have a very limited budget or prefer to modify their weapons on their own.

Heckler & Koch G12A3z: The latest development of several generations of assault rifles by HK, the G12 is a compact and reliable rifle fielded by many armies and paramilitary corporate forces. The weapon comes equipped with an integral top-mounted laser sight, a barrel-mounted gas vent 2 system, and a telescoping shoulder stock to shorten the weapon's length if necessary.

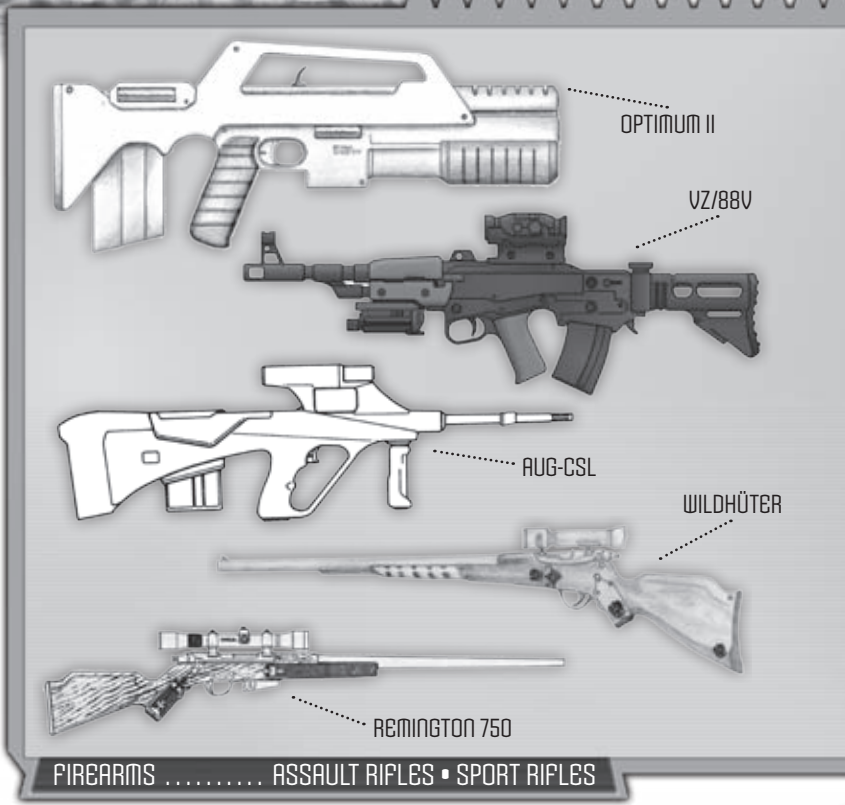
Nitama Optimum II: This bullpup assault rifle with an integrated underbarrel shotgun is a standard weapon of the Japanese military. The weapon is infamous for the numerous film documentaries showing General Saito's Imperial Marines shooting open doors with the shotgun and dragging out suspects during his occupation of San Francisco. The Nitama Optimum comes equipped with an internal smartgun system and a shock pad integrated into the weapon's rigid stock.

Sernopal vz/88V: The Sernopal is the assault rifle of the Czech Mechanized Forces and is in wide use among other East European military forces as well. It features an underbarrel laser sight, a top-mounted imaging scope, a barrel-mounted gas-vent 2 system, and a folding stock for increased manageability and easy storage within cramped surroundings.

Steyr AUG-CSL: The Steyr AUG-CSL is a multi-weapon system. While the basic weapon is an assault rifle, it can also be assembled as a submachine gun, a rifle, or a light machine gun. Converting the weapon from one system to another requires an Armorer + Logic (8, 1 minute) Extended Test. The weapon system is delivered in a special large briefcase with enough compartments to hold all the weapon's components. Breaking down the weapon into its parts for transportation or storage or rebuilding it into one of the configurations requires the same Extended Test with a Threshold of 5.

All AUG-CSL configurations have an integral top-mounted laser sight, a barrel-mounted gas-vent system that provides 1 point of recoil compensation, and a rigid stock (giving the SMG configuration an additional point of recoil compensation).

The configurations require different skills to be used properly: Automatics for the assault rifle and submachine gun configuration, Heavy Weapons for the LMG configuration, and Longarms for the rifle configuration. All configurations use assault rifle ammunition but different ammo clips.



FIREARMS ASSAULT RIFLES • SPORT RIFLES

SPORT RIFLES

Sport rifles can be equipped with top-, barrel-, and underbarrel-mounted accessories, unless otherwise noted. A character firing a sport rifle uses the Longarms skill.

Mannlicher Wildhüter: The "Wildhüter" ("game warden") rifle is the most recent model from the renowned Austrian weapon manufacturer Steyr-Mannlicher. Besides having a 25-year manufacturer's warranty on relevant weapon parts, this high-quality bolt-action hunting weapon comes with a top-mounted imaging scope and a shock pad inconspicuously integrated into the walnut wood stock.

Remington 750 / Remington 950: These rifles have been especially popular with hunters for the past 60 years. Both feature an extremely reliable bolt-action loading mechanism and a top-mounted imaging scope but may not mount underbarrel accessories.



Sport Rifles	Damage	AP	Mode	RC	Ammo	Availability	Cost
Mannlicher Wildhüter	8P	-1	SS	—	6 (c)	7R	1,200¥
Remington 750	7P	-1	SS	—	5 (m)	4R	500¥
Remington 950	8P	-1	SS	—	5 (m)	4R	675¥

Sniper Rifles	Damage	AP	Mode	RC	Ammo	Availability	Cost
Ares Desert Strike	8P	-3	SA	(1)	14 (c)	10F	3,350¥
Barrett Model 121	9P	-4	SA	(2)	14 (c)	18F	9,000¥
HK PSG Enforcer	7P	-3	SA	(2)	2 x 12 (c)	12F	4,800¥



FIREARMS SNIPER RIFLES • SHOTGUNS

SNIPER RIFLES

Sniper rifles can be equipped with top-, barrel-, and under-barrel-mounted accessories, unless otherwise noted. A character firing a sniper rifle uses the Longarms skill.

Ares Desert Strike: This sniper rifle is intended for long-range shooting in harsh environments, built without materials or technologies prone to failure. It includes an extended barrel to increase its range. It also comes equipped with a rigid stock with shock pad and a detachable imaging scope.

Barret Model 121: The Barret 121 is a heavy sniper rifle that is primarily used against heavily armored opponents, as well as to destroy valuable (and well-protected) equipment and light armored vehicles. It comes equipped with an integral barrel-mounted silencer, a smartgun system, and a folding bipod.

HK PSG Enforcer: The Enforcer sniper rifle is a high-precision rifle designed for law enforcement agencies. The weapon's most distinguishing feature is the dual-clip system that allows the shooter to switch between the weapon's two ammo clips.

The Enforcer comes equipped with a folding bipod and an imaging scope. The weapon can only fire one clip at a time; it takes a Simple Action to manually select the other clip (or a Free Action if the Enforcer is smartlinked).

SHOTGUNS

Shotguns can be equipped with top-, barrel-, and under-barrel-mounted accessories, unless otherwise noted. A character firing a shotgun uses the Longarms skill. For special rules concerning shotguns, see p. 154, *SR4A*. A shotgun fired in burst mode is subject to double the recoil modifier for any uncompensated recoil (see *Recoil*, p. 152, *SR4A*).

Auto-Assault 16: The AA16 is the latest model of the deadly fully automatic shotgun, ideal for chewing up landscape with lethal suppressive fire. It includes an integral gas vent 2 system for 2 points of recoil compensation. When using flechette rounds for suppressive fire (see p. 154, *SR4A*), the AA16 only uses 10 rounds, instead of the standard 20.

Boyd & Richards Desperado: The Desperado is a short-barreled repeating shotgun whose design is reminiscent of the time when the American West was still wild and untamed. The weapon is built only in limited numbers each year and can be ordered with a wide range of unique design features if the customer has the nuyen to pay for them (including mother-of-pearl inlays, precious metal coatings, and exotic woods or gravures by renowned artists).

The Desperado uses heavy pistol ranges when firing slug rounds and taser ranges for flechette. While it can mount top- and underbarrel accessories, they are rarely seen because they would ruin the Wild West appearance of the weapon.

Defiance T-250: This self-loading shotgun is available either in a normal-length or a short-barreled version. The short-barreled version has a Concealability modifier of +2, a Damage code of 5P, and uses heavy pistol ranges (taser ranges when firing flechette ammunition).

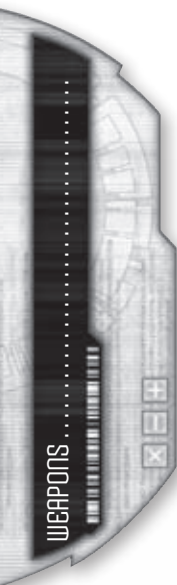
Enfield AS-7: This assault shotgun provides its user with massive firepower. It can be loaded with either 10-round ammo clips or special 24-round ammo drums. To switch between these two feeding mechanisms requires minor manual adjustments that can be done in one full Combat Turn. The Enfield AS-7 comes with an integrated, top-mounted laser sight.

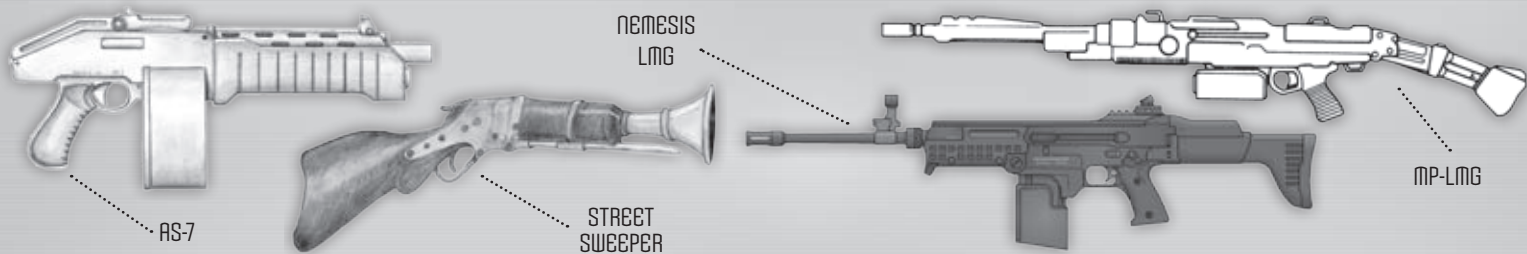
Franchi SPAS-22: Due to its folding stock with shock pad and its internal smartgun system, this assault shotgun is popular with many military and police forces operating in urban combat zones.

PJSS Model 55 Shotgun: The German "Produktionsgemeinschaft Jagd- und Sportwaffen Suhl" (Manufacturing conglomerate for hunting and sports weapons, Suhl) holds high the concept of "weapons of classic styles for a classic sport." The model 55 shotgun is only produced in small numbers and is renowned among European hunters as a high precision and quality weapon for a wealthier clientele.

The weapon's rigid stock comes equipped with an integrated shock pad. Both barrels can be shot at once with a +1 DV and a -1 Recoil modifier.

Shotguns	Damage	AP	Mode	RC	Ammo	Availability	Cost
Auto-Assault 16	7P	-1	SA/BF/FA	2	32 (d)	18R	8,000¥
Boyd & Richards Desperado	7P	-1	SS	—	5 (m)	10R	1,700¥+
Defiance T-250	7P	-1	SA	—	5 (m)	3R	475¥
Enfield AS-7	7P	-1	SA/BF	—	10 (c) or 24 (d)	12R	1,100¥
Franchi SPAS-22	7P	-1	SA/BF	(1)	10 (m)	10R	1,250¥
PJSS Model 55 shotgun	7P	-1	SS	(1)	2 (b)	7R	1,200¥
Street Sweeper	7P(f)	+2	SS	—	1 (b)	5R	175¥





PIREARMS SHOTGUNS • LMGs

Street Sweeper: The so-called “street sweeper” shotgun is not officially distributed by any corporation. It is in fact a jury-rigged shotgun used by sprawl gangers and similar low-level criminals. The weapon’s design has been made popular by several trid combat shows and can easily be downloaded off the Matrix and built by a skilled gunsmith with the appropriate tools.

The Street Sweeper functions similarly to an old-fashioned musket gun and must be manually loaded for each shot with condensed black powder cubes, which requires a Simple Action. The weapon’s muzzle is then crammed full of any small, hard junk or debris within reach (for example, rocks, glass, screws, nails, metal bits, plascrete chunks, and so on), which requires at least another Simple Action to complete (depending on the availability of nearby debris and the gamemaster’s approval). When fired, the Street Sweeper shoots the debris as shrapnel at a fixed spread setting that must be chosen when the weapon is built (see p. 154, *SR4A*). The gamemaster may choose to modify the Street Sweeper’s DV by +1 or –1, depending on the “ammunition” loaded into the barrel.

The Street Sweeper uses taser ranges and cannot mount any accessories. The black powder cubes required for shooting have an Availability of 4 and cost 10¥ for 10 shots.

MACHINE GUNS AND CANNONS

All machine guns and assault cannons can be equipped with top-, barrel-, and underbarrel-mounted accessories, unless otherwise noted. They cannot use silencers or sound suppressors and suffer from double recoil modifiers (see *Recoil*, p. 152, *SR4A*). Firing these weapons requires the Heavy Weapons skill.

Light Machine Guns

Ares MP-LMG: The Ares MP-LMG is the most popular light machine gun, being fielded by militaries all over the world. It comes equipped with an underbarrel built-in laser sight, a barrel-mounted gas-vent 2 system, and a hip-pad bracing system.

GE Vindicator Minigun: The Vindicator is a six-barreled minigun, powered by high-density batteries, that allows for an as-

ounding rate of fire. When activated, the barrels require 1 Simple Action to reach firing speed and make an easily recognizable and audible electric whirring sound.

SA Nemesis LMG: Shiawase Armaments’ Nemesis light machine gun (named after the ancient Greek goddess of divine justice and vengeance) is a high-tech light machine gun that was recently introduced as a support weapon for modern small-scale infantry units. It features an internal smartgun system, a basic safe target system that can be upgraded according to the customer’s wishes (see *Safe Target System*, p. 33) to prevent losses of valuable soldiers due to friendly fire, and a barrel-mounted gas-vent 2 system. The Nemesis is usually deployed as a mobile fire support weapon, using a gyro stabilization system to provide additional recoil compensation (see p. 322, *SR4A*).

Medium Machine Guns

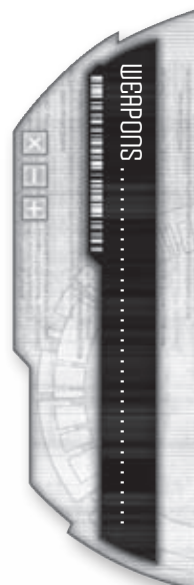
FN MAG-5: The FN MAG-5 medium machine gun is primarily used as an emplaced point-defense weapon and comes equipped with a top-mounted laser sight, a barrel-mounted gas-vent 2 system, and a folding tripod as an underbarrel accessory.

Ultimax MMG: This medium machine gun is very popular within the Pacific area, since it withstands saltwater and humid heat very well. The Ultimax features a detachable tripod.

Heavy Machine Guns

RPK HMG: This heavy Russian machine gun is used by the military of Russia and many Asian countries primarily as a vehicle-mounted support weapon. It comes with a detachable tripod.

Ruhrmetall SF20: This is the standard support weapon of the world’s largest mercenary unit, the MET2000. Because Ruhrmetall paid special attention to the weapon’s assembling points, it is known for its versatility, for its easy adaptation to vehicle mounts, and for accepting attachments of further accessories. The SF20 is delivered with a barrel-mounted gas-vent 3 system and hip pad bracing system.

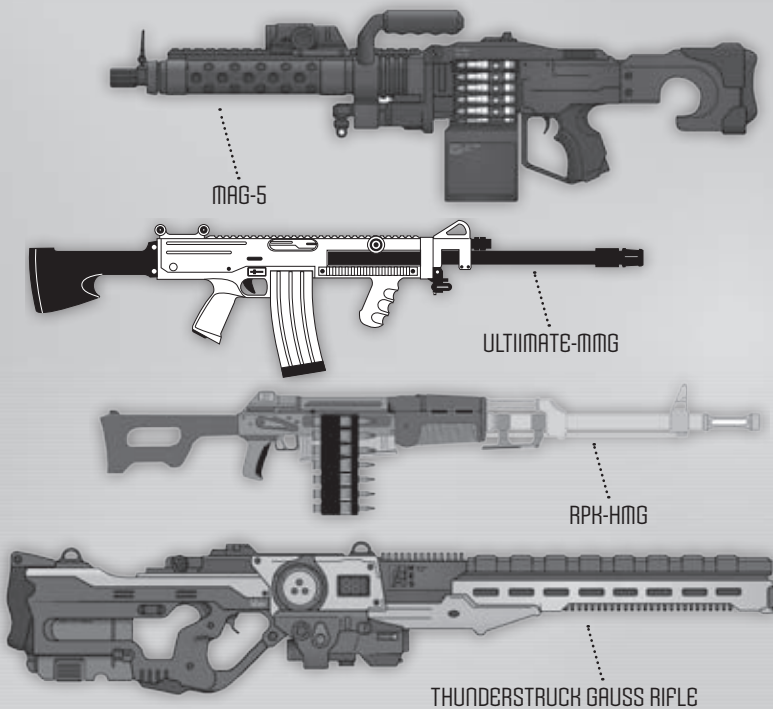


Light Machine Guns	Damage	AP	Mode	RC	Ammo	Availability	Cost
Ares MP-LMG	6P	–1	BF/FA	2 (3)	50 (c) or belt	12F	1,500¥
SA Nemesis LMG	6P	–1	BF/FA	2	60 (c)	17F	3,500¥
GE Vindicator Minigun	6P	–1	FA*	—	50 (c) or belt	16F	5,500¥

* The fixed fire rate is 15 rounds per Complex action instead of 10.

Medium Machine Guns	Damage	AP	Mode	RC	Ammo	Availability	Cost
FN MAG-5	6P	–2	FA	2 (8)	50 (box) or belt	14F	5,500¥
Ultimax MMG	6P	–2	FA	(6)	40 (c) or belt	13F	4,500¥





PIREARMS MMGS • HMGs • ASSAULT CANNONS

Stoner-Ares M107: The M107 heavy machine gun is the standard heavy support weapon of the UCAS Armed Forces. It includes a built-in top-mounted laser sight and a barrel-mounted gas-vent 3 system for better accuracy and reduced recoil. The weapon also comes with a detachable underbarrel-mounted tripod, providing the weapon with excellent full autofire capabilities.

Assault Cannons

Ares Thunderstruck Gauss Rifle: The Thunderstruck rifle is the first man-portable gauss weapon and Ares's newest contribution to the assault cannon market. The weapon's measurements and weight are comparable to those of assault cannons, and while its damage potential is slightly below that of an assault cannon round, the Thunderstruck's rate of fire is higher.

The Thunderstruck consumes both ammunition and energy to power its magnetic accelerators for each round fired. It uses the same peak-discharge battery packs as Ares's laser weapons (see p. 36) and consumes 1 power point per shot. The Thunderstruck can hold one power clip (which provides enough energy to shoot the 10 rounds each ammo clip holds) or draw its energy from external satchel power packs or power backpacks.

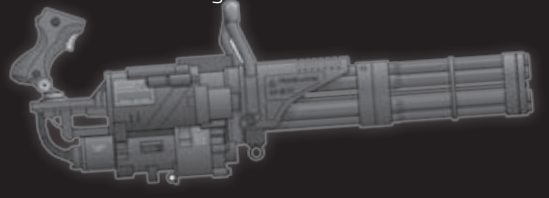
The weapon is fired from the hip and features a shoulder strap and a hip pad bracing system for better balance and recoil compensation, as well as a built-in laser sight.

Miniguns (also called Gatling guns after the weapon's developer) use several rotating barrels and an external power source (usually the power sources of the vehicle it is mounted on or separate high-power batteries) to reach tremendous rates of fire.

Miniguns can only fire full bursts (see p. 154, SR4A) and use 15 bullets for a single full burst instead of the usual 10. Miniguns impose a -14 dice pool modifier upon the attack roll. A narrow burst applies a +14 DV modifier to the attack, while a wide burst applies a -14 dice pool modifier to the defender's dice pool. When used to attack multiple targets, a minigun can hit three targets with two long and one short burst, four targets with one long and three short bursts, or five targets with five short bursts. All other rules for Full bursts as described on page 154, SR4A apply.

If a minigun is employed for suppressive fire, it uses 30 bullets instead of the usual 20. The rules for *Suppressive Fire* remain unchanged (see p. 154, SR4A) with the exception that a character hit by the suppressive fire suffers the Vindicator's base Damage value times 1.5 (round up).

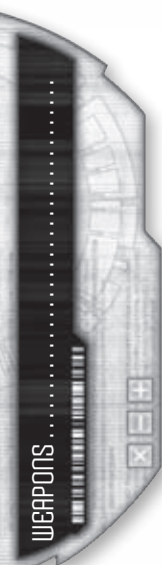
Only light, medium, or heavy machine guns can be constructed as miniguns.



Ares Vigorous Assault Cannon: The Ares Vigorous is an assault cannon whose advantages are also its drawbacks. Ares has perfected the assault cannon's design within the past 20 years, and thus the weapon is often praised for its durability (partly due to its lack of accessories). However, since the enormous recoil the assault rounds produce is usually compensated by at least some recoil reduction systems, many users complain about the massive recoil. Ares's usual answer to these complaints is that there is no need for including the accessories with the basic model, since a wide range of them is available to the licensed customer when the weapon is bought.

Heavy Machine Guns	Damage	AP	Mode	RC	Ammo	Availability	Cost
Ruhrmetall SF20	7P	-3	FA	3 (4)	40 (c) or belt	15F	6,500¥
RPK HMG	7P	-3	FA	(6)	40 (c) or belt	16F	6,000¥
Stoner-Ares M107	7P	-3	FA	3 (9)	40 (c) or belt	15F	7,500¥

Assault Cannons	Damage	AP	Mode	RC	Ammo	Availability	Cost
Ares Thunderstruck Gauss Rifle	9P	-4	SA	(1)	10 (c) + Energy	24F	13,000¥
Ares Vigorous Assault Cannon	10P	-5	SS	—	12 (c)	18F	4,000¥



GRENADE, MORTAR, AND MISSILE LAUNCHERS

Firing grenade, mortar, and missile launchers (as well as rocket launchers) requires the Heavy Weapons skill. Since these weapons vastly differ from other firearms, only certain weapon accessories can be used with each kind of weapon.

Grenade and Mortar Launchers

Grenade launchers can be equipped with any top-, barrel-, and underbarrel-mounted accessories, unless otherwise noted. They fire minigrenades as described on page 324, *SR4A* (see *Grenades, Rockets, and Missiles*).

Mortar launchers fire special mortar rounds (see p. 37) and accept none of the standard weapon accessories. They can only be fired when set up and they use the rules for *Indirect Fire* (see p. 162).

ArmTech MGL-6: The MGL-6 is the pistol version of the popular ArmTech MGL-12 grenade launcher (p. 320, *SR4A*). It cannot be equipped with barrel-mounted accessories.

Enfield GL-67 Grenade Launcher: The Enfield GL-67 is a drum-feed personal grenade launcher. It is popular despite its heavy weight due to its large ammunition capacity and built-in accessories.

It comes with an internal smartgun system, an airburst link, and a shock pad attached to the weapon's rigid stock.

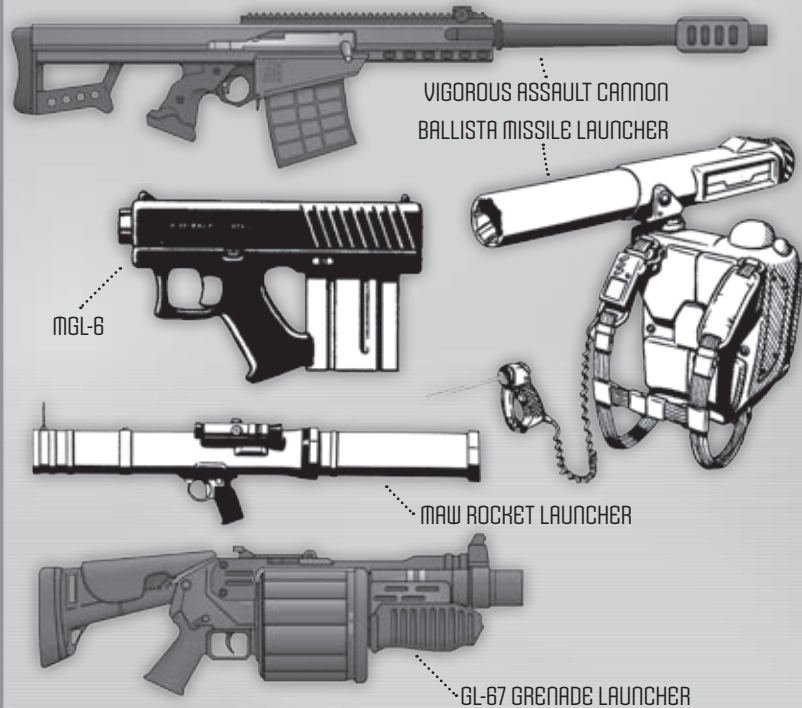
M-12 Portable Mortar System: The M-12 is an example of the classic portable mortar systems used by military forces since the First World War. It consists of a long barrel tube ending in a round base with four prongs that dig into the earth to stabilize the unit. A bipod brace props the barrel at the desired firing angle.

The M-12 must be set up before firing, a process which takes about 3 minutes, while breaking down the weapon takes about half that time. The disassembled mortar can be carried by a troll or two other metahumans, requiring a (combined) Strength of 6 to carry.

It fires a maximum of two mortar rounds per complete Combat Turn and can be fired either by sight (using data from a spotter) or using guidance from a target designator (see p. 34). Determine scatter by using the Missile column of the *Scatter table* (see p. 155, *SR4A*).

Rocket and Missile Launchers

A character firing a rocket or missile launcher uses the Heavy Weapons skill. Unless otherwise noted, all rules for *Rockets and Missiles* (see p. 324, *SR4A*) apply. Launchers cannot mount standard firearm accessories unless otherwise noted.



FIREARMS GRENADE & MISSILE LAUNCHERS

Arbelast II MAW Rocket Launcher: This single-shot medium anti-armor weapon (MAW) is used to fire unguided rockets only, since it lacks the equipment to lock the more advanced missiles onto a target or guide them by other means (see *Rockets and Missiles*, p. 324, *SR4A*). The Arbelast weapon system consists of the firing unit and a rigid canister that holds the rocket and is discarded after the rocket has been fired. Attaching the canister to the firing unit or removing it requires a Simple Action. Once both components are attached to each other, the rocket inside the canister is ready to be fired.

The firing unit includes an imaging scope and easily fits inside a shoulder bag or similar repository. Rockets must be purchased within the canisters (adding 50¥ to the rocket's cost); these also serve as storage boxes.

Ballista Missile Launcher: The Saeder-Krupp-manufactured Ballista is a semi-autonomous backpack missile launcher. It consists of an armored backpack unit that holds the weapon's magazine and electronics, and a small top-mounted missile tube that adjusts itself toward the current target. The Ballista is especially built for direct and indirect missile fire and comes with a handheld laser target designator (see p. 34) that can be linked to the backpack unit either by fiberoptic cable or via the bearer's

Grenade and Mortar Launchers	Damage	AP	Mode	RC	Ammo	Availability	Cost
ArmTech MGL-6	Grenade	—	SA	—	6 (c)	10F	1,500¥
Enfield GL-67 Grenade Launcher	Grenade	—	SS	1	20 (d)	14F	4,000¥
M-12 Portable Mortar System	As Mortar Round	—	SS	—	1	16F	2,250¥



Ranges (in meters)

Mortar

Short (+0)

150–300*

Medium (-1)

301–1,000

Long (-2)

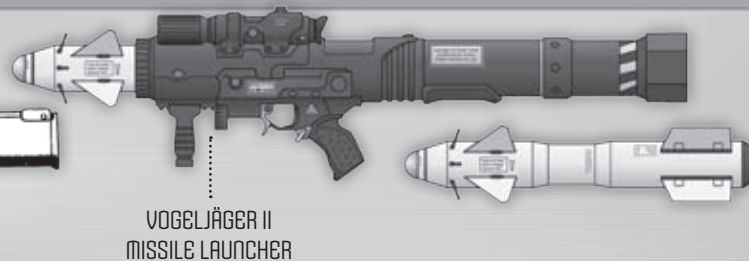
1,001–4,000

Extreme (-3)

4,001–6,000

* see Grenade Launcher Minimum Range, p. 145, *SR4A*





FIREARMS ROCKET & MISSILE LAUNCHERS

PAN. A Ballista missile launcher can also be programmed to accept orders from other target designators or one or more PANs (see *Subscriptions*, p. 224, *SR4A*).

The backpack's magazine can hold 4 Ballista missiles of any kind (each type of missile must be chosen before firing). The magazine can be replaced either by the backpack's bearer (which requires the removal of the backpack) or by a second person. Replacing the magazine requires 3 Combat Turns, while the backpack unit takes 10 Complex Actions to put on or to take off.

The Ballista may use only special Ballista missiles (see p. 35) and cannot mount any other accessories.

Great Dragon ATGM Launcher: This anti-tank guided missile (ATGM) launcher is actually a stripped-down version of a popular air-to-ground missile system. It fires from a tripod-mounted reusable canister and features an integrated optical imaging scope (see p. 322, *SR4A*) but cannot mount other accessories.

The Great Dragon fires special anti-vehicle missiles with a fixed Sensor rating of 3 (see p. 35).

M79B1 LAW Rocket: The M79B1 is a single-shot, disposable rocket fired from a shoulder mount. The weapon comes in a telescoping cylinder that can only be fired when fully extended. This light anti-armor weapon (LAW) is the most common weapon of its class in the world, since it is usually given to infantrymen in any well-equipped army or paramilitary security force when difficulties with armored vehicles are expected.

The M79B1 fires an anti-vehicle rocket (see p. 325, *SR4A*).

Phalanx Systems Vogeljäger II Missile Launcher: The Vogeljäger ("bird hunter") is a man-portable launcher especially designed to fire anti-air missiles, and has become the nightmare of every ground-attack aircraft pilot.

The launcher comes equipped with an imaging scope with low-light and thermographic vision enhancements. Its special control unit provides a +1 dice pool modifier against aerial targets and a -2 dice pool modifier against ground targets when firing missiles. These modifiers stack with the modifiers provided by surface-to-air-missiles (see p. 38).

WEAPON ACCESSORIES

Firearms can be equipped with a wide range of accessories, from a simple sling to help stabilize the weapon to underbarrel flamethrowers or even a "weapon personality."

For additional rules and weapon accessories see *Firearm Accessories* on p. 322, *SR4A*.

GENERAL ACCESSORIES

Advanced Safety: The advanced safety system uses biometric criteria or an RFID or PAN signal to prevent the weapon from being abused. When the weapon is picked up, the safety system compares the holder's palmprint to up to a dozen authorized users stored in the system's firmware and only deactivates the safety if the print matches. If the match fails, the safety remains on and the gun cannot be fired.

The system can also be programmed to fire only when within 1 meter of a certain PAN or RFID signal, though this kind of safety is discouraged by the system's manufacturer because they don't consider it safe enough. Changing the programmed profiles of an advanced safety system requires an Admin account (see *Access Privileges* p. 225, *SR4A*) and a Computer + Logic (10, 5 minutes) Extended Test.

Ammo Box/Drum: Ammo boxes or drums store ammo belts for belt-feed weapons in a space efficient manner, are easy to carry, and prevent the ammo belts from getting dirty or entangled. Available for 100-, 200-, and 250-round belts.

Bayonet: A bayonet is a long knife designed to be attached under the barrel of a rifle-sized weapon. Even in the year 2070, bayonets are still used by military forces for intimidation and defense against melee attacks or as last-resort weapon if a soldier runs out of ammunition. Bayonets may be used either fixed to a rifle-sized weapon (see the Blades melee weapons table, p. 14) or detached and wielded as a standard knife (p. 315, *SR4A*), using the Blades skill in both cases.

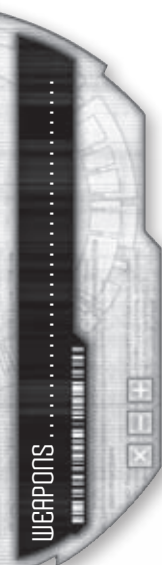
Flashlight: This tactical light illuminates a cone-shaped area projecting from the equipped weapon outward up to a distance of

Missile Launchers	Damage	AP	Mode	RC	Ammo	Availability	Cost
Arbelast II MAW	Rocket	Rocket	SS	—	1	14F	1,200¥
Ballista	Missile	Missile	SA	—	4 (m)	19F	7,500¥
Great Dragon ATGM Launcher	Missile	Missile	SS	—	1 (ml)	17F	1,200¥
M79B1 LAW	12P	-2/-6*	SS	—	1	12F	750¥
Phalanx Vogeljäger	Missile	Missile-	SS	—	1	22F	8,750¥

* AP of -2 against people, -6 against vehicles.

Ranges (in meters)	Short (+0)	Medium (-1)	Long (-2)	Extreme (-3)
Ballista	20-100**	101-500	501-3,000	3,001-5,000

** see Grenade Launcher Minimum Range, p. 155, *SR4A*



25 meters with a base of 4 meters at its end. For all versions of the flashlight, apply the Partial Light Visibility modifier (see p. 136, *SR4A*) to tests made against targets illuminated by the flashlight. The flashlight's lens is recessed, making it difficult for those not directly in the light's path to trace its source. A character looking directly into the light will suffer a Glare Visibility modifier (see p. 136, *SR4A*) if he would be able to benefit from the kind of light the flashlight is providing under normal circumstances.

Flashlights are available for normal light, as well as for low-light and thermographic vision only. The low-light version uses soft red light to illuminate an area for characters using low-light vision and provides no bonus to characters without this kind of vision. The infrared version provides similar illumination for characters using thermographic vision.

The flashlight has no effect if the Visibility modifiers are already Partial Light or better.

Guncam: A guncam is a miniaturized trideo camera that records whatever the gun is targeting. It can either be linked to the character's PAN, to an internal weapon commlink, or subscribed to another external receiver within the guncam's Signal range. A guncam starts with a Signal rating of 2 which can be increased according to the usual rules for *Upgrading Devices* (see p. 222, *SR4A*).

Safe Target System: The Safe Target system prevents a character from accidentally shooting at "friendly" targets. The basic system consists of modifications to the weapon's firing mechanism and a microcomputer subscribed to the weapon's PAN connection. The microcomputer constantly scans for a programmed RFID or PAN profile and determines the relative proximity and location of the tags that fit into this profile. If the gun is pointed at or within a radius of 1 meter of a target marked as "safe," the system engages the gun's safety and prevents or holds fire. If the gun is pointed away from the safe target, the safety is automatically disengaged. Note that this feature also prevents the weapon from shooting if anything marked as safe is in front or behind of the actual target.

Instead of a certain profile, the Safe Target system can be programmed with the GPS data of a fixed location where the weapon can fire or cannot be fired (for example, a weapon that can only be fired on Council Island or another that cannot be fired within a special building). The basic system can also be upgraded to accept more profiles or GPS data or with special image recognition routines. To include the image recognizing add-on, the weapon must either be smartlinked or have a guncam modification. The image recognition software can be programmed with either general information (for example, preventing the weapon from firing at anybody wearing a Knight Errant uniform) or the biometric features of a single person. It can also be upgraded to accept more "safe images."

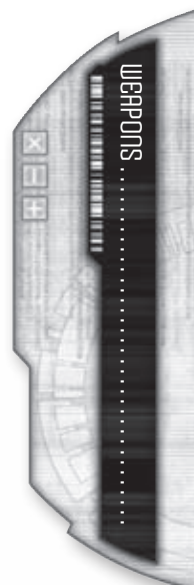
The Safe Target system can be turned on and off with a Simple Action, while changing the programmed profiles of a Safe Target system requires an Admin account (see *Access Accounts* p. 225, *SR4A*) and a Computer + Logic (8, 1 minute) Extended Test.

Sling: Slings are usually made from nylon or cloth and are attached to the barrel and stock of a weapon to allow users to hang the gun from their shoulders. This stabilizes the weapon when the user holds it out, making it less likely that she will drop it in combat or other situations. Slings can be attached to submachine guns, shotguns, assault cannons, and all kinds of rifles and machine guns.

Underbarrel Bola Launcher: This accessory can be mounted under a rifle-sized firearm and shoots special rounds of two-balled bolas to entangle a target. The rounds use the same rules as a standard bola (see p. 40). The Strength of the underbarrel bola launcher for the purposes of Knockdown Tests is 5. The weapon requires the Exotic Ranged Weapon skill (see p. 122, *SR4A*) and uses heavy pistol ranges.

Underbarrel Flamethrower: Modifying a flamethrower to add a specially designed nozzle allows a flamethrower to be mounted under the barrel of a rifle-sized or larger firearm, allowing the user to wield the firearm simultaneously with the flamethrower and switch between them. See p. 40 for further information about flamethrowers.

General Accessories	Mount	Availability	Cost
Advanced Safety System	—	4	600¥
Ammo Drum/Box	—	4	25¥
Flashlight			
Standard	Top/Under	2	50¥
Low-Light	Top/Under	4	200¥
Infrared	Top/Under	6	400¥
Bayonet (on rifle)	Barrel	3	40¥
Guncam	Top/Under	5	375¥
Safe Target System	—	6	750¥
per additional set of RFID or GPS data	—	6	+25¥
Image Recognition software	—	8	+200¥
per additional Image	—	8	+5¥
Sling	—	—	15¥
Underbarrel			
Bola Launcher	Under	8R	350¥
Flamethrower	Under	as flamethrower +2	as flamethrower +200¥
Grapple Gun	Under	10R	550¥
Weapon Commlink	—	—	1,000¥ + Commlink Cost
Weapon Personality	—	8	250¥



Underbarrel Grapple Gun: This accessory is a complete grapple gun (p. 337, *SR4A*) mounted under the barrel of a rifle-sized or larger firearm.

Weapon Commlink: A version of the commlink (see p. 221, *SR4A*) built into a weapon, thus making it the center of the user's PAN. The weapon commlink is often combined with the weapon personality option.

Weapon Personality: A weapon personality is a software personality for your gun's computer, giving it a metahuman-like interface to communicate with via your PAN.

RECOIL COMPENSATORS

Foregrip: A foregrip is a kind of pistol grip that is installed underneath a weapon's barrel to allow a character to use both hands to stabilize the weapon while firing and reduce the lift of the barrel. A foregrip provides 1 point of recoil compensation while firing Full Bursts. Foregrips can only be attached to submachine guns, assault rifles, and shotguns.

Hip Pad Bracing System: The hip pad bracing system combines a shock-absorbing pad system with a sling or shoulder-strap system to balance heavy weapons and brace them against the wearer's hip, reducing the weapon's recoil by 1.

Stock: Rigid or folding stocks can be added to pistols, machine pistols, and submachine guns. Stocks provide 1 point of recoil compensation when used while shooting. Folding or unfolding a folding stock requires a Simple Action.

Underbarrel Weight: This weapon accessory is simply a weight attached to the underside of the barrel, to serve as a counterweight to the lift of the barrel during firing. It provides 1 point of recoil compensation while firing Full Bursts.

TARGET DESIGNATORS

Target designators are used to mark an enemy with reflected energy, allowing weapons equipped with seeker gear to home in on a target (see *Indirect Fire*, p. 162). Each has a Signal rating of 1-6. Their Signal rating determines their range.

Laser Designator: This device reflects an infrared laser light off the target, visible only to characters with thermographic vision. Two versions are available—one mounts like a laser sight on a weapon and the other is a hand-held model. Smoke is very effective at blocking the laser beam; apply double the modifiers for smoke when making a Spotting Test with a laser designator.

Microwave Designator: This hand-held device reflects microwaves off the target. Chaff (strips of metallic foil released into the atmosphere) is very effective at blocking microwaves. If chaff is released between a microwave designator and a target, apply a dice pool modifier between 1 and 4 to the Spotting Test.

Radar Designator: A radar designator is equipped with a fold-out tripod that requires a Complex Action to set up. It reflects a radar signal off the target. Chaff blocks radar beams in the same way that it affects a microwave designator, and radar designators are also vulnerable to jamming.

Recoil Accessories	Mount	Avail	Cost
Foregrip	Under	2	100¥
Hip Pad Bracing System	—	4	200¥
Stock	—	4	150¥
Underbarrel Weight	Under	2	75¥

AMMUNITION

FIREARMS AMMUNITION

The following kinds of ammunition are available for each firearm unless otherwise noted. The same rules as for the other types of ammunitions in *SR4* (see *Ammunition*, p. 323, *SR4A*) apply.

AV Rounds: Anti-vehicular (AV) rounds are high-speed projectiles with a solid penetrator core usually made of wolfram, depleted uranium, or another exceptionally dense metal. They resemble APDS rounds in many aspects, except that they are optimized to penetrate vehicle armor rather than personal ballistic armor.

Capsule Rounds: Capsule rounds are special gel rounds (see p. 323, *SR4A*) that also carry a liquid within them. Upon impact, the round breaks open and splashes the target with the liquid. While originally used to deliver paint, dye, or ink for games or target practice, capsule rounds nowadays are often used to deliver toxins, drugs, or substances that the target is allergic to (see p. 83 of this book and pp. 80 and 254, *SR4A*).

Since they are less massive, capsule rounds do not modify the target's Knockdown test like normal gel rounds do. The availability and costs listed are for capsule rounds filled with paint, ink, or another common and harmless material. For capsule rounds filled with toxins or compounds, adjust the costs and availability by adding those for the chemical to those for the capsule round.

Frangible Rounds: These metal and polymer rounds were designed for law-enforcement and counter-terrorist units operating in areas containing highly sensitive hardware. The bullets are made to damage unarmored targets but break up almost instantly when hitting solid surfaces.

Frangible rounds are resisted with the higher rating of either Ballistic or Impact armor. Double all Barrier ratings against this kind of ammunition.

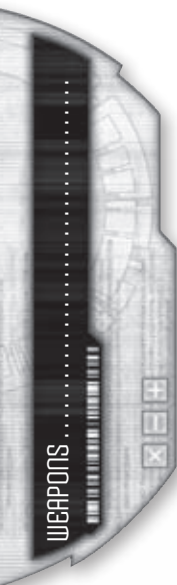
Hi-C Plastic Rounds: Hi-C plastic rounds are composed of densiplast and are undetectable by magnetic anomaly detectors (MADs). The propellant charge of these rounds is especially powerful to provide the densiplast bullet with the necessary punch to reach almost the same ballistic capabilities as regular ammunition.

Any uncompensated recoil from firing Hi-C rounds is doubled. This may add up with the recoil multiplier of heavy weapons (see p. 152, *SR4A*). Due to their lighter weight, the Damage Value from these rounds is reduced by 1 at long and extreme ranges.

Hollow Point Rounds: Hollow point bullets are similar to standard rounds except that the tip of the bullet is indented. When a hollow point strikes a target, its shape causes the bullet's tip to peel back, expanding its surface area and allowing it to transfer more kinetic energy.

Silver Bullets: Silver bullets replace a large quantity of a standard bullet with silver to harm critters or other magical or mystical beings. When a silver bullet hits a being that is allergic to silver (for example, shapeshifters and banshees), the Damage Value of the

Target Designators	Mount	Avail	Cost
Laser Designator			
Weapon-mounted	Top/Under	6	Rating x 50¥
Hand-held	—	6	Rating x 50¥
Microwave Designator	—	8	Rating x 200¥
Radar Designator	—	8	Rating x 200¥



attack is increased by the usual rules of the *Allergy* negative quality (see p. 94, *SR4A*) and any other negative side effects occur (based upon the severity of the allergy).

Since many beings inhabiting the Sixth World are allergic to certain substances, a wide range of projectiles with allergic substances and alloys are manufactured in small numbers, with silver bullets being just the most well known. It is up to the gamemaster to determine the availability, price, and other statistics for such kinds of ammunition.

Subsonic Ammo: Subsonic ammunition features a lighter charge and a slightly smaller bullet than regular rounds. This slows the bullets' muzzle velocity below the speed of sound, reducing the sound of the weapon being fired and making it easier to silence.

Subsonic ammunition applies a -1 dice pool modifier on all Perception Tests to notice the weapon's use or locate the firing position. This dice pool modifier increases to -2 if a silencer (see p. 322, *SR4A*) or sound suppressor (see p. 322, *SR4A*) is used. Reduce the weapon's range by 20%.

Tracker Rounds: These rounds include a special RFID tag inside the bullet designed to mark a hit target. If the target receives damage from the hit, the tracker round penetrates the target's armor and remains within the body of the target until it is removed. Tracker rounds contain either security or stealth tags (see p. 329, *SR4A*) that can be used to track the target's movement, home in on drones or artillery fire, and any other possibilities for using tags.

Shotgun Rounds

Flare Rounds: Flare rounds are rarely used for attack but rather are intended to be shot into the air and act as a signal or location marker. After 60 meters of flight, they explode into a large shower of burning sparks. Targets struck by a flare round may catch fire (see p. 164, *SR4A*) but receive a +2 dice pool modifier to their damage resistance test.

Shock Lock Rounds: These slugs are made of a ceramic and metal composite designed to fragment and disintegrate upon impact. Shock lock rounds are designed to shatter a door's lock or hinge and halve the Barrier ratings of doors or similar barriers when used to destroy them (see *Destroying Barriers*, p. 166, *SR4A*). Against other targets, treat shock lock rounds as standard explosive rounds.

MISCELLANEOUS AMMUNITION

Miscellaneous ammunition includes special types of ammunition usually used in exotic or otherwise unique weapons. This section also covers specialized kinds of rockets and missiles that are custom tailored toward certain launchers.

Miscellaneous ammunitions cannot be used in types of weapons other than those specified unless otherwise noted.

AV Assault Cannon Rounds: These assault cannon rounds are specifically designed to be effective against vehicle armor.

Ballista Missiles: These small missiles can only be fired by the Ballista missile launcher (see p. 31). Due to the small size of Ballista missiles (in comparison to normal missiles) the Damage Value Reduction of all Ballista missiles is -7/m (see *Blast Effects*, p. 155, *SR4A*) but due to the high precision of the Ballista system, the missile's scatter is reduced by 2 meters per net hit rolled on the attack test (see *Rocket and Missile Scatter*, p. 156, *SR4A*).

The Ballista missile Mk I is actually an unguided armor-piercing rocket, while the Mk II is a semi-smart missile with a fixed Sensor rating of 4 (see *Resolving Rocket and Missile Fire*, p. 156, *SR4A*) that must be guided toward its target by a laser, microwave, or radar designator (see *Target Designators*, p. 34). Both types of missiles can be used for either direct or indirect fire (see *Indirect Fire*, p. 162).

Flamethrower Tank: Flamethrower fuel tanks are available as backpack- or weapon-mounted tanks, depending upon the flamethrower (see *Flamethrowers*, p. 40). They count as Barriers with an Armor rating of 12 and a Structure rating of 8 when resisting damage (see *Barriers*, p. 166, *SR4A*); if they are breached by an explosion or other attack, they will explode in a ball of fire with a Damage Value equal to the number of shots left and a blast radius of -2/m, likely to set everything aflame within that blast radius (using the Fire damage rules, p. 164, *SR4A*).

Refilling an empty fuel tank takes 1 minute per shot.

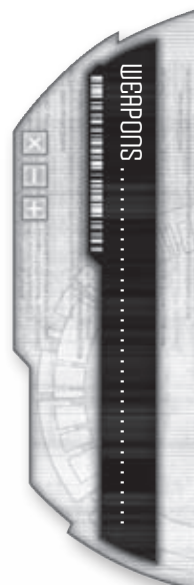
Gauss Rifle Rounds: These ferromagnetic tungsten alloy darts are fired by the Ares Thunderstruck gauss rifle (see p. 30).

Great Dragon Anti-Tank Guided Missiles: These Sensor Rating 3 anti-vehicle missiles may only be fired by the Great Dragon ATGM Launcher (see p. 32).

Ammunition, per 10 shots	Damage Mod.	AP Mod.	Armor used	Availability	Cost
AV Rounds	—	-4/-6*	B	18F	120¥
Capsule Rounds	— (Stun)	+2	I	4	30¥
Frangible Rounds	—	+2	B/I	6R	50¥
Hi-C Plastic Rounds	-/-1**	—	B	8F	150¥
Hollow Point Rounds	+1	+2	B	6F	50¥
Silver Bullets	—	+2	B	12R	250¥
Subsonic Rounds	—	+2	B	10F	40¥
Tracker Rounds					
Security Tag	—	—	B	6R	150¥
Stealth Tag	—	—	B	8R	75¥
Shotgun Rounds, per 10 shots					
Flare Rounds	-2	+2	I	6	25¥
Shock Lock Rounds	+1	—	B	10F	70¥

* = AV rounds have an AP of -4 against people, -6 against vehicles and Barrier ratings (see p. 157, *SR4A*).

** = The Damage Value of Hi-C plastic rounds at long and extreme ranges is reduced by 1.



Standard Gyrojet Rockets: These are miniature rockets that may only be fired from a gyrojet pistol (see p. 40). They are propelled by a reactive alkaline fuel and are designed to explode upon impact.

Gyrojet Plus Rockets: These rockets add an improved fragmenting warhead to the gyrojet rocket, increasing the rocket's damage. The rules for *Explosive Rounds* (see p. 323, *SR4A*) apply to this ammunition; in all other aspects they are similar to Standard Gyrojet Rockets.

Gyrojet Taser Rockets: This is an adhesive variant of the miniature rocket that replaces the usual warhead with a battery pack similar to Stick-n-Shock rounds (see p. 324, *SR4A*). In all other aspects they are similar to Standard Gyrojet Rockets.

Gyrojet Tracker Rockets: These rockets fire special RFID tags with the rocket to mark their target. The rules for *Tracker Rounds* (see p. 35) apply to this ammunition; in all other aspects they are similar to Standard Gyrojet Rockets.

Peak-Discharge Battery Packs

These are special high-power battery packs used in the Ares Thunderstruck gauss rifle and laser weapons (see p. 30 and 41) to provide them with the tremendous amount of energy they require for each shot. Each peak-discharge battery pack can hold a certain number of power points (the number of power points required for each shot depends on the weapon used) and may be recharged by plugging them into the local energy grid. They recharge one power point every 30 minutes.

For purposes of reloading, a power clip is equal to a removable clip, while satchel and backpack power packs are linked to the weapon with a self-recoiling cable attached to the power pack. Inserting or removing the cable takes a Simple Action.

Power Clip: This battery pack is about the size of an ammo clip and carries enough charge to power a laser pistol or laser rifle.

Satchel Power Pack: Satchel power packs hold a much greater charge than the smaller power clips. About the size and weight of a full canteen, they are usually attached to a belt or a combat vest.

Power Backpack: Power backpacks hold the greatest charge (even sufficient for powering emplaced support lasers for a short time) and are also the largest power packs, roughly the size of a backpack.

GRENADES, MORTAR ROUNDS, ROCKETS, AND MISSILES

This section covers all kinds of grenades, mortar rounds, and also rockets and missiles that do not require a special launcher to be fired (see *Miscellaneous Ammunition*, p. 35).

For grenades, rockets, and missiles the standard rules as specified in *SR4A* (see *Grenades, Rockets, and Missiles*, p. 324 *SR4A*) apply unless otherwise noted.

Grenades

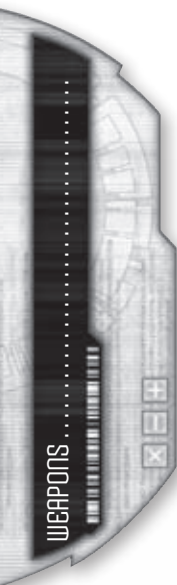
Flare Grenade: Flare grenades are intended to be used as signal markers. They do not detonate, but burn with an intensely bright light for 10 minutes. The flare grenade negates any visibility modifiers for darkness in a 30-meter radius, but also imposes the Glare visibility modifier (see p. 136, *SR4A*) to anyone looking in its direction (flare compensation eliminates the latter modifier). Flare grenades become hot to the touch but can be held safely and will not ignite any fires under normal circumstances.

Flash Grenade: This grenade produces a blinding flash of light upon detonation to blind opponents. Anyone looking in the

Miscellaneous Ammunition (per 10 shots)	Damage	AP	Blast	Availability	Cost
AV Assault Cannon Rounds	—	-1/-3*	—	20F	2,500¥
Ballista Missiles					
Ballista Mk I	14P	-2/-6	-7/m	24F	1,000¥ (per missile)
Ballista Mk II	14P	-2/-6	-7/m	28F	2,500¥ (per missile)
Flamethrower Tank	—	—	—	As Flamethrower	Ammo capacity x10¥
Flamethrower Fuel Mixture	—	—	—	14F	5¥ (per shot)
Gauss Rifle Rounds	—	—	—	18F	350¥
Great Dragon Anti-Tank Missiles	18P	-2/-6	-4/m	27F	3,000¥ (per missile)
Gyrojet Rockets					
Standard Gyrojet Rockets	—	—	—	12F	80¥
Gyrojet Plus Rockets	+1	—	—	16F	200¥
Gyrojet Taser Rockets	6S(e)	-half	—	14F	300¥
Gyrojet Tracker Rockets					
with Security Tag	—	—	—	14F	200¥
with Stealth Tag	—	—	—	16F	125¥

* = AV Assault Cannon Rounds have an additional AP of -1 against people, -3 against vehicles.

Peak-Discharge Battery Packs	Power Points	Availability	Cost
Power Clip	10	14F	300¥
Satchel Power Pack	30	16F	750¥
Power Backpack	80	20F	2,200¥



direction of an exploding flash grenade receives a -5 dice pool modifier on attack tests due to the intense light. Reduce this modifier by 1 for every 5 meters from the point of the grenade's ignition (flare compensation reduces this modifier by an additional 2). This modifier fades away at the rate of 1 point per Combat Turn.

Incendiary Grenade: Incendiary grenades do not explode, but instead start to burn, generating intense heat and spewing flames and burning sparks within a 10-meter radius. Anything flammable within this radius may catch on fire at the gamemaster's discretion (see *Fire Damage*, p. 164, *SR4A*). Incendiary grenades will continue to spark and burn for 10 Combat Turns. The burning grenade and its sparks negate any visibility modifiers for darkness in a 30-meter radius, but also impose the Glare visibility modifier (see p. 136, *SR4A*) to anyone looking in its direction (flare compensation eliminates the latter modifier). Anyone touching or moving within 1 meter of a burning incendiary grenade must resist a DV of 4P *Fire Damage* (see p. 164, *SR4A*).

Ink Grenade: Intended for underwater use, ink grenades release a cloud of blank ink when they explode with a 5-meter radius. This ink cloud inflicts a -4 Visibility modifier for those caught inside it, cumulative with other underwater vision modifiers.

Splash Grenade: This grenade explodes in a wave of chemical spray that covers the blast radius. Any chemical payload that can be dissolved in a liquid can be delivered to its target by using a splash grenade (see p. 83 and p. 254, *SR4A*, for the use of toxins, drugs, and other chemicals.)

White Phosphorus Grenade: These grenades are packed with white phosphorous, a chemical that burns at very high temperatures when exposed to air. They cover the blast area with the burning chemical that adheres itself to whatever it touches and burns until it is completely consumed.

The first Damage Value listed represents the initial blast effect. Anything caught within the blast radius will be covered with various amounts of white phosphorus and must resist the initial DV reduced by the distance from the blast point (see *Blast Effects*, p. 155, *SR4A*). The white phosphorus will continue to burn for 10 Combat Turns, causing the second Damage Value listed (or the initial DV if it was reduced to less due to the distance from the blast point) at the end of each subsequent Combat Turn. White phosphorus grenades deal Fire damage, so the appropriate rules apply unless otherwise noted (see p. 164, *SR4A*). These grenades also create thick clouds of smoke, creating the same effect as a smoke grenade (see p. 324, *SR4A*).

White phosphorous is difficult to extinguish because it reignites whenever exposed to air. If an affected area or target can be completely cut off from air, the chemical's effects cease at the end of the next Combat Turn.

Mortar Rounds

Mortar rounds may only be fired by mortar launchers (see p. 31). They are drop-fired down the mortar barrel and ignited by a pin at the barrel's bottom. Mortar rounds are fin-stabilized in flight, and arm only after they have cleared the barrel.

Anti-Vehicle Rounds: These rounds contain a warhead designed to exploit weak points on vehicles and other armored structures.

Fragmentation Rounds: This is an anti-personnel warhead for use against people. It is similar in function to fragmentation grenades and rocket warheads.

Gas/Splash Rounds: These warheads either release a wave of chemical spray or a cloud of gas over the target area. With the exception of an increased area of effect and duration of approximately 6 Combat Turns, the rules for gas grenades apply (see p. 324, *SR4A*).

High Explosive Rounds: High explosive rounds are the standard warhead used in mortars. They are similar in function to high explosive grenades and rocket warheads.

Incendiary Rounds: For these mortar rounds, the same rules as for incendiary grenades (see p. 37) apply, except that they have a greater area of effect and last for 12 Combat Turns.

Seeker Rounds: Seeker rounds are sophisticated mortar rounds capable of homing in on a target that has been marked by a laser, microwave, or radar target designator (see *Indirect Fire*, p. 162). Every mortar round listed is also available as a seeker round.

Seeker Heads: Rockets or missiles with Seeker heads are built to home in on a target that has been marked by a laser, microwave, or radar target designator and thus allow the rocket or missile to be used for Indirect Fire (see p. 162).

Smoke Rounds: These rounds deploy a smoke cloud with a diameter of 30 meters that lasts for approximately 10 Combat Turns, depending on air conditions. With the exception of the increased area and duration, these rounds are similar to smoke grenades (see p. 324, *SR4A*).

Solar Rounds: Solar rounds are used in night maneuvers to light the battlefield. Except for their greater area of effect, the same rules as for flare grenades (see p. 36) apply.

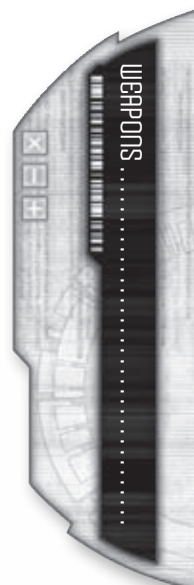
Thermal Smoke Rounds: With the exception of an increased area of effect and duration similar to the smoke mortar rounds, the rules for thermal smoke grenades apply (see p. 325, *SR4A*).

White Phosphorus Rounds: White phosphorous mortar rounds have the same effect as white phosphorous grenades (see p. 37), except for their higher Damage Value and increased area of effect.

Rockets and Missiles

Rockets and missiles use the standard rules as described in *SR4A* (see *Rockets and Missiles*, p. 325, and *Resolving Rocket and Missile Fire*, p. 156, *SR4A*) unless otherwise noted.

Grenades	Damage	AP	Blast	Availability	Cost
Flare	—	—	—	4	40¥
Flash	—	—	Special	6R	30¥
Incendiary	Special	—	Special	8R	50¥
Ink	—	—	—	6	35¥
Splash	Chemical	—	10 m Radius	4 + Chemical	20¥ + Chemical
White Phosphorus	8P/4P	-half	-1/m	12F	120¥



All rockets presented here may also be bought as missiles (see p. 325, *SR4A*).

Inferno Rocket: The so-called Inferno rocket is an infamous type of weapon. The rocket's warhead contains a large amount of a highly flammable mixture closely related to napalm. When the warhead explodes, it sets an area of about 12 meters diameter aflame.

Inferno rockets deal Fire damage (see p. 164, *SR4A*). Due to the napalm-like mixture, almost everything caught in the blast area will be set on fire for at least a short period of time (gamemaster's decision).

MP Jabberwocky II Munitions: These famed rockets and missiles, produced by Loral-Vought, carry a payload of electronic warfare transponders instead of an explosive warhead. The transponders are dispersed upon impact and may be set to activate upon dispersal or after a specified delay, functioning as area jammers for a period of 20 Combat Turns (1 minute; see *ECM and ECCM*, p. 245, *SR4A*, and area jammers, p. 329, *SR4A*).

Seeker Heads: Rockets or missiles with a Seeker heads are built to home in on a target that has been marked by a laser, microwave, or radar target designator and thus allow the rocket or missile to be used for indirect fire (see p. 162). This modification can be added to any kind of rocket or missile.

Surface-to-Air Missile (SAM): Surface-to-air missiles are designed to engage aerial targets at great distances. Since SAMs are engineered for maximum velocity and range, they use the standard range table for missile launchers (see *Weapon Range Table*, p. 151, *SR4A*) with an Extreme range of up to 5,000 meters.

When firing a SAM at an aerial target, apply an additional +1 dice pool modifier, while firing at ground targets receives a -4 dice pool modifier upon the attack. SAMs are considered to be anti-vehicle weapons and must always have a Sensor rating of at least 1.

Zapper Static Discharge Rocket: This rocket is a specialized anti-drone and anti-vehicular weapon. It carries an electrically charged dielectric warhead encased in alternating layers of conduc-

tive metal and ceramic insulation. On impact, the warhead acts as a giant capacitor and discharges a massive electrical surge into the target, causing its circuitry to burn out.

The rocket causes a Damage Value of 8P upon impact and then discharges for an Electricity damage of 12S with a blast radius of -4/m. Vehicles and drones do not suffer the stun damage noted for this weapon, but are affected as per the standard rules for Electricity damage (see p. 163, *SR4A*).

Since the main damage done by a Zapper rocket results from the burnout of the target's circuits, this warhead is also especially devastating for a rigger who has "jumped into" the drone hit by the rocket. The damage the rigger has to resist when a jump-piloted drone suffers damage is not halved; all other rules for *Jumping into Drones* apply (see p. 245, *SR4A*).

EXOTIC WEAPONS

The following section covers a variety of melee and ranged weapons either unique in design or requiring very special combat skills, as well as weapons whose functionality differs fundamentally from other weapons of their category. The Exotic Melee Weapon and Exotic Ranged Weapon skill is required for each separate weapon as described on p. 122, *SR4A*, or for some special groups of closely related weapons as described in the appropriate entry (see *Flamethrowers*, p. 40, and *Laser Weapons*, p. 41).

EXOTIC MELEE WEAPONS

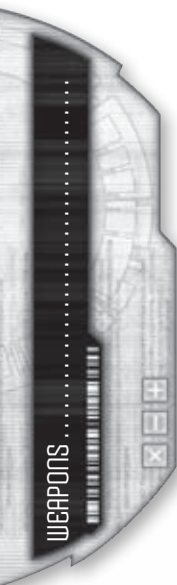
The Exotic Melee Weapon skill is used for any exotic weapon that is held by the character or attached to him (as in the case of some cyberweapons) while he fights with it.

Garrote: A garrote is a piece of rope or wire with handles at each end used to strangle someone. It has become a symbol for assassins and is even nowadays used by some secret conspiracies to silently eliminate their opponents.

Mortar Rounds	Damage	AP	Blast	Availability	Cost
Anti-Vehicle	16P	-2/-6*	-4/m	18F	210¥
Fragmentation	18P(f)	+2	-1/m	15F	105¥
Gas/Splash	Chemical	—	15 m Radius	6F + Chemical	60¥ + Chemical
High Explosive	15P	-2	-2/m	12F	135¥
Incendiary	—	—	15m Radius	12F	150¥
Seeker	As Round	As Round	As Round	+2F	+500¥
Smoke	—	—	15m Radius	8F	90¥
Solar	—	—	40m Radius	8F	120¥
Thermal Smoke	—	—	15m Radius	10F	105¥
White Phosphorus	12P/6P	-half	-1/m	20F	360¥

* AP of -2 against people, -6 against vehicles.

Rocket	Damage	AP	Blast	Availability	Cost
Inferno Rocket	6P/12P	+0/-half	-/-2/m	24F	1,500¥
MP Jabberwocky II (Rating 1-10)	—	—	Special	(6 + Rating) x 3F	1,000¥ + Rating x 300¥
Seeker Rocket	As Rocket	As Rocket	As Rocket	+2R	+500
Zapper Rocket	8P/12S(e)	+0/-half	-/-4/m	10R	1,150¥
Missile					
As Rocket	As Rocket	As Rocket	As Rocket	+5	+ Sensor rating x 500¥
SAM	12P	-2/-6	-2/m	28F	1,250¥ + Sensor rating x 500¥



A garrote cannot be used in normal combat, since it requires a target that is surprised or otherwise unaware of the attack and unable to defend against it (see *Surprise*, p. 165, *SR4A*). When attacking, use the rules for subduing combat (see p. 161, *SR4A*) with the following exceptions: If the attacker successfully subdues and immobilizes his target, he causes a Damage Value equal to half his Strength (round up) plus the net hits scored on his attack roll with each Complex Action, which the target must resist with his Body + Impact armor. The attacker may maintain the grapple and spend Complex Actions to get a better grip while continuing to inflict damage or knock the defender down, but cannot choose to inflict Stun damage, as per the normal subduing rules.

Hardliner Gloves: These stylish leather gloves provide an extra bit of punch when the chips are down. Each glove contains a thin layer of densiplast set into the knuckles and along the ridges of the hand. A character wearing these using Unarmed Combat to attack.

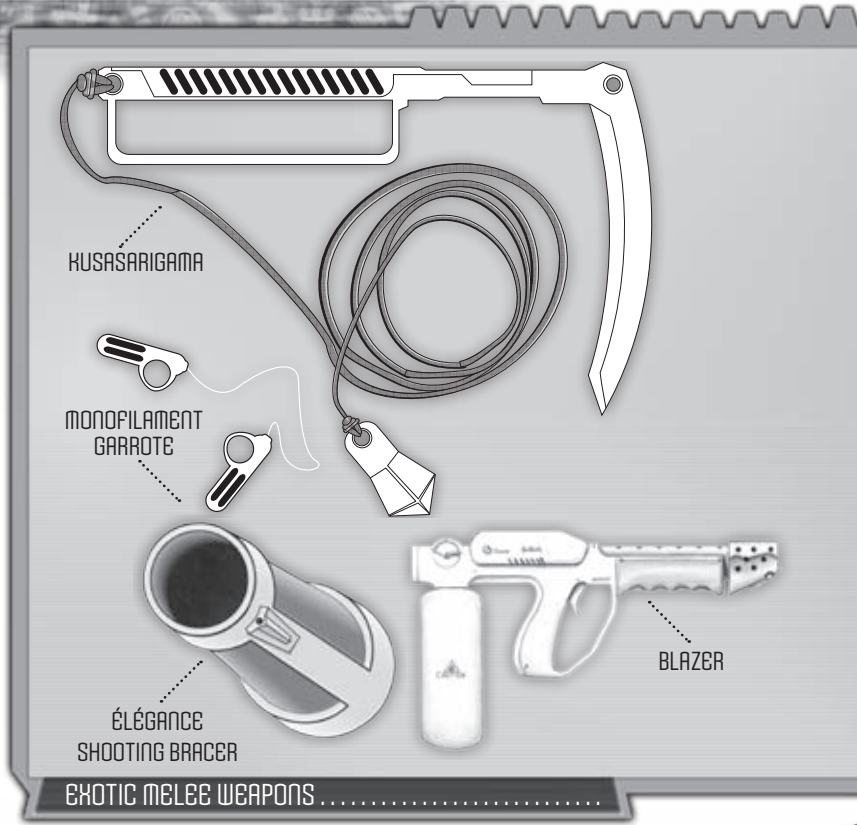
Kusarigama: The Kusarigama is a traditional Japanese weapon that consists of a sickle (kama) and a metal chain (kusari) with an heavy iron weight at one end and connected to the grip-end of the sickle with the other end. The usual attack form with this weapon entails swinging the weighted chain in a large circle and then swinging it forward to entangle the opponent's limbs or weapons, allowing the weapon's user to strike the opponent with the sickle end of the weapon. The Kusarigama user can also strike his opponent with the weighted end of the chain. If the attack gains sufficient momentum, the weight can cause serious damage while the user stays out of the range of most melee weapons.

While the Kusarigama is a very versatile melee weapon, using it efficiently requires a lot of space, preventing its use within most buildings and alleys. The Kusarigama can be used to entangle an opponent with the chain, using the rules for subduing combat (see p. 161, *SR4A*).

Monofilament Garrote: A monofilament garrote replaces the normal wire of a garrote with monofilament wire to slice through the victim's throat nearly instantaneously.

Sai: The sai is a three-pronged defensive weapon that originated in Okinawa. The usual fighting technique with sai is to use two simultaneously. Sai can inflict either Physical or Stun damage (attacker's choice). The primary function of sai is to trap and hold an opponent's weapon, thereby disarming him or breaking bladed weapons. If the sai-wielding character successfully use Full Parry to block an attack (see p. 160, *SR4A*), on his next melee attack he may use the Called Shots rule to disarm his opponent (p. 161, *SR4A*) without receiving the -4 modifier.

Whip: This is the classic bullwhip made of leather or synthetic fiber, about 2 meters long. While a whip is useless in a direct attack against an armored opponent, it can be used to snare handheld objects or to trip or entangle an opponent (using the rules for



subduing combat, p. 161, *SR4A*, or the called shot rules to disarm, pp. 161, *SR4A*).

EXOTIC RANGED WEAPONS

The Exotic Ranged Weapon skill is used for any exotic weapon that uses bullets, bolts, liquids, or other kinds of ammunition to harm or otherwise affect a target over distances.

Ares Screech Sonic Beam Rifle: Another nonlethal weapon designed for riot control purposes, this rifle projects a beam of intense high-frequency sound that creates disorientation and nausea in metahuman targets.

The Screech sonic attack can be projected as a narrow, medium, or wide spread beam, using the same rules as shotguns (see p. 154, *SR4A*) for determining the number of targets affected and the DV modifier. The Screech is resisted with Willpower instead of Body. Regular armor does not apply, but damper earware (p. 341, *SR4A*) provides 2 dice for the resistance test. A Hush or Silence spell reduces the Screech's DV by -1 per ht on the Spellcasting Test. Targets hit by a Screech beam suffer the effects of disorientation and nausea (see p. 254, *SR4A*).

Screech attacks are powered by peak-discharge power packs (see p. 36). The Screech consumes 1 power point per shot. It uses shotgun ranges.

Exotic Melee Weapons	Reach	Damage	AP	Availability	Cost
Garrote	—	(STR/2)P	—	0F	10¥
Hardliner Gloves	—	(STR/2+1)P	—	4	100¥
Kusarigama	—	—	—	8F	150¥
Sickle	1	(STR/2 + 2)P	—		
Weighted Chain	2	(STR/2 + 1)P	—		
Monofilament Garrote	—	8P	-4	18F	2,000¥
Sai	—	(STR/2 + 1)P or S	—	4	75¥
Whip	2	(STR/2)P	+2	3	100¥

Blowgun: A blowgun is a narrow tube up to two meters long that is used to propel a dart or large needle by blowing forcefully through the tube. Blowguns were used by many cultures that hunted small game, with rain forest tribes in South America and Southeast Asia being the best known wielders of this weapon. Since the dart of a blowgun does almost no damage, it is usually used to deliver a contact or injection toxin (see p. 83 and p. 254, *SR4A*). Since the weapon operates silently, it is popular with some shadowrunners or other stealthy criminal types. Blowguns are also used in sports target shooting.

To deliver a toxin with a blowgun needle, use the rules for targeting an area not protected by armor (see *Called Shots*, p. 161, *SR4A*), if the attack succeeds, the poison is delivered. Note that when using a blowgun, a character may inhale his own dart on a critical glitch; some modern blowguns have a safeguard in form of a small crosslike section in the mouthpiece. The blowgun dart does no damage on its own.

Bolas: Bolas are throwing weapons made of interconnected cords with ball-weights (in most cases two or three) at the ends. Bolas were made for capturing animals by entangling their legs and causing them to fall. When thrown at a moving opponent, bolas knock him down (see *Knockdown*, p. 161, *SR4A*) if the attacker's net hits plus half his Strength (round up) equal or exceed the target's Body. Bolas use shuriken ranges.

FN-AAL Gyrojet Pistol: This is the preferred weapon of many military marine and combat diving teams like the British Special Boat Squadron or the German Kampfschwimmer. It fires self-propelling miniature rockets that explode upon impact; though it was initially developed for underwater combat, it has also proven to be quite effective on land.

The FN-AAL Gyrojet pistol can mount the same accessories as a heavy pistol and uses the same ranges. When it is used underwater, increase any DV ratings by +1 in addition to any other modifiers.

Monofilament Bolas: This vicious and highly illegal rare weapon is known to be used by some madmen. It replaces the cords of usual bolas with monowire to slice into the target. Use the monofilament whip rules for glitches and critical glitches (see p. 315, *SR4A*) for monofilament bolas.

Mortimer of London "Trafalgar" Gun Cane: Mortimer of London, a well-known high-end fashion house, also sells several other useful "accessories" like briefcases, tobacco boxes, and even the "Trafalgar" gun cane within their tailoring shops. The gun cane seems to be a finely crafted but ordinary walking stick, but its real purpose is to be its owner's last line of defense. It is built with a mechanism to fire a single bullet from its tip by pointing the cane at the attacker and pressing a trigger hidden within the handle.

The Trafalgar gun cane uses light pistol ranges and cannot mount any accessories. Its Concealment modifiers are +0 for the whole cane and -6 to detect its true nature (see p. 311, *SR4A*).

SA Retarius Net Gun: The Retarius net gun (named after a Roman gladiator who fought with a net) fires an expanding fiber net that envelops and restrains the target. The weapon is available in two sizes, normal and large. The large version is designed to restrain trolls or large animals, while the normal version is meant to be used against other metahumans or animals of comparable size.

When a target is hit, apply the rules for nets (see p. 19). If a large net is used against a normal sized target, the target receives a -2 modifier on his Agility, while a large target hit by a normal

sized net receives a +2 Agility modifier. Net guns use light pistol ranges and cannot mount any accessories.

Tiffany Élégance Shooting Bracer: This weapon is a large platinum-covered bracelet designed to fire a single light pistol bullet. A small button trigger just below the wrist fires the weapon. Because it lacks a barrel, the bracer is somewhat inaccurate and has only a very limited range. Customized bracer versions are available upon request and can be made to fit special evening wardrobe (additional costs are up to the gamemaster).

The Élégance Shooting Bracer can only use caseless ammunition and uses taser ranges. It cannot mount any accessories. The bracer's Concealability modifier to hide its true function is -5 (see p. 311, *SR4A*).

Flamethrowers

Flamethrowers spew an ignited fuel mixture, most commonly gasoline and oil or napalm, burning the target or setting a designated area on fire. Most flamethrowers store the fuel in tanks worn as a backpack, while the wielder uses a pistol-grip nozzle with a hose attached to the tank to deliver the burning material. Some more modern "handheld" flamethrowers combine the spraying mechanism and a smaller tank in a frame approximately the size of a submachine gun or assault rifle, increasing its manageability and also the mobility of the person carrying the flamethrower, while reducing the ammunition capacity. Flamethrowers require a small flame at the end of the nozzle to ignite the sprayed fuel mixture. Igniting the flame and making a flamethrower combat-ready require a Complex Action.

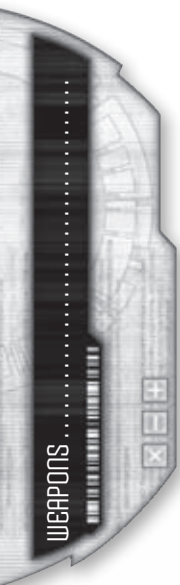
Flamethrowers can be used to blast a single target or they can be used to spread flame over a wider area in an attempt to strike multiple targets. Using the area-sweep attack takes a Complex Action and enables the user to strike up to two additional targets, as long each target is within two meters of another target. Flamethrowers can also be used for laying down *Suppressive Fire* (see p. 154, *SR4A*), consuming two "shots" per usage. Note that taking cover or falling prone may not prevent a character from being hit by the attack, according to the situation's exact circumstances and the gamemaster's decision.

Flamethrowers deal Fire damage (see p. 164, *SR4A*). Due to the special flaming mixtures used by flamethrowers, almost every item caught in the attack's area of effect will be set on fire for at least a short period of time (gamemaster's discretion).

All flamethrowers require the Exotic Ranged Weapon: Flamethrowers skill to use (see p. 122, *SR4A*) and cannot mount any accessories except biometric safety systems (*Advanced Safety*, p. 32).

Aztechnology F3a Flamethrower: The Aztechnology F3a is a modern example of the classic one-person backpack flamethrower. It saw heavy use during the Yucatan uprising when Aztlan/Aztechnology troops fell back to "scorched earth" tactics. The F3a flamethrower uses light pistol ranges. A flamethrower tank requires an Extended Logic + Exotic Weapons Test (10, 1 Complex Action) to replace.

Shiawase Blazer: A compact flamethrower the size of a submachine gun, the Blazer is easier to carry and use than a standard flamethrower. The fuel tank is mounted at the rear of the weapon and contains enough fuel for four uses. This weapon is favored by government and corporate strike teams for clearing out rebel hideouts in heavy jungle terrain. The Shiawase Blazer uses taser ranges. Replacing the tank requires a full Combat Turn.



Laser Weapons

Laser weapons use highly concentrated beams of light to burn into and sometimes even through their targets. Laser weapons cause no recoil and are resisted with half Impact armor (rounded up).

Laser weapons have good maximum firing ranges under ideal circumstances but lose focus and deliver less damage over longer distances. For each range category beyond Short, decrease the weapon's Damage Value by 1 (Medium -1, Long -2, Extreme -3). Laser weapons are somewhat ineffective in areas of reduced visibility, as the particles in the air reduce the weapon's focus. In areas of Light Fog/Mist/Rain/Smoke Visibility Modifiers (see p. 136, *SR4A*), double all DV reductions due to range categories. In areas of Heavy Fog/Mist/Rain/Smoke or Thermal Smoke, triple all DV reductions due to range categories.

Creating the intense light beams necessary to inflict damage requires significant amounts of power. Portable laser weapons derive this power from special peak-discharge battery packs (see p. 36) while stationary laser weapons are often directly linked to high-power energy sources.

All laser weapons require the Exotic Ranged Weapon: Laser Weapons skill to use. They may mount underbarrel and top-mounted accessories only.

Ares Redline: The Ares Redline laser pistol is the showpiece of the Ares laser weapon program. Due to the advancements in energy conducting and storage technology of combined Ares Arms and Ares Space projects, the costs of laser weapons have de-

creased at an astonishing rate during the last couple of years. The Ares Redline was extensively featured in the trideo movie "Cross Point: Daedalus" and has become the most common—but nevertheless still rare—laser weapon.

The Ares Redline consumes 1 power point per shot and draws its power from a detachable power clip or an external source, usually a satchel power pack. It uses SMG ranges.

Ares MP Laser 3: The Ares MP Laser 3 is a man-portable, self-contained laser system about the size of a large assault rifle and ideal for sophisticated high-prestige mercenary or security forces with sufficient funds.

The MP Laser 3 consumes 2 power points per shot and is either powered by twin power clips or by an external satchel or backpack power pack. It uses sporting rifle ranges.

Ares Heavy MP Laser: The Heavy MP Laser is Ares's laser support weapon system, providing enormous high precision firepower over distances of up to 1.5 kilometers.

This weapon comes equipped with a mount for either a tripod or gyro-mount stabilization system, since the Heavy MP Laser is too heavy and unbalanced to be fired without proper support.

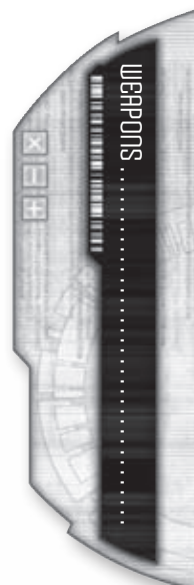
It draws 4 power points per shot and is powered by either an external battery pack (almost always a power backpack) or by linking it directly into the local energy sources when used as part of a permanent emplacement (for unlimited ammo as long as the energy supply remains online). The Ares Heavy MP Laser uses sniper rifle ranges.

Exotic Ranged Weapons	Damage	AP	Mode	Ammo	Availability	Cost
Ares Screech Sonic Rifle	5S	—	SS	10 (c) or external source	16	8,000¥
Blowgun	—	—	SS	1 (ml)	4	10¥
Bolas	—	—	—	—	6	75¥
FN-AAL Gyrojet pistol	6P	-1	SA	10 (c)	12F	1,000¥
Monofilament Bolas	8P	-4	—	—	16F	2,500¥
Mortimer "Trafalgar" Gun Cane	5P	—	SS	1 (b)	9R	750¥
SA Retiarius Net Gun						
Normal	—	—	SS	4 (b)	9	750¥
Large	—	—	SS	2 (b)	9	1,000¥
Tiffani Élégance Shooting Bracer	4P	—	SS	1 (b)	10R	1,250¥

Ranges (in meters)	Short (+0)	Medium (-1)	Long (-2)	Extreme (-3)
Blowgun	0-BOD	To BOD x 2	To BOD x 3	To BOD x 4

Flamethrowers	Damage	AP	Mode	Ammo	Availability	Cost
Aztechnology F3a	8P	-half	SS	10	14F	1,800¥
Shiawase Blazer	6P	-half	SS	4	16F	1,200¥

Laser Weapons	Damage	AP	Mode	Ammo	Availability	Cost
Ares Redline	5P	-half	SA	10 (c) or external source	14F	7,500¥
Ares MP Laser 3	7P	-half	SA	2 x 5 (c) or external source	18F	12,000¥
Ares Heavy MP Laser	9P	-half	SA	External source	24F	30,000¥





Wake up, asshole.

Spirits know why the hell I decided to give my sensor setup a personality—much less why I'd chosen the Sullen Teen Elf version. I'm a sucker for cuteness and ears.

I roused myself from a deep but uncomfortable sleep. I was sweaty, dirty, and I ached all over. Two days of laying still in my sniper's nest without moving was torture, even with the massaging liners built into my Victory Globetrotter camo. And the desert ghillie suit that helped hide me from the Black Scorpion patrols was like wearing a snowsuit in the Sahara. The constant wind had also covered everything around me in a fine layer of grit. I'd made sure to lube up the rifle in powdered graphite rather than oil, to keep the sand from gumming up the works. Not that it kept the rifle from complaining.

I stopped the mental complaining long enough to take a look at the warning message the elf chica was waving in my AR vision. The sensors I'd placed on high ground around the training camp had finally scored a facial ID on my target. Even better, the system had tracked him as he got inside the back of a jeep—a jeep that was now leaving the camp. *Rifle*, I mentally messaged my gun, *I'd like you to meet Ahmoud, a dear friend of mine.*

Charmed, I'm sure, it told me back. *Shall I invite him to dinner?* When you spend days out in the wilderness, far from a Matrix link, on your own, even hearing your weapons talk smack can be a comfort.

I ran through some breathing exercises as the small convoy of jeeps left the camp and approached my position a few clicks down the road. I prepped for the shot, knowing I had to make it count. A few minutes later, the target finally came into visual range. I now had Ahmoud's head in my scope's sights. I just needed for them to make a little more distance down the road towards me ...

A pale light to my left suddenly distracted me—the tip of my glo-wand was suddenly eerily blue. *Shit, didn't expect him to have astral coverage.* I had no time to waste.

The spirit was already materializing as I took the shot. I glimpsed the puff of red that confirmed the kill, but I was already issuing the mental orders that I hoped would cover my escape. The EMP grenade detonated by the jeeps, hopefully frying their comm gear and preventing them from calling in backup. If not, the jammer in my pocket would finish the job. The same command that triggered the EMP also triggered a Petite Brume manatech grenade, clouding my position in a fine mist—a mist that should also impede astral visibility. I could only hope it would distract the spirit and give me a head start.

I was already running for my transport, a good click away. I knew I wasn't going to make it.

Time for Plan B.





ARMOR AND CLOTHING

Because shadowrunners don't survive by guns and fists alone, this section brings you the gear that keeps you alive when it's cold and dark outside and the security guys are laying down the suppressive fire.

ARMOR RULES

These rules are all optional—use them if you like, discard if you don't. They complement the rules for armor given on pp. 160 and 326, *SR4A*.

Tweaking Armor Encumbrance

As noted under *Armor and Encumbrance*, p. 161, *SR4A*, whenever a character's Ballistic or Impact armor rating exceeds his Body x 2, the character risks a penalty for being overburdened. If you're looking for a game with less record-keeping and where characters can pile on a bit more armor for survival purposes, try one of these options:

- Ignore armor encumbrance entirely if a character is simply wearing a single armor item (even if that's a full body armor suit). Only apply encumbrance when a character is stacking armor or using a lot of armor accessories (helmet, shield, forearm guards, etc.).
- Allow characters to buy customized armor that is specially-tailored for their specific bodies (much like how military-grade armor is fit to each person). Custom-fit armor could either ignore encumbrance entirely, or increase the armor allowance to Body x 3.

Maximum Armor Modifications

Since each type of clothing or armor is—due to chemical and physical limitations of the materials used—only designed to protect against certain types of damage or to grant other advantages, and because adding layer upon layer of special fabrics only works until you reach the point where mobility will be greatly decreased or other hindrances appear, only a limited number of armor modifications (see p. 50 or p. 327, *SR4A*) can be applied to a piece of armor or clothing.

Each piece of armor or clothing can only accept a total number of modification *rating points* equal to 6 or the highest number of its armor ratings (Ballistic or Impact) x 1.5 (round up), whichever is higher. Unrated armor modifications (for example, the gel pack modification) take up 1 point.

For example, a lined coat (6/4) can take up to 9 (highest rating 6 x 1.5) rating points of modifications. This means it could be modified with Fire Resistance 5, Insulation 3, and shock frills, but no more (5 + 3 + 1 = 9).

Armor Suit Capacity

Similar to the maximum armor modifications rule, the number of gadgets and sensory enhancements you can cram into an armor suit (such as full body armor, p. 326, *SR4A*, or the SWAT, milspec, and similar outfits described in this book) is also finite.

Under this rule, every armor suit type has a Capacity rating (just like cyberlimbs) that indicates what accessories it can take. These Capacity ratings are noted in the appropriate armor tables. Each modification or add-on takes up Capacity (noted as a number in brackets), also noted in the appropriate tables. Note that these specifically represent gear that is *built into* the suit; additional worn or carried items are accounted for as normal.

ARMOR SUIT CAPACITY

Apply the following Capacity for each of these items detailed in the *Street Gear* chapter of *SR4*. For gear items in this book, see the individual listings.

Armor Add-On	Capacity	Armor Add-On	Capacity
Auto-Picker	[1]	Audio Enhancement	
Biomonitor	[1]	Audio System	[1]
Climbing Gear	[5]	Audio Enhancement	
Concealed Holster	[4]	(Rating 1-3)	[1]
Flashlight	[1]	Select Sound Filter	[1]
GPS	[1]	Spatial Recognizer	[2]
Holster	[3]	Communications Gear	
Medkit	[5]	CommLink	[2]
Micro-flare Launcher	[1]	Jammer	[2]
Miniwelder	[4]	Micro-transceiver	[1]
Quick-Draw Holster	[4]	RFID Tag	–
Survival Kit	[6]	Sim Module	[2]
Tool Kit	[6]	Simrig	[5]
Wire Clippers	[1]	Skinlink	[3]
Armor Modification		Wireless Link	–
Chemical Protection	[2]	Sensors	
Chemical Seal	[4]	Atmosphere Sensor	[1]
Environment Adaptation	[3]	Camera	[1]
Feedback System	[3]	Cyberware Scanner	[1]
Fire Resistance		Directional Microphone	[1]
(Rating 1-3)	[1]	Geiger Counter	[1]
Fire Resistance		Laser Microphone	[2]
(Rating 4-6)	[2]	Laser Range Finder	[1]
Internal Air Tank [1 per hour]		MAD Scanner	[1]
Insulation (Rating 1-3)	[1]	Microphone	[1]
Insulation (Rating 4-6)	[2]	Motion Sensor	[1]
Nonconductivity		Olfactory Sensor	[1]
(Rating 1-3)	[2]	Radio Signal Scanner	[1]
Nonconductivity		Vision Enhancement	
(Rating 4-6)	[3]	Flare Compensation	[1]
Shock Frills	–	Image Link/HUD	[2]
Thermal Damping		Low Light	[1]
(Rating 1-3)	[3]	Smartlink	[2]
Thermal Damping		Thermographic Vision	[1]
(Rating 4-6)	[5]	Ultrasound Sensor	[2]
		Vision	
		Enhancement [Rating]	
		Vision Magnification	[2]

Urgent Message...

For the purposes of this rule, the full body armor described on p. 326, *SR4A*, has a Capacity of 8; its accompanying helmet has a Capacity of 7. The Urban Explorer Jumpsuit has a Capacity of 6; its helmet has a capacity of 5.

Armor Degradation

Modern body armor is designed to stop damaging attacks, but this often means the armor itself is damaged in the process. Any time an attack that causes Physical damage penetrates a character's armor (i.e., the damage is not downgraded to Stun damage, per the rules on p. 160, *SR4A*), reduce the appropriate armor rating (Ballistic or Impact) by 1.

Repairing damaged armor usually requires the Armorer skill and the rules for *Using Technical Skills to Build or Repair* (see p. 138, *SR4A*). The threshold for the test is determined by the gamemaster, based on the kind of armor that has to be repaired and the amount of damage it suffered. Repairing certain kinds of sophisticated armor (especially full body armors) may require an additional Hardware or Industrial Mechanic test if electronic components, power systems, or hydraulics have been damaged.

ARMOR CLOTHING

Since much of the Sixth World likes to think of itself as civilized, there are many situations when looking like a reinforced gun emplacement can get a shadowrunner into trouble with police and security forces. Heavily armored runners might have a hard time getting into high-society meetings or even into the corporate wageslave encampment they were hired to infiltrate.

To master such situations, when discretion or just an innocuous appearance is more important than personal protection, a wide range of armor clothing is available to provide a subtle level of security. Many of these outfits are produced by top-line fashion designers, tailored for executives and power players who need to look trendy without sacrificing their safety. Runners should be careful, though, since prejudices and animosity can naturally work the other way as well: crossing the street in a suit worth a year's income for most sprawl denizens can be an adventure of its own.

The exact effects of the wrong clothing in a situation are usually up to the gamemaster, but it should be noted that in a world that is divided into some "haves," many "have-nots," and only few people in between, the right look is the most important indicator of whether you do or don't belong in a place, and thus cannot be overrated in almost every situation.

For those living a High lifestyle, clothes worth several hundred nuyen are the norm rather than the exception, while outfits in a four-digit range are normal for those living a Luxury lifestyle.

The armor fashion designs described below are just meant to be a sampling of the clothing lines available to runners who want to be discreet *and* protected. Gamemasters are encouraged to design their own clothing lines and packages for characters looking for a style not represented here.

Outfit Components

Some armor clothing items have rather low armor ratings when worn individually, but are designed to be worn together with other garments as part of an ensemble. Add the armor values of each piece worn together as an outfit and note the result as the Ballistic and Impact ratings of the whole ensemble, ignoring the rule that only the highest armor value of each piece of armor applies (see *Armor and Encumbrance*, p. 161, *SR4A*) in this case only.

After calculating the result of the combined pieces of armor clothing, this result becomes the character's armor value and is subject to the usual rules concerning Armor and Encumbrance. Clothing lines whose components may be combined in this manner are noted with a (c) on the tables. Any components marked with asterisks may not be worn together.

Mortimer of London

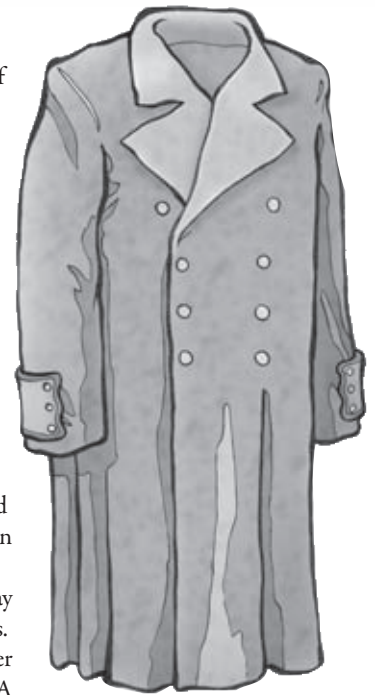
Until the 2050s, Mortimer of London had been an established and exclusive tailor for the European high society crowd. When Dr. Samantha Mortimer took over the family business in 2056 from her father, she started to expand onto the worldwide fashion market with the addition of women's wear and fashions specifically sculpted for metahumans in addition to the line's well-known upper-class coats and dresses. Mortimer of London's clothiers are well respected hand-tailoring shops that now can be found in most metroplexes around the globe—and with them, at least some of the flair of an old English gentlemen's outfitter.

Trolls and dwarfs do not need to pay extra for racially modified Mortimer outfits.

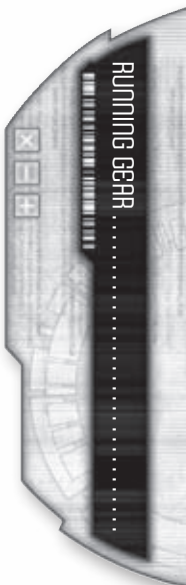
Berwick Line: Berwick is Mortimer of London's pinnacle line of suits. A Berwick suit lacks the *en vogue* aspects of a high-class Zoé dress, but it represents classic elegance in perfection. Each Berwick suit is custom tailored to the customer's body within one of Mortimer of London's tailoring shops, while a personal master tailor guides him or her through the necessary decisions to create a unique type of suit. Combining classic eighteenth to twentieth century cuts and patterns with dozens of different collar and cuff styles, embroidered monograms, and other individual details, Berwick suits are some of the finest suits known to the Sixth World.

Greatcoat Line: The Greatcoat line features heavy wool and tweed coats lined with silk, based upon the classic design of twentieth-century naval greatcoats. Greatcoats are waterproofed and chemically resistant to the "hard rain" common in many urban sprawls, and also incorporate heavy ballistic fabric and semi-rigid plates disguised by the coat's cut. Greatcoats offer Rating 2 Chemical Protection and Insulation (see p. 327, *SR4A*) and provide an additional -2 Concealability modifier to items hidden beneath.

Ulysses Line: Ulysses coats are made to resist rain and water for hours or even days, keeping their wearer dry regardless of the weather. These hooded coats exchange the heavy, warm lining of the Greatcoat line for liquid-proof weaves. Ulysses coats offer Rating 4 Chemical Protection (see p. 327, *SR4A*) and also provide an additional -2 Concealability modifier to items hidden beneath.



Mortimer of London	Ballistic /Impact	Avail.	Cost
Berwick Line (c)			
Suit Jacket*	3/2	12	1,500¥
Dinner Jacket*	2/2	12	1,750¥
Skirt/Trousers	1/1	12	800¥
Blouse/Shirt	1/0	12	550¥
Greatcoat Line	6/5	8	3,000¥
Ulysses Line	6/4	8	2,800¥



Vashon Island (Shiawase Fashion)

Since its founding, Vashon Island has been a tailoring house that concentrated on chic casual wear and fine business clothing for both sexes. During the Crash of 2064, the independent fashion label suffered from cash flow problems and, before the dust of the Crash had settled, it ended up under control of Shiawase Corporation. Since the takeover, Vashon Island has been incorporated into Shiawase's corporate structure and thus their clothing lines—especially their business suits—have begun to show elements of the so-called neo-Japanese style while still retaining their international flair.

Aces High Jacket Line: This series of suave leather aviator jackets has become a favorite of well-paid employees who have a taste for adventure (or at least want to look like they do). The Aces High line is available in four different styles: “Ace of Spades” (WWII US fighter pilot style), “Ace of Clubs” (WWII British bomber pilot style), “Ace of Hearts” (modern military pilot style), and “Ace of Diamonds” (futuristic styling as seen in the trid series *Spitfire Resurrection*). Each is available either blank or with a wide range of patches, colors, and symbols of military or corporate air squadrons of the appropriate time period,



as well as pin-up girls and other classic aviation scenes on the backs. These jackets offer 1 point each of Chemical Protection and Insulation (see p. 327, *SR4A*).

Steampunk Line: If you haven't heard, the “corporate street-tough” look of the formerly popular Sleeping Tiger line is so last year, edged out by the retrofuturist and neo-Victorian Steampunk fashion line. These outfits are elegant in their design and modern materials, and complemented with brass buttons, hobnails, big buckles, and lace. Numerous accessories are also available, from goggles and derbies to canes and clockwork-gear jewelry.

Synergist Business Line: The Synergist Business line has become *de rigueur* for anyone who considers himself one of the sharks of the modern corporate world. Featuring high collars and necklines, no lapels, and hidden fasteners instead of buttons, the styling of these business outfits is as smooth as it is elegant.

The suit jacket and longcoat feature incorporated concealed holsters (adding a -2 Concealability modifier), while the longcoat provides an additional -2 Concealability modifier to items hidden underneath it (see *Lined Coat*, p. 326, *SR4A*).

Victory (Ares)

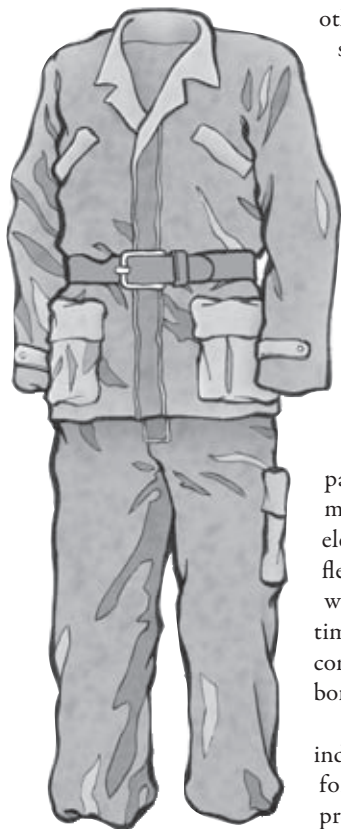
The Victory Sportswear label is Ares's main subsidiary for the production of clothing that cannot be considered outright armor. The label consists of several smaller companies from Seattle to Germany that work hand-in-hand to produce a wide range of clothing, from simple sportswear to outdoor and hunting outfits to heavy-duty work clothes for industrial use. Ares regularly uses Victory's hunting clothes as part of its cross-marketing campaigns for their hunting weapons. Designed for athletes and adventurers alike, Victory styles are simultaneously flashy and practical.

Globetrotter Line: This line of gear is marketed for hunters, outdoorsmen, and wilderness explorers, providing protection in the great outdoors. All of the Globetrotter line's clothes are available in camouflage schemes—the buyer chooses the exact type of camouflage when the item is purchased.

Globetrotter armored clothing offers options for nearly all inhabitable terrains. They feature short, sleeveless shirts and

Vashon Island	Ballistic/ Impact	Avail.	Cost
Aces High Jacket Line	3/3	7	1,250¥
Steampunk Line (c)			
Overcoat	3/3	7	1,000¥
Corset/Vest*	2/2	7	600¥
Slacks or Knickers/ Petticoat and Skirt	1/1	7	400¥
Blouse/Shirt	1/1	7	250¥
Dressing Gown*	1/0	7	750¥
Synergist Business Line (c)			
Suit Jacket*	3/2	8	800¥
Short Jacket*	2/2	8	500¥
Skirt/Slacks	1/1	8	400¥
High-collar Shirt	1/0	8	300¥
Longcoat*	4/2	8	1,300¥

Victory	Ballistic/ Impact	Avail.	Cost
Globetrotter Line			
Camouflage Jacket	6/4	5	1,000¥
Camouflage Jumpsuit	5/3	5	750¥
Camouflage Vest	3/3	5	400¥
Light Armor Clothing	3/0	5	400¥
Heavy Armor Clothing	4/2	5	600¥
Fatigues	3/0	5	500¥
Massaging Liners	—	+2	+800¥
Industrious Line			
Jumpsuit	4/2	4	700¥
Coverall	5/4	4	900¥
Hard Hat	+0/+2	4	50¥
Winterized Coverall	6/5	4	1,000¥



other light pieces designed for dry and sun-pounding environments (deserts) or sweltering and humid regions (jungles), isolated warmer clothing for colder and windier areas, and nearly everything in between. Globetrotter outfits include built-in relief from the sun, sweat, and small insects. They are popular with security companies, since Victory offers fair discounts for consumers buying large quantities of customized clothes.

Massaging Liners: Intended for hunters who need to stay motionless for extended periods of time, this patented lining actually jolts selected muscle groups periodically with low-level electric current, causing the muscles to flex and spasm slightly. This allows the wearer to lie in one position for a long time without cramps and extreme discomfort (though it is still unpleasant and boring).

Industrious Line: This line of industrial-strength coveralls is intended for workers and engineers who need protection from accidents, paranormal animals, or urban predators while doing

their jobs. Favored by field mechanics, construction workers, disaster control personnel, and paramedics, these jumpsuits and coveralls provide armor and enough pockets, loops, and straps to easily carry a kit's worth of tools or store the compounds of a medkit. The hardy fabric is also resistant to liquids and flame, providing 2 points of Fire Resistance and Chemical Protection each (see p. 327, *SR4A*). A winterwear accessory line also provides thermal protection for outdoor work in the winter, offering an additional 2 points of Insulation.

Zoé

Zoé is perhaps the most exclusive of the large fashion houses—especially since they took over the remains of their former main competitor Armanté—but also the most innovative, regularly revolutionizing corporate fashion. The company's main business lies in custom tailoring for its exclusive client list, but it also produces several fashion lines that are available to the public. Though Zoé outfits are designed for business rather than social occasions, their creative touch has proven that if you look good at the office, you look good anywhere.

Executive Suite Line: While Vashon Island's Actioneer Business line features neo-Japanese style and Mortimer's Berwick line evokes the old European look, Zoé has changed this top-selling line to "define the style of the next century's executive." It features very smooth and simply designed clothes with few but carefully placed pockets and other accessories, like contrasting-colored cuffs and collars seamlessly attached to the clothing. The fabric appears stiff but offers high comfort even after a sixteen-hour workday. Executive Suite clothes are available either as monocolored suits (with the previously mentioned contrasting

accessories) or in specific complementary color pairs, carefully arranged to harmonize with each other. Many Executive Suite ensembles are often tailored to emphasize their owners' best features—for example, accentuating a slim waist or well-toned upper body.

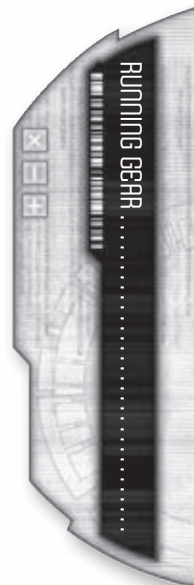
Heritage Line: The Heritage line has been an ongoing success for Zoé for more than 15 years. It was inspired by the Highland Laird outfit, which offered a contemporary version of traditional Scottish Highland formal wear. Though the public looked upon this design with distrust at first, its carefully researched historical roots convinced the Scottish High Society of its worthiness (with Zoé's reputation doing much of the work) and Zoé soon began receiving requests from prominent people for designs modeled on other cultural traditions. Thus the Heritage line was born.

Each design is commissioned by a specific individual or group which retains exclusive rights to the line for one year (or more if additional annual payments are made), after which the designs can be produced for public consumption. By 2070, nineteen specific cultural designs have been made public: Pueblo, Navajo, Salish, Spanish courtesan, Italian Renaissance, fifteenth-century French royal court, Hanseatic trader, Russian Cossack, Confederate aristocrat, Indian Maharajah, Aztec, Mayan, Imperial Rome, feudal Japanese, traditional Chinese, Nubian, Victorian-era colonial gentleman, and Scottish Highlander, as well as a "traditional Tir" style commissioned by Tir Tairngire nobles that has fallen out of favor in the last couple of years.

Moonsilver Line: This line of evening gowns combines silver and light-blue effects provided by the enticing Illumine(tm) self-lucent fabric in a way that not only looks staggering but also



Zoé	Ballistic/ Impact	Avail.	Cost
Executive Suite Line (c)			
Long Jacket*	4/1	9	1,000¥
Short Jacket*	3/1	9	750¥
Plain Blouse/Shirt	1/0	9	400¥
Skirt/Trousers	1/1	9	550¥
Heritage Line	2-6/1-4	14	10,000+¥
Moonsilver Line			
Evening Gown	4/1	10	7,500¥
Cocktail Dress	3/1	10	5,000¥
Shawl/Scarf/Stole	+1/0	10	500-1,000¥
Second Skin Line	4/1	12	5,000¥



diverts attention away from the fact that the highly stress-resistant fabric and its accessories provide considerable impact protection. The line offers a wide variety of dresses for nearly all high-society occasions, from formal full-length evening gowns to more seductively tailored cocktail dresses.

Zoé also offers many accessories for this line, including sashes, scarves, and stoles to either harmonize with or offer an elegant contrast to the basic dresses.

Second Skin Line: The Second Skin line provides protection, comfort, and style for open-minded people. These bodysuits leave little to the imagination, since they consist of transparent or opaque skintight ballistic polylatex and sculpted densiplast. Each bodysuit must be custom-tailored for its wearer. The bodysuits are also available with a transparent ruthenium polymer coating to change the opaque parts of the suit instantly via the user's PAN or to allow it to display signs and slogans (+1,000¥).

PERSONAL ARMOR

In the Sixth World, many situations demand special armor, either due to unusual environmental requirements (for example, when you need something to protect you while diving in a sea filled with Awakened moray eels) or because of public or corporate expectations (for example, a metroplex's administration wishes their bomb-disposal personnel to be easily identified, or Damien Knight wants his Knight Errant troopers to be distinctive).

Despite the fact that the number of specialized armors in use in the world of *Shadowrun* is nearly unlimited, the following armor options should provide gamemasters with an overview of the most common kinds of special armor, as well as providing some guidelines for the creation of other armors to be used in your group.

Body Armor Bag: This is a large bag, typically used to carry a firearm, that when zipped open easily slips over the user's head and serves as an armor vest. Ideal for situations when wearing armor is not an option, but allowing you to rapidly deploy armor via the bag you're carrying.

Chain Mail: This is a medieval armor consisting of small metal rings that are linked together to form a mesh. Chain mail is worn over a synth-woolen undergarment to prevent the chain rings from cutting into the wearer's flesh when he's hit. Chain mail protects the wearer's torso and arms and is frequently worn by Viking-themed (or Viking wannabe) biker gangs, since it also protects very well in certain kinds of bike accidents. Most modern chain mails are made of lightweight steel alloys to increase comfort.

Personal Armor	Ballistic/ Impact	Avail	Cost
Body Armor Bag	6/2	8	750¥
Chain Shirt	2/7	8	900¥
Form-Fitting Body Armor			
Shirt	3/0	6	500¥
Half-Body Suit	4/1	7	900¥
Full-Body Suit	6/2	8	1,600¥
Padded Leather Armor	2/5	8	600¥

Form-Fitting Body Armor: Form-fitting body armor uses advanced synthetic materials that breathe and stretch with the body, and is custom-tailored to each individual wearer. It can be either worn as standalone armor or beneath other clothing or armor.

The armor is available in three versions: shirt, half-body suit, and full-body suit. The shirt offers protection only for the chest and back. The half-body suit covers the torso, groin, and thighs. The full-body suit covers the entire body, including the extremities, and comes with gloves, booties, and a hood.

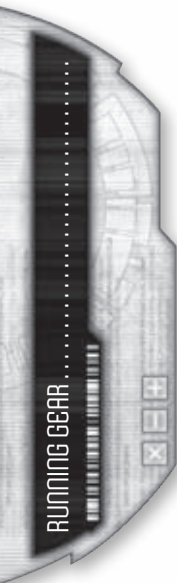
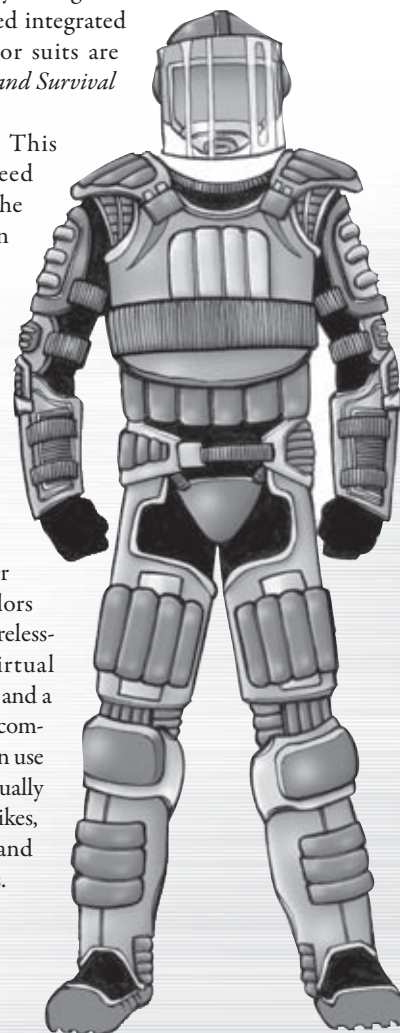
When worn in combination with other pieces of armor, the form-fit armor rating is added to the other armor's rating (ignore the rule that only the highest value applies in the case of form-fitting armor). When determining encumbrance, however, add only half the rating (round down) of form-fitting body armor to the ratings of other armor when comparing them to the wearer's $\text{Body} \times 2$ (see *Armor and Encumbrance*, p. 161, SR4A).

Padded Leather Armor: This armor is made of several layers of hardened leather with some metal fittings over crucial parts, and protects the wearer's torso and upper arms. Padded leather armor is used by primitive tribal warriors as well as low-ranking street gangs and is also quite popular with medieval re-enactors.

ARMOR SUITS

Note that the Capacity ratings listed already incorporate any listed integrated gear. Some additional armor suits are noted under *Environmental and Survival Gear*, p. 51.

Bike Racing Armor: This armor is made for high-speed motorcycling and provides the maximum impact protection possible without making the suit unduly clumsy. The racing suit combines lightweight densiplast protectors with Kevlar materials and a synthleather coating. The armor is available in almost any color and with a huge variety of brand names or logos to choose from, but most sets are either black or use the flashiest colors imaginable. The helmet is wireless-enabled and includes a virtual surround-sound music system and a visor with image link and flare compensation. Combat bikers often use armor based upon this suit, usually further customizing it with spikes, helmets with demon faces, and other scary-looking accessories.



Bunker Gear: Bunker gear is the outfit worn by firefighters the world over. It includes heavy pants with reinforced knees, puncture-resistant leather or rubber boots, a protective turnout coat with KevFlex and reflective strips, an aramid hood, heavy work gloves, and a “leatherhead” or similar helmet. Modern firefighting helmets are wireless-enabled and equipped with thermographic vision, low light, flare compensation, a gas mask, and a security RFID tag for locating a missing firefighter. All components are water and chemical resistant (Chemical Protection 4) as well as heat and fire resistant (Fire Resistance 6).

Riot Control Armor: Similar to full body armor, riot control armor is specially-designed for officers on crowd control duties who typically have more to fear from rocks, bottles, and Molotovs than firearms. The armor is lightweight and comfortable, while still offering protection. It features shock frills (p. 327, *SR4A*), is treated to withstand heat and fire (Fire Resistance 2), and can be enhanced with a chemical seal or environmental adaptation (see p. 327, *SR4A*) at the standard costs. Riot control helmets feature wireless links and image links. Riot shields (also p. 327, *SR4A*) are a common accessory.

SWAT Armor: This armor is an example of the protection gear used by most specialized police or security forces that have to deal with dangerous operations against heavily armed gangs, mobsters, shadowrunners, terrorists, and whatever other savage nightmares roam the streets of the Sixth World.

The armor consists of a KevFlex(tm) armor suit with integrated polymer composite plates offering additional protection to vital body parts and an uppermost layer of fire resistant fabric (giving the armor a Fire Resistance rating of 4, see p. 327, *SR4A*). This suit also comes with several equipment pouches, giving the wearer easily accessible storage room for half a dozen ammo clips, grenades, flashlight, restraints, and an emergency medkit. The integrated biomonitor (see p. 337, *SR4A*) is usually subscribed to the user’s PAN and informs the officer’s superiors constantly about

his actual health status. Several built-in security RFID tags also can be used to track the officer should he go missing.

The matching helmet features a gas mask (see p. 336, *SR4A*), enabling the SWAT team to use certain toxins like nausea gas, and a nontransparent visor with image link display, low-light vision, smart link, and flare compensation.

Officers leading the way often include additional armor pieces (for example the *PPP leg and arm casings* and *vitals protector*, below) or use ballistic shields (see p. 327, *SR4A*) for additional protection.

SECURETECH PPP-SYSTEM

The SecureTech PPP (Personal Protection Piecemeal) System consists of padded densiplast sections that the wearer can combine to give additional protection to several body parts. Each piece of armor is available in at least three styles: as discreet protection designed to be worn beneath other clothing, as an obvious strapped addition to other visible armor, and as sports equipment. These armor pieces do not count as separate armor for purposes of encumbrance; instead, these items modify the rating of armor worn by their rating just as helmets and shields do (see *Helmets and Shields*, p. 327, *SR4A*, and *Armor and Encumbrance*, p. 161, *SR4A*).

Forearm Guards: Forearm guards provide protection across the back of each forearm.

Helmet: The PPP helmet is used for a wide variety of purposes, from security measures in industrial surroundings to several sports like downhill biking, professional skiing, and ice hockey.

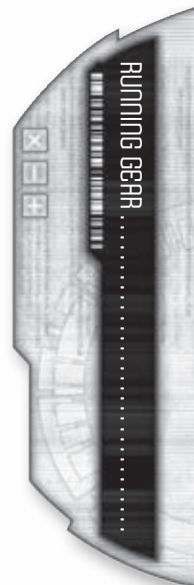
Leg and Arm Casings: These are protective casings for both the upper arms and upper legs. If only either the arm or leg casings are worn, the armor bonus drops to +0/+1.

Shin Guards: Padded shin guards to protect the lower legs.

Vitals Protector: This piece of armor protects the wearer’s genitals and lower belly. It is the top-selling product of the armor system, since it is used by many athletes and sportsmen.

Personal Armor	Ballistic/Impact	Capacity	Availability	Cost
Bike Racing Armor	4/7	6	6	500¥
Helmet	+1/+2	6	—	+200¥
Bunker Gear	3/6	4	6	2,500¥
Helmet	+1/+2	3	—	+750¥
Riot Control Armor	6/9	6	10R	3,000¥
Helmet	+1/+2	6	—	+1,000¥
SWAT Armor	12/10	8	16R	8,000¥
Helmet	+2/+2	4	—	1,200¥

SecureTech PPP System	Ballistic/Impact	Availability	Cost
SecureTech PPP System			
Forearm Guards	+0/+1	6	200¥
Helmet	+0/+2	4	100¥
Leg and Arm Casings	+1/+1	6	350¥
Shin Guards	+0/+1	5	150¥
Vitals Protector	+1/+1	4	200¥



ARMOR MODIFICATIONS

For further types of armor modifications, see p. 327, *SR4A*.

Auto-Injector: An auto-injector is a small medical injection unit usually linked to the armor's biomonitor. If one or more pre-programmed conditions are met, or an instruction is received from the wearer's PAN, the auto-injector dispenses a medication, drug, or chemical directly into the wearer's bloodstream. Each auto-injector carries five doses that can hold one or more substances in any combination. Refilling the injector takes 1 minute per dose.

Gel Packs: Gel packs are obvious pockets of liquid that can be added to clothing or armor, covering the modified item. They remain flexible until the shockwave of a projectile impact solidifies the gel, forming an additional barrier that the bullet has to penetrate. As the kinetic energy dissipates, the gel liquefies again, ready to absorb the next impact. When gel packs are added to a piece of armor, they increase the armor's Ballistic and Impact rating by 1.

Since gel packs solidify for a brief instant, they increase the possibility that the wearer will be knocked down by an attack. When comparing the Body of a character using armor with gel packs to the DV of an attack to determine knockdown (see *Knockdown*, p. 161, *SR4A*), lower the character's Body by 1.

Radiation Shielding: This modification adds a lining of a molecular-engineered compound that provides protection against radiation, including x-rays, gamma rays, and certain energy particles. Each point of Radiation shielding provides 1 extra die for resisting Radiation damage (see p. 167). Radiation shielding also protects against laser attacks, adding armor equal to half its rating (round up).

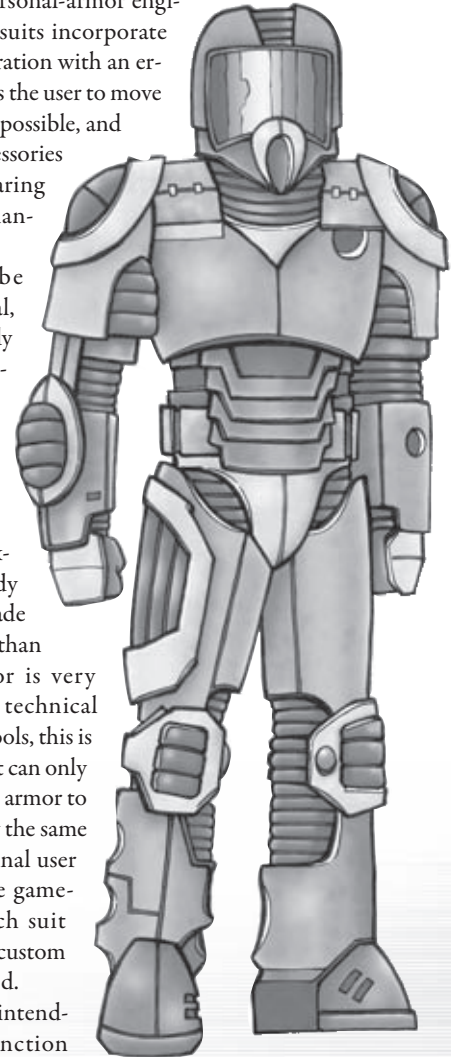
Ruthenium Polymer Coating: This modification can only be added to armor or clothing that covers the wearer's whole body, like full body armors or suits. The ruthenium polymers are controlled by a sensor suite incorporated into the armor or clothing that scans the surroundings and replicates the images at the proper perspectives, providing the wearer with chameleon-like abilities and applying a -4 dice pool modifier to Perception Tests to see the wearer.

MILITARY-GRADE ARMOR

Military-grade armors (also called "milspec armors") are the cutting edge in personal-armor engineering. These full-body suits incorporate hard and soft armor integration with an ergonomic design that allows the user to move with as little restriction as possible, and sophisticated combat accessories that turn the person wearing such a suit into a one-man-battle group.

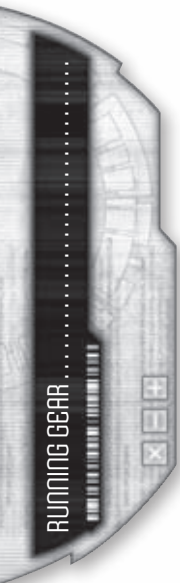
Each suit must be custom-fit to an individual, tailored to her specific body contours and range of motion. This decreases the armor's encumbrance (see p. 161, *SR4A*); the character wearing the armor is only encumbered if either armor rating exceeds the character's Body x 3. Adjusting military-grade armor to another person than the one it was made for is very difficult. Even with the technical knowledge and the right tools, this is a time-consuming task that can only be performed to adjust the armor to a new person with roughly the same physical traits as the original user (the details are up to the game-master's discretion). Each suit also comes in any color or custom camouflage patterns desired.

All these armors are intended to be worn in conjunction



Armor Modifications	Ballistic/Impact	Capacity	Availability	Cost
Auto-Injector	—	[2]	4	1,500¥ + chemical cost
Gel Packs	+1/+1	—	8R	1,500¥
Radiation Shielding	—	[4]	8	Rating x 200¥
Ruthenium Polymer Coating	—	—	12R	7,500¥

Military Grade Armor	Ballistic/Impact	Capacity	Availability	Cost
Light Military Armor	12/10	10	16F	12,000¥
Medium Military Armor	14/12	15	18F	16,000¥
Heavy Military Armor	16/14	20	20F	20,000¥
Military Helmet	+2/+2	5	—	+10,000¥
Modern Samurai Armor				
Oyoroï Armor	11/11	11	18F	11,000¥
Red Samurai Armor	13/13	12	20F	15,000¥
Kabuto Helmet	+2/+2	4	—	+10,000¥



with the appropriate helmet to offer optimal protection, exploiting the armors' technical possibilities to their fullest extent. Military armor is wireless-enabled (automatically subscribed to the helmet's commlink), and features a built-in biomonitor and several built-in security tags. Each can be equipped with any of the armor modifications described on p. 50 or p. 327, *SR4A*, including chemical seal and environmental adaptation.

Dartguns, blowguns, needles, and other 0 DV attacks used to expose the target to injection-vector compounds cannot penetrate a full suit of military armor. No other armor can be worn with military-grade armor.

Light Military Armor: These suits of armor offer about the same protection as full body security armor but do not tire their wearer down as quickly, since they are made to be worn for longer periods of time—for example, by military scouts operating behind enemy lines. They also accept slightly more upgrades than security armor, a fact that can mean the difference between life and death.

Medium Military Armor: The medium milspec armor, also called "heavy duty armor," is the most common suit of military full body armor, since it is sufficient for most missions but not as expensive and encumbering as the assault armor.

Heavy Military Armor: This "assault armor" is issued to troops who must fulfill missions where nothing but the highest amount of personal protection and firepower can keep them alive. It is heavy, encumbering, and slows its wearer down due to its weight, but it also enables him to withstand terrible onslaughts and can be equipped with a wide array of enhancements.

Military Helmet: Each helmet incorporates a wireless military commlink (Firewall, Response, Signal, System, and Encryption Rating 4), a camera, and flare compensation, image link, and smartlink enhancements. The helmet's military commlink can be upgraded to hardware ratings of 5 (+2,500¥) or 6 (+8,500¥). These helmets can also be upgraded with any of the vision or audio enhancements or sensors detailed on pp. 58–60 or pp. 333–335, *SR4A*.

Modern Oyoroi (Samurai Armor): The modern version of the traditional *Oyoroi* armor of the Japanese samurai has become quite popular with elite security forces and bodyguards of traditional Japanacorps ever since the declaration of the Japanese Empire. These expensive suits combine the protection of advanced polymer composites and ballistic fabrics with the ornate beauty of their predecessors, and are comparable to the more conventional Light Military full body armor. These armors usually also include modern varieties of the *Kabuto* samurai helmets (treat like the *Military Helmet* in all other aspects).

Red Samurai Armor: This variant of the modern *Oyoroi* armor is usually worn by Renraku's elite Red Samurai security troops when on duty within vital areas of their corporation's compounds. This armor is heavier than most other modern variants of the *Oyoroi* armors, and features a fixed Mobility upgrade rating 2.

Military-Grade Armor Enhancements

Military-grade armors accept a wide variety of enhancements that are not available to other armor types.

Articulated Weapon Arm: This functions just like the cyberware described on p. 42, *Augmentation*.

Flotation System: Since people in heavy armor sink like a rock when they fall in the water, this safety system provides an emergency life-saving mechanism for units deployed along waterfronts or on ships. When activated (either manually or via PAN), this system deploys and immediately inflates numerous airbags that provide enough buoyancy for the armor to float. The character remains immobilized until rescued, however.

Foot Anchor: This system is installed in the leg armor and boots, and functions exactly like foot anchor cyberware (p. 40, *Augmentation*).

Gyromount: The gyromount can be built into one of the armor's arm casings and works similarly to the cyberarm gyromount (see p. 344, *SR4A*).

Hydraulic Jacks: These function just like the cyberware described on p. 344, *SR4A*.

Integrated Weapons: Any of the cyberguns and cyber-melee weapons available for cyberlimbs (see pp. 344–345, *SR4A*, and pp. 42–43 and 46–48, *Augmentation*) may also be integrated into military-grade armor at the same Capacity and nuyen costs.

Magnetic System: This system functions exactly like foot the cyberware described on p. 40, *Augmentation*.

Mobility Upgrade: By integrating additional servo-motors, improved joints, and similar enhancements, the armor's mobility is increased to allow users that are not as strong and well trained to wear it without being slowed down too much. This enhancement reduces the encumbrance modifiers to Agility and Reaction due to the worn armor (see *Armor and Encumbrance*, p. 161, *SR4A*) by its rating, and also adds a dice pool modifier equal to its rating to all Running Tests.

Quick Release: This design system allows the armor to be quickly removed with a single Complex Action, either manually by pulling a simple catch or via wireless link.

Strength Upgrade: This upgrade adds additional servos, hydraulic pumps, and an improved internal structure to the armor that increases the character's Strength attribute by its rating. The usual rules for the maximum augmented attribute (see *Attribute Ratings*, p. 68, *SR4A*) do not apply to this enhancement, since the increment is due to fully external mechanics and the sheer mass of the armor.

ENVIRONMENTAL AND SURVIVAL GEAR

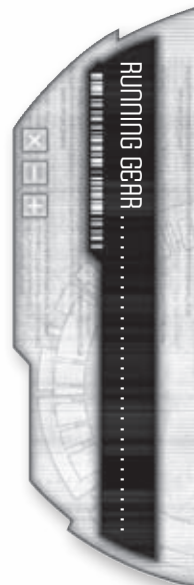
For runners used to the urban jungle, where the next meal is only a Stuffer Shack away, outdoor survival can be a challenging task—especially if the environment is hostile, such as desert or arctic. Luckily, there's a wide array of modern gear runners can equip for their outdoors adventures—some of which might actually help them to survive.

For survival rules, see p. 137, *SR4A*.

ARCTIC SURVIVAL EQUIPMENT

Whenever characters have to venture into the frozen wastes of the Arctic or Antarctic, or even high mountainous peaks such as those found in the Alps, Himalayas, or Andes, the following arctic survival gear can be literal lifesavers.

Coldsuit: This form-fitting, layered bodysuit of heated fabric is the ideal Polar outfit. It has three layers: an inner synthetic wicking layer that immediately transfers moisture outwards away





from the skin, a middle insulating layer, and an outer nylon waterproof and windproof shell. The coldsuit also includes heated boots, a hood, and a facemask with polarizing lenses (eliminating glare modifiers).

Hand protection consists of flexible gloves that allow maximum dexterity. A smartlink adaptor can be included in the gloves for an extra 50¥. The coldsuit offers Rating 4 Insulation (see p. 327, *SR4A*). External armor can be layered over the suit, though at the risk of overheating the wearer.

Crevasse Detector: This handheld device uses pulse radar to detect open cracks and fissures in the ice. Though not foolproof, it can also be used to detect snowbridges that can be used to cross the crevasse.

Filter Contacts: One of the big hazards of operating in a polar environment is snow-blindness, intense glare from sunlight reflected off snow drifts that can result in vision loss. These simple disposable contact lenses will filter UV radiation and prevent snow-blindness, and they also eliminate glare modifiers. They are available in a variety of designer colors. A pack contains enough contacts to last 10 days.

Polar Survival Kit: A polar survival kit is a survival kit tailored particularly for arctic or high mountain environments. These kits commonly include items like waterproof matches, a sewing kit, a compass, a signal mirror, safety pins, a wire saw, a multi-tool, a solar battery charger, a mini-flashlight (two spare bulbs and rechargeable batteries), a tallow wax candle, a windproof butane lighter, mini-flares, an emergency blanket, a folding shovel, duct tape, energy bars, nylon cord, pocket warmers, a pocket stove, a mess kit, multi-vitamins and a collapsing aluminum cup among other items. When used

in a winter environment, polar survival kits provide a +4 dice pool modifier, instead of the normal +2 for standard survival kits. Polar survival kits are usually used as emergency supplies on board an airplane or snow track in the event of a breakdown or crash; characters should not rely solely on polar survival kits for a long-term expedition.

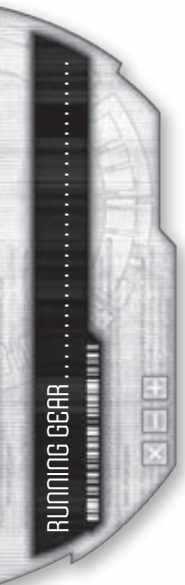
Polar Survival Suit: Survival suits are the ultimate in personal protection for harsh arctic environments. These bulky suits have several layered components. The under layer is a waterproof body smock that functions like a diving drysuit (see p. 55) and covers the torso, head, arms and legs. This layer also incorporates a liquid body waste reclamation system similar to the desert suit (p. 53). The outer layer is a heated, windproof parka that will allow the wearer to float and can be converted into a cold-weather sleeping bag. The gloves and boots both have retractable climbing claws (+1 dice pool modifier to Climbing Tests) and the gloves can form into a useful shovel shape. The survival suit also includes a high-visibility, polarized full-face mask (eliminates glare modifiers) that will never fog up and an integral heater to warm the air before it is breathed. The suit can be outfitted to include any modifications available to armor (see p. 327, *SR4A*) and armor suits (p. 50). Polar survival suits provide 1 point of Ballistic and 3 points of Impact armor, as well as Rating 6 Insulation and Rating 4 Thermal Damping (see p. 327, *SR4A*). It cannot be worn with any other armor.

Polar Tent: This durable geodesic dome tent offers protection from cold, snow, and wind. The lightweight collapsible carbon poles provide a sturdy structure that can withstand winds up to 150 kph and remain intact if buried under snow during a storm. It also includes a chemical space heater. A polar tent holds one troll or two human-sized characters.

Skis: Skis are excellent for polar cross-country travel. They come with a pair of ski poles that are heated when gripped. Skis are available in two types: cross-country and alpine. Cross-country skis work best in flat or gently sloping terrain; characters receive no movement penalty using cross-country skis across snow. Alpine skis excel in mountainous terrain, allowing users to quadruple their walking and running rates. On the other hand, they fare poorly on level or uphill inclines, reducing movement rates to half normal.

Snowshoes: Snowshoes allow characters to walk across snow without suffering a movement rate penalty. A character can only run in snowshoes at half his normal running rate.

Arctic Survival Equipment	Ballistic/Impact	Capacity	Availability	Cost
Coldsuit	—	—	4	600¥
Crevasse Detector	—	—	6	250¥
Filter Contacts (10 day pack)	—	—	6	35¥
Polar Survival Kit	—	—	4	200¥
Polar Survival Suit	1/3	6	8	1,000¥
Polar Tent	—	—	6	250¥
Skis, Cross-country	—	—	—	200¥
Skis, Alpine	—	—	—	600¥
Snowshoes	—	—	—	175¥



CAMPING AND OUTDOOR GEAR

Occasionally shadowrunners may have to undertake missions in the wilderness, to infiltrate or assault remote corporate facilities away from civilization. The following camping gear may be helpful in braving the elements of an Awakened Mother Nature.

Backpack: By 2070, backpacks commonly employ an internal frame support, with ergonomically placed shoulder and hip pads, as well as modular internal and external compartments. Backpacks typically carry up to approximately 25 percent of a character's normal body weight (18 kg for humans), the limit recommended by professional expeditioners. Overloading a backpack will not compromise its structural integrity, though characters may find it hard to fit extra stuff into an already overstuffed pack.

Camouflage Net: This netting comes in a wide variety of patterns (urban, desert, forest, etc.) and is useful for covering and camouflaging encampments, vehicles, people, and other large objects. Nets come in 10 square meter diamonds, and provide a -2 dice pool modifier for Perception Tests to spot the camouflaged area (if the camouflage pattern does not fit the surroundings, this becomes a +2 dice pool modifier instead).

Ghillie Suit: A ghillie suit is a camouflaged poncho-like cloak that drapes over the entire body. Ghillie suits are more effective than standard camo gear as they feature layers of cloth strips, nettings, simulated foliage, and other garnishings that serve to obliterate the character's outline so he blends into the surrounding terrain more efficiently. Commonly used by patient snipers, ghillie suits are very restrictive; reduce the character's Movement Rate to one quarter (round up). Ghillie suits provide a -4 dice pool modifier to Perception Tests to spot the camouflaged character as long as he remains immobile; if the character is moving, reduce the modifier to -2.

Rations: Rations for camping consist of ready-to-eat meals packaged in hermetically sealed plastic pouches and often include a water-activated heating compound, so that meals can be eaten hot or cold, at the diner's choice. Rations typically provide about 1,500 calories of nutrition (the bare minimum for survival; human characters typically require 2,000 to 2,500 calories a day). Sealed rations can last up to 3 years unopened.

Sleeping Bag: Ordinary sleeping bags allow a character to sleep outside in relative comfort when temperatures fall within a range of 0 to 35 degrees Celsius.

Tent: Camping tents in the 2070s employ a dome design, with mesh screen windows and doors that can be zipped up to keep out the elements, as well as a supplemental tarp for additional protection against rain. Most tents are made of advanced nylon

Camping Gear	Availability	Cost
Backpack	—	250¥
Camouflage Net (10 sq. meters)	4	100¥
Ghillie Suit	6	500¥
Rations	—	5¥
Sleeping Bag	—	75¥
Tent	—	75¥
Water Purification Tablet	—	5¥

composites for improved heat insulation and resistance against acid rain. The standard tent size fits two people plus their gear.

Water Purification Tablets: Water purification tablets disinfect suspect water supplies from bacterial and other forms of biological contamination. One bottle of tablets will purify about 25 liters of water.

DESERT SURVIVAL EQUIPMENT

Shadowrunners may occasionally be hired for runs in the desert, as many corps have facilities or expeditions into deserts such as the Mojave, Sahara, or Gobi. The following equipment will help shadowrunners immensely in surviving the hot elements of the sands.

Desert Goggles: Blowing sand and intense sunlight are threats that any desert traveler needs to take seriously. These goggles protect the eyes from flying grit and bright sunlight and eliminate glare modifiers.

Desert Suit: An advanced version of a diving wetsuit, the sandwiched layers of this suit help to cool the body through heat dissipation while the reflective outer surface protects from the sun's heat. A hood, facemask, and skin-tight seal keep the wearer protected from sand. The polarizing eye shield neutralizes glare modifiers. The suit even captures and distills some of the wearer's body fluids, holding the water in pockets to be drunk with a straw. Desert Suits cannot be worn with armor or anything but loose, non-restrictive clothing, as it impedes the suit's heat sinks from working properly. A character wearing a desert suit receives an additional +2 dice pool modifier to desert Survival Tests (see p. 137, *SR4A*).

Desert Survival Kit: A desert survival kit is one specially tailored for hot desert environments. These kits commonly include items like matches, flint (and a saw striker), a sewing kit, water purification tablets, a compass, a small metal mirror, safety pins, a wire saw, snare wire, a multi-tool, a solar battery charger, a mini-flashlight (two spare bulbs and rechargeable batteries), a tallow wax candle, a windproof butane lighter, mini-flares, three space blankets, a mini-water filter (with three spare filters), a folding shovel, a miniature solar still (half normal results), a canteen backpack, a mess kit, multi-vitamins, and a collapsing aluminum cup. When used in a desert environment, a desert survival kit will provide a +4 dice pool modifier, instead of the normal +2 for standard survival kits. Desert survival kits are usually used as emergency supplies on board an airplane or ground craft in the event of a breakdown or crash; characters should not rely solely on desert survival kits for a long-term expedition.



Desert Tent: This extremely compact and lightweight geodesic dome tent offers protection from heat, sand and insects. The lightweight collapsible carbon poles provide a sturdy structure that can withstand winds up to 150 kph and remain intact if buried under sand during a storm. Holds one troll or two human-sized characters.

Snake Mesh Socks: These knee-length socks are woven from a double layer of titanium micromesh, specifically designed to prevent a snake's fangs (or other sharp penetration) while remaining light and flexible. They provide 2 points of Impact armor to attacks directed at the feet and lower legs.

Solar Still: Solar stills use principles of evaporation and condensation to extract clean, drinkable water from tainted water. The still must sit in the sun; it distills up to 8 liters of contaminated water a day. Solar stills have no effect on bacteria or irradiated water. Solar stills can also be used to collect water via condensation even if there is no contaminated water available. In this case, however, the still produces at maximum a single liter of water per day.

Thermal Air Bag: This sleeping bag protects the wearer against temperatures as low as 10 degrees Celsius and as high as 65 degrees Celsius. It incorporates a mattress with a battery-operated thermal compressor so it can be heated or cooled, in addition to keeping the sleeper off the ground. The batteries are good for 1 month (assuming 8 hours use per night). The bag also floats.

SPACE GEAR

Runners who leave the confines of Earth will find the following items essential.

Evo HEL Suit: The HEL (Hostile Environment Living) suit was developed by the Evo Corporation as the everyday dress of space station inhabitants and astronauts. The thin, tight-fitting, puncture- and tear-resistant suit covers the whole body except the face, which can be protected by a hood and self-attaching breath and eye mask with an internal 5-minute supply of highly compressed air that is usually carried within one of the suit's many pouches. The suit is made of some of the most advanced clothing materials available, offering limited vacuum protection for up to

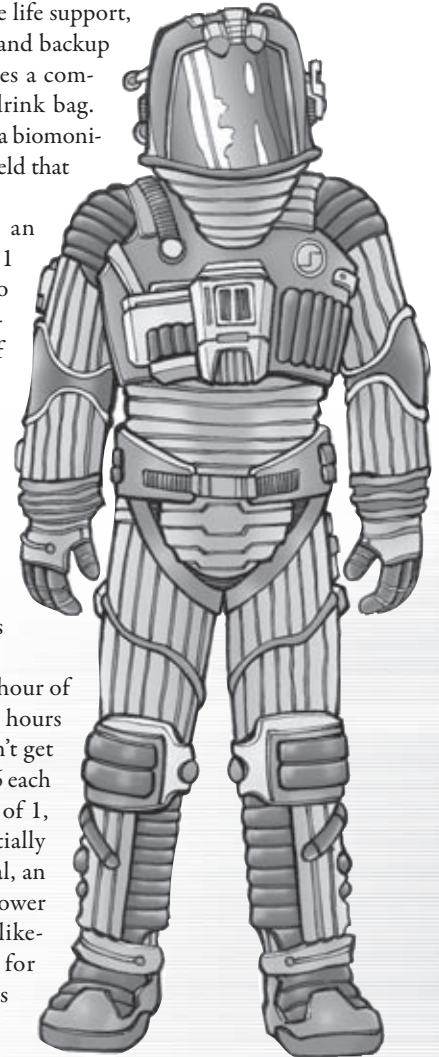
5 minutes, as well as protection from hot or cold environments and chemicals. Due to its many useful traits and high comfort, the suit has become increasingly popular with people working in uncomfortable earthbound surroundings as well (at least those for whom the suit's high price is no obstacle).

The HEL suit protects its wearer against Cold damage (Insulation 4), heat and Fire damage (Fire Resistance 2), radiation (Radiation Shield 3), and chemicals (Chemical Protection 2). See p. 50 and p. 327, *SR4A*, for the description of these armor modifications.

Spacesuit: Spacesuits are designed to keep the user at a comfortable temperature and standard air pressure in the vacuum of space. A thermal underlayer handles ventilation, provides liquid cooling and removes odors. The torso and backpack unit provide life support, bio-monitoring, control, and backup units. The helmet includes a comlink (Rating 3) and a drink bag. The spacesuit also features a biomonitor and a polarized faceshield that eliminates glare modifiers.

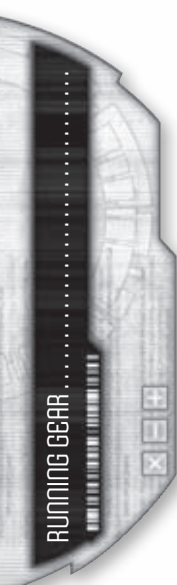
Spacesuits require an Agility + Reaction (12, 1 minute) Extended Test to put on. Spacesuits are designed to be as idiot-proof as possible, with built-in alarms, notifications and step-by-step automated instructions to users who aren't practiced in putting them on. The spacesuit's built-in oxygen supply lasts for 12 hours. The power supply lasts for 24 hours before it needs recharging.

Spacesuits require 1 hour of maintenance for every 12 hours of use. If a spacesuit doesn't get this maintenance, roll 1D6 each time it is used. On a roll of 1, the suit develops a potentially fatal failure: a cracked seal, an air leak, temperature or power failure, etc. Increase the likelihood of a failure by 1 for every additional 12 hours of use without maintenance.



Desert Survival Equipment	Availability	Cost
Desert Goggles	4	15¥
Desert Suit	8	1,000¥
Desert Survival Kit	4	200¥
Desert Tent	4	150¥
Snake Mesh Socks	6	50¥
Solar Still	4	200¥
Thermal Air Bag	6	400¥

Space Gear	Ballistic/Impact	Capacity	Availability	Cost
Evo HEL Suit	4/6	5	10	3,000¥
Spacesuit	6/8	4	16	12,000¥
Security Spacesuit	12/12	8	24	25,000¥
Spacesuit Maneuvering Unit	—	—	16	2,500¥
Survival Bubble	—	—	Rating x 3	Rating x 2,000¥



nance (fails on a 1D6 roll of 1 or 2 after 24 hours, and so on). Spacesuits come equipped with 5 emergency slap patches (additional patches cost 50¥ each).

Spacesuits feature a chemical seal, Rating 6 Insulation, and Rating 4 Thermal Damping (see p. 327, *SR4A*). Finally, the suit provides 6 point of Ballistic and 8 points of Impact armor. No other armor can be worn, but the suits can be equipped with armor add-ons and modifications as described on p. 50 or p. 327, *SR4A*.

Security Spacesuit: This is an armored version of the standard spacesuit for use by security personnel. It provides 12 points of both Ballistic and Impact armor.

Spacesuit Maneuvering Unit: This nitrogen-propelled backpack attaches to the spacesuit and allows the user to fly in zero-g with precision using rotational and translational hand controllers (or virtual dashboard). A character using a maneuvering unit can accelerate and brake, up to 10 meters per Combat Turn. To accelerate and brake in the right direction, the character must succeed in a Reaction + Intuition (3) Test. Likewise, to change direction during flight requires a Reaction + Intuition (4) Test. Maneuvering units have enough fuel for 30 “burns” (each acceleration, brake and direction change counts as one burn).

Survival Bubble: This self-inflating mylar bubble is designed for escape and survival in the case of emergency decompression. Taking only one Combat Turn to inflate around the user(s), the sphere features transparent windows, an airlock, 24-hour oxygen supply (per person), emergency food and water rations, a homing beacon (100 kilometer range), a medkit, and a built-in, stripped down version of the spacesuit maneuvering unit (with 10 “burns”). The rating of the bubble is how many people it will hold (maximum 6).

TOXIC ENVIRONMENT GEAR

Though most runners will do their best to avoid highly-contaminated areas, the following gear may come in handy if they must traverse a toxic zone.

Hazmat Tools: Hazmat tools are used to detect and decontaminate hazardous chemical, biological, and radioactive

materials. Hazmat kits can only detect the presence of hazardous materials; they cannot aid in decontamination. Hazmat shops and facilities are capable of decontamination, but the type required depends on the size and quantity of items or personnel needing decontamination. Hazmat tools are categorized by size as kits, shops, and facilities, and they follow the same rules for tools as listed on p. 332 of *SR4A*.

Mitsuhama EE Suit: This full-body extreme environment suit from Mitsuhama is worn by those who must deal directly with hazardous materials/environments such as chemical or biological agents or radiation. It protects against chemicals (full chemical seal), heat and fire (Fire Resistance 3), and radiation (Radiation Shield 6). See p. 50 and p. 327, *SR4A*, for the description of these armor modifications.

Protection Tent: When you absolutely must camp out in a polluted area, the protection tent is a vital. The tent is equipped with a complete chemical seal (p. 327, *SR4A*), an automated airlock system, a chemical shower (20 uses per person), and a complete air supply good for 5 days (per person). The rating of the tent is how many people it will hold (maximum 6).

Radiation Film Badge: This square piece of chemical film is usually clipped to a visible part of the body, and changes color in the presence of radiation.

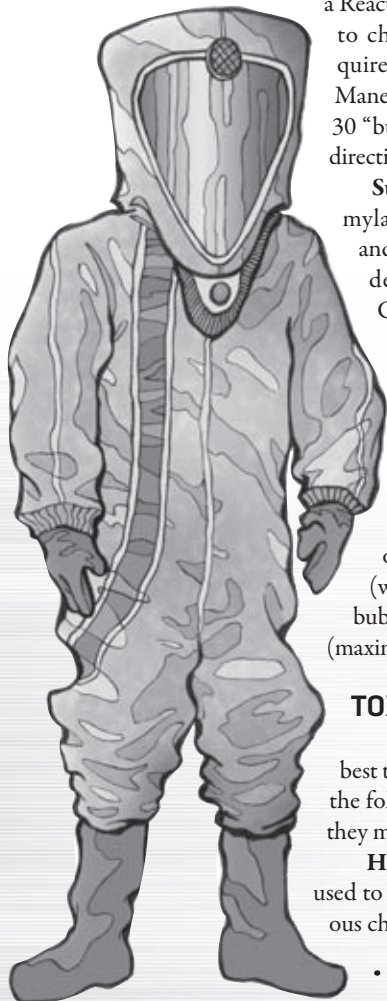
UNDERWATER GEAR

The diving gear set described on p. 336 of *SR4A* consists of the basic equipment requirement for casual scuba divers for recreational purposes. The underwater gear listed below is available for professional divers performing underwater labor or diving in riskier environments.

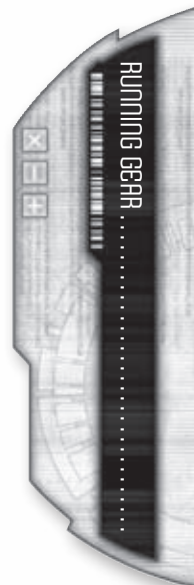
Diving Armor: Diving armor looks almost identical to the usual diving suits used for scuba, but combines several layers of waterproof and ballistic materials with thin ceramic plates covering some vital areas. Diving armor incorporates Rating 4 Chemical Protection, guarding the wearer against contact-vector chemical attacks (see p. 327, *SR4A*) and offers all the other advantages of the diving gear described on p. 336, *SR4A*.

Diving Light: At depths greater than 4 meters, water begins to gradually absorb the color spectrum, thus reducing ambient light and visibility. After 15 meters depth, most of the spectrum is absorbed, resulting in an ambient light condition on par with early evening. Diving lights help counteract this effect, providing local illumination. A diving light can either be carried by hand or strapped to the forearm or a diving helmet.

Drysuit: Unlike wetsuits, which keep a diver warm by trapping and warming a thin film of water around him, drysuits enclose the diver in a sheath of air, sandwiched between an outer layer keeping out the water and an inner layer snug against the skin. Because drysuits work even more effectively in heat insulation than wetsuits,



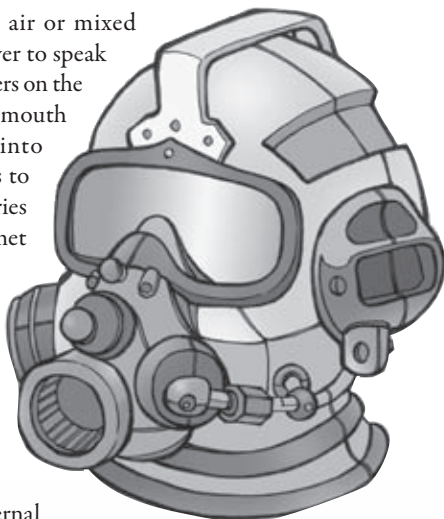
Toxic Environment Gear	Ballistic/ Impact	Capacity	Availability	Cost
Hazmat Tools	—	—	8	per tool size (p. 332, <i>SR4A</i>)
Mitsuhama EE Suit	3/3	5	10	1,500¥
Protection Tent	—	—	Rating x 2	Rating x 2,000¥
Radiation Film Badge	—	—	6	25¥



divers use them for dives in arctic waters or for dives in very deep (greater than 200 meters) waters for extended periods of time. Drysuits feature a chemical seal (with the hood up and face mask attached) and Rating 4 Insulation (see p. 327, *SR4A*).

Dual Tank Manifold: This special manifold assembly allows the user to connect his scuba system to two air tanks instead of the normal one, thus doubling his diving time to four hours. (The cost of the additional tank is included with the manifold.)

Enclosed Breathing Helmet: This is a specially constructed helmet used by commercial divers requiring unrestricted verbal communication to perform their jobs. Hoses at the back connect into the tank, which fills the inside of the helmet with air or mixed gas, allowing the diver to speak freely. Built-in speakers on the outside around the mouth broadcast speech into the water for others to hear. Other accessories included in the helmet are a halogen headlamp (since most divers requiring a helmet often work at depths where light is almost non-existent) and a speaker jack to connect into an external underwater radio or cablephone.



Full Face Mask: A full face mask completely covers the eyes, nose, and mouth of the diver, with a quick-release assembly that allows the attachment of a standard breathing regulator. Removable side plugs also let the diver attach communication systems, voice microphones, or other add-ons. A full face mask also provides complete protection against airborne toxins and chemicals that enter the body through inhalation.

Glow Spray: This spray can dispenses a water-insoluble fluorescent paint that can be easily seen and illuminated underwater. It is useful for marking locations, objects, or even other divers visible underwater.

Ink Grenade: This small black orb creates a cloud of thick black oil 10 meters in diameter when activated underwater. It is thrown in the same manner as a baseball, rather than lobbed in an arc like a grenade. The range is the same as a thrown knife (see p. 151, *SR4A*).

Liquid Breathing Apparatus: The LBA system uses a rig similar to scuba gear with an enclosed helmet, except that the tank contains a super-oxygenated liquid that the user inhales into his lungs. Consequently, this has allowed divers to achieve depths down as far as 3,000 meters, as the liquid system completely negates the risks posed by decompression.

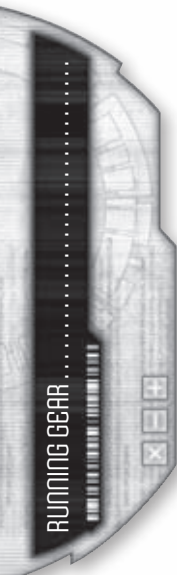
Due to the fluid properties of the liquid medium, verbal speech is impossible. Communication with others occurs electronically via commlink.

OXSYS Artificial Gill: The OXSYS artificial gill consists of a wraparound facepiece with series of filters along both sides of the jaw. The filters draw in water and extract oxygen by forced osmosis. Carbon dioxide and waste gases are then absorbed into the water through reverse osmosis and expelled from the system at the back of the neck.

Because they are light, compact, and easy to use (no training or certification is needed to operate one), OXSYS systems are widely available for casual recreational diving at shallow depths less than 7 meters (25 feet).

Underwater Camera: This is a waterproof and pressurized version of the digital camera, capable of taking pictures at all depths normally reached with scuba equipment (typically 80 meters depth). They are available in both consumer and professional grade versions. Specialty lenses used with professional underwater cameras must be specially adapted for underwater use and cost twice as much as their normal counterparts.

Underwater Gear	Ballistic/Impact	Capacity	Availability	Cost
Diving Armor	5/4	3	6	1,750¥
Diving Light	—	—	6	25¥
Drysuit	—	—	6	1,000¥
Dual Tank Manifold	—	—	6	600¥
Enclosed Breathing Helmet	—	—	8	900¥
Full Face Mask	—	—	8	300¥
Glow Spray	—	—	6	5¥
Ink Grenade	—	—	8	5¥
Liquid Breathing Apparatus	—	—	12	50,000¥
OXSYS Artificial Gill	—	—	6	1,000¥
Underwater Camera				
Standard	—	—	6	125¥
Professional	—	—	6	1,000¥



RUNNER TOYS

Runner toys cover a whole range of equipment not directly related to combat. Most of the equipment described below are professional-grade items, specialized equipment for experts in their particular trade or craft. Many of the items are legal to own and operate without requiring a permit or certification. Their specialized functions sometimes make them more difficult to acquire, however, as characters have to search for specialty stores or e-businesses that cater to a specific trade, rather than the general public.

ELECTRONICS

Biofabrics: Biofabric clothing contains embedded electronic circuitry that is attuned to the wearer's physiological signs—essentially working like a worn biomonitor (see p. 337, *SR4A*). When accessed via wireless link, biofabric clothing provides real-time information on the wearer's current state of health. Biofabrics are popular with physical therapists and athletic sport trainers, who use them to fine-tune their training regimens. They are also popular with military and law-enforcement organizations, as biofabrics can instantly alert commanders whenever personnel are injured or killed.

Like biomonitors, biofabrics provide information on the wearer's general health: body temperature, pulse rate, blood pressure, and so on. They also reduce the threshold for Diagnosis Test by 1 (see p. 125, *Augmentation*).

Emotitoys: Emotitoys are sophisticated electronic toys programmed with empathy software (see p. 60) to recognize metahuman body language and facial expressions, thus giving them a limited ability to sense emotions and react appropriately, based on their purpose.

Due to aggressive marketing campaigns by Aztechnology, Horizon, and other corps, emotitoys are extremely popular even among adults, with hipsters everywhere sporting emotitoys that dangle from their commlinks or climb around their clothing. Emotitoys come in a wide variety of styles, such as the gothic Grue, the cheerful Chirpichu, and the colorful Moodwurm. Some are animatronic but nonmobile, while others are functional minidrones.

Shadowrunners have also embraced the emotitoy craze, bringing their "friends" along to meets to get an edge during negotiations, using the toy's sensors and empathy software to get a read on the other side.

The rating of the emotitoy is the rating of its built-in empathy software.

EMP Grenade: This weapon does not detonate like a normal grenade, instead sending out a powerful electromagnetic pulse designed to create damaging current and voltage surges in electronic items. Though most electronics in 2070 are optical based, an EMP blast can still affect power supplies, anything linked to an antenna or electric cable, or older/cheaper devices with integrated circuits, transistors, inductors, or silicon chips. Most cyberware is also unaffected; RFID chips, however, are extremely vulnerable to EMP attacks.

The gamemaster determines what devices are affected. Each affected device within a 10-meter radius makes a Device Rating x 2 (3) Test; reduce the threshold by 1 for 2 meters outside of that radius. Items that fail the test burn out, have their data erased, and may even catch on fire or explode from the power surge. At the gamemaster's discretion, even optical devices like commlinks will lose 3 points of Signal rating as their antennae are affected.

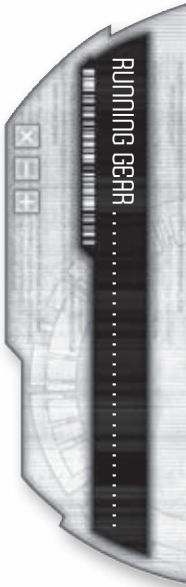
Expendable Jammer: Expendable jammers are one-shot versions of the jammers described on p. 329 of *SR4A*. When activated, they jam continuously for 1 hour and then burn themselves out. Expendable jammers are available in area and directional versions.

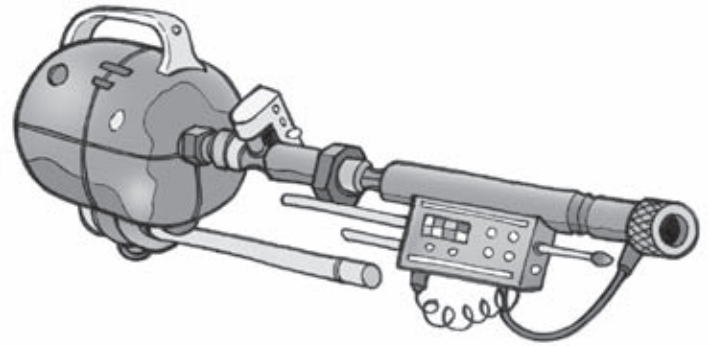
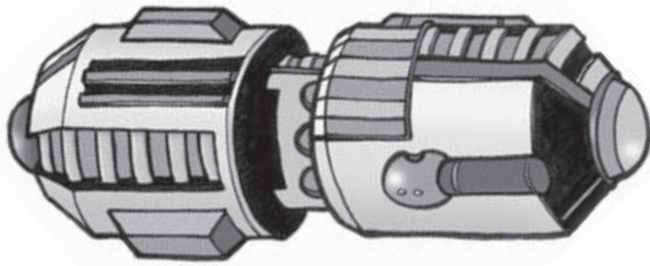
HERF Gun: A High-Energy Radio Frequency weapon is similar to an EMP grenade, except they target a directed beam of energy rather than creating a blast radius effect. To use the HERF gun, the attacker rolls Agility + Exotic Weapon (HERF gun); if the targeted item is held by someone, that character may defend against the ranged attack as normal. As with EMP grenades, the gamemaster has final say on whether an item is affected or not. Affected electronics must make the same Device Rating x 2 (3) Test to avoid being damaged by the destructive voltage. Optical devices lose one point of Signal rating per net hit on the attack. HERF guns have a maximum range of 50 meters.

Inkless Printer: This printer uses ultraviolet light to "print" on special paper manufactured with photochromatic compounds. The printing only lasts for 24 hours before it fades away, or it can be fed back into the printer and erased using light of a different wavelength. This method of printing is preferred by shadowy types that don't like leaving anything in hardcopy or data storage.

Electronics	Availability	Cost
Biofabrics	4	100¥
EMP Grenade	16F	500¥
Expendable Jammer		
Area (Rating 1–10)	(Rating x 3)F	Rating x 50¥
Directional (Rating 1–10)	(Rating x 3)F	Rating x 50¥
Hardening (Rating 1–6)	4	+(Rating x 25¥)
HERF Gun	16F	2,500¥
Inkless Printer	6	50¥
Photochromatic Paper (50 sheets)	6	5¥
Polygraph (Rating 1–5)	12	Rating x 500¥
Smart Jammer		
Area (Rating 1–6)	(Rating x 3)F	Rating x 1,000¥
Directional (Rating 1–6)	(Rating x 3)F	Rating x 1,000¥
Voice Mask	8R	500¥

Emotitoys	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Emotitoy, nonmobile (Rating 1–6)	—	—	—	3	1	0	3	—	Rating x 100¥
Emotitoy, minidrone (Rating 1–6)	+1	3/15	15	3	1	0	3	4	(Rating x 100)+2,000¥





Polygraph: Modern polygraphs have advanced in reliability, using advanced methods to measure physiological responses such as blood pressure, pulse, respiration, skin conductivity, thermal scans, retinal dilation, and eye movement as well as magnetic imaging of the brain to identify when a subject is lying. To properly work, the subject must be hooked up to the polygraph and run through a series of pre-test control questions, taking half an hour. In order to defeat the polygraph, the subject must make a Composure Test (Willpower + Charisma) with a threshold equal to the polygraph's rating. Success indicates the subject has successfully lied or misled the questioner without the polygraph noting.

Smart Jammer: Smart jammers improve on the ability of area or spot jammers (see p. 329, *SR4A*) to selectively jam and target specific frequencies while leaving others unjammed. Smart jammers can be instructed to jam specific nodes (or any nodes in range that are not identified as friendly), and will continue to jam those nodes even if they change to a different frequency. If a targeted node is hidden, the smart jammer makes a Rating x 2 (4) Test to detect it; once a node is detected, the smart jammer will jam it.

Voice Mask: This masking device, worn over the mouth, distorts the user's voice in order to defeat recordings and voice recognition analysis. Similar to voice mask cyberware (p. 37, *Augmentation*), it cannot be used to mimic another voice, but it does effectively distort the user's voice unrecognizably and makes voice identification impossible.

ate indefinitely in extreme environments, but the designer must specify what condition the device is resistant to. This option is particularly useful when operating outside space stations or deep-sea underwater aquacologies.

Hardening: This modification option is available for all electronics items. Hardening adds shielding, fuses, and cut-outs to electronics that could be damaged by an electromagnetic pulse such as an EMP grenade or HERF gun. Each point of Hardening adds one die to the Device rating test to resist damage from the EMP/HERF.

Inertial Trigger: The inertial trigger detects sudden movement and activates the trigger if the device is moved more than a gentle nudge. The trigger can be set to turn the device on or off, activate a self-destruct feature, or do anything else the device is capable of.

Laser Link: A device equipped with a laser link can communicate to other devices via an infrared laser, though this requires clear line of sight between the device and its receiver. At the gamemaster's discretion, fog or smoke may interrupt the link. The advantage of laser links is that they cannot be jammed or eavesdropped on. The laser link has a maximum range of 100 meters.

Personality Software: This software gives the device's interface a virtual personality, sometimes mimicking the personality of fictional characters or real-life stars. Some popular favorites include Sultry Simantha, Hal 9001, Max Headnode, the Shadow, and Orxanne.

Photosensitive Trigger: This feature includes a photosensitive sensor that activates a trigger if the device is either exposed or cut off from ambient light (one or the other). The trigger can turn the device on or off, activate a self-destruct feature, or do anything else the device is capable of.

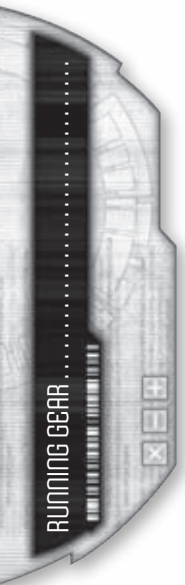
Self-Destruct: The device contains a small explosive charge that destroys it when a pre-programmed trigger condition is met or a specific wireless signal is received. This option is available in two sizes, localized and area effect. The localized self-destruct destroys only the device. The area effect self-destruct has a blast area like either a fragmentation or high-explosive grenade.

ELECTRONICS AND SENSOR OPTIONS

The following modifications are available to all electronics devices and sensor systems.

Environmental Resistance: Electronics and sensors operate well in standard environmental conditions, but if exposed to extreme conditions (heat, cold, underwater, high pressure, intense radiation), they will be destroyed in a matter of hours. The environmental resistance option allows the device to oper-

Electronics	Avail.	Cost
Environmental Resistance	8	+100¥
Hardening (Rating 1–6)	4	+(Rating x 25¥)
Inertial Trigger	8	+25¥
Laser Link	—	+50¥
Personality Software	—	+100¥
Photosensitive Trigger	4	+10¥
Self-Destruct		
Localized	16F	2,000¥
Area Effect	20F	10,000¥



PARACHUTES

By the 2070s, most parachutes in service employ a composite compound consisting of both lightweight polymer nylon and synthesized spider silk, significantly reducing the weight of the complete assembly. Standard recreational parachutes utilize a parasail design, allowing users to experience optimal maneuverability and directional control, so as to position themselves for an accurate and soft landing. All parachutes include a reserve chute, in case the main chute either fails to open or opens improperly.

All parachutes also include as a standard feature a digital altimeter built into the harness, which provides the user information on his current altitude, speed, and estimated fall time. The altimeter also has a built-in failsafe feature that automatically deploys a chute when the height or fall time exceeds a critical threshold. (Only the main chute is automatically deployed; the failsafe does not trigger the reserve chute, which is manually deployed only.) This failsafe can be bypassed by the user, although only experienced professionals have the know-how to do this safely. The altimeter can be connected to any standard commlink, thus allowing jump telemetry to be communicated to others.

Low Altitude: Low altitude parachutes are designed for parachute jumps at a height of 500 meters (1,500 feet) or less. Instead of a parasail design, low-altitude parachutes employ the standard dome canopy. More often than not, low-altitude parachutes employ a static-line ripcord, which means that the parachute deploys within four seconds after the user has left the aircraft. Low altitude parachutes are the standard parachute used by military airborne paratroopers.

HALO: HALO stands for “High Altitude, Low Opening.” These chutes are strong enough to slow down a parachutist dropping at terminal velocity when opened at an extremely low altitude. HALO parachutes also are designed to provide better gliding capabilities, both for increased accuracy in hitting the landing zone and for a safer landing. HALO parachutes come equipped with a face mask and small air tank that allows the user to breathe and see at high altitude, where oxygen levels are normally too thin for survival.

Parachutes	Availability	Cost
Standard	6	500¥
Low Altitude	6	120¥
HALO	8	2,000¥

Sensors	Capacity	Availability	Cost
Barometric	[1]	2	200¥
Camera Neutralizer (Rating 1–6)	[5]	12	Rating x 250¥
Liquid Analyzer	[5]	10	2,000¥
Non-Linear Junction Detector (Rating 1–6)	[1]	12R	Rating x 100¥
Radar (Rating 1–6)	[5]	8	Rating x 200¥
Radiation	[1]	6	100¥
Sonar			
Passive (Rating 1–6)	[3]	8	Rating x 200¥
Active (Rating 1–6)	[3]	8	Rating x 200¥
Thermometric	[1]	—	20¥
Ultrawideband Radar (1–4)	[2]	8R	Rating x 500¥

SENSORS

These devices follow all of the standard rules given for sensors on p. 333, *SR4A*.

Barometric: Barometric sensors detect changes in the ambient air or water pressure and are often used to detect changes in altitude or water depth.

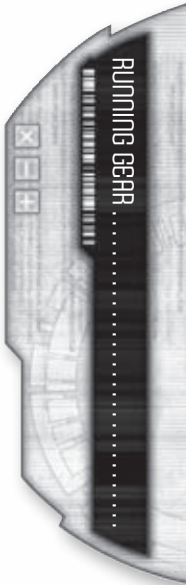
Camera Neutralizer: This system uses infrared lasers and photo-detecting transistors to scan an area for the reflectivity and shape of the image-producing sensors used in digital cameras. Once a camera is located, the system points a laser directly into the camera, overloading it with white light and rendering images, video, and trideo useless. Celebrities often use this system to defeat paparazzi, as do some secure installations that hope to defeat surveillance measures.

To determine if the neutralizer system detects a camera, make a Device rating x 2 (2) Test. Visibility modifiers apply, and micro-sized cameras increase the threshold by 1. A detected camera is immediately targeted with a laser and neutralized, though if the camera moves erratically the neutralizer system may have to make another test to detect and neutralize it again.

Liquid Analyzer: A liquid analyzer is a microwave scanner that is capable of analyzing the liquid content of a sealed container. The scanner works equally well on standard glass, plastic, and metal containers, although specialized containers may render uncertain results or no function. The scanner consists of a handheld scanning aperture attached by cord to an analysis unit the size and weight of a heavy briefcase. The aperture must be held within six inches (fifteen centimeters) of the liquid being analyzed to function properly.

Non-Linear Junction Detector: This handheld device emits microwave signals and detects the reflected harmonic signals given off by electronics. It is commonly used to scan for RFID tags, micro-sensors, microdrones, bombs, and other hidden devices, and can even detect electronics that are not powered. The range of this device is limited, however, to only 2 meters.

To determine if the NLJD detects a device, make a Success Test using its Device rating x 2. The threshold to detect a device is 2 for non-optical electronics and 3 for optical electronics. Increase the threshold by 1 if the device is off. If the device is hardened (see *Hardening*, p. 58), subtract the Hardening rating from the sensor’s dice pool.



Radar: Radar sensors are used to monitor activity on or around installations, encampments, and battlefields. Radar systems work by emitting radio waves and measuring the reflection of those waves as they bounce off both moving and fixed objects like people, animals, vehicles, terrain, weather formations, etc. Radar systems are capable of detecting ground-level activity such as walking or crawling, and they can determine range, altitude, direction, and speed. Radar does not suffer Visibility modifiers, but may suffer dice pool modifiers when used to detect objects in cluttered terrain like urban settings or heavy foliage, due to the “noise” generated by so many reflected radio waves. Radar is also vulnerable to jamming.

Radiation: A radiation sensor monitors the presence and level of radioactive sources in close proximity to the sensor.

Sonar: Sonar uses sound waves to detect objects. Sonar comes in two types, passive and active. Passive sonar simply listens to the propagation of sound and vibration underwater made by external sources. Active sonar transmits a ping and then listens for the reflection of the sound pulse. Detected sources are analyzed for their type, range, and bearing. Sonar does not suffer from Visibility modifiers, but is affected by Silence and Stealth spells, suffering a -1 dice pool modifier for every hit generated on the Spellcasting Test.

Static Scene Laser Monitoring System: This system uses lasers to scan the area of coverage when initialized, building a detailed map of every object in the room that has been tagged with a special piece of laser-reflecting tape down to the millimeter. The lasers continue to scan the area multiple times a second, noticing if any of tags are moved or change position even slightly and immediately triggering an alarm. This system is commonly used by museums, galleries, and rich collectors to protect valuable items and artifact from theft. Defeating this system is all but impossible, given the scanning speed and level of resolution.

Thermometric: A thermometric sensor scans the ambient temperature of the environment around the bug.

Ultrawideband Radar: This sensor system functions exactly like radar sensor cyberware (p. 36, *Augmentation*), using ultrawideband and terahertz radar to see through walls and obstacles and create a three-dimensional map of the area.

Ultrawideband radar sensors use the same Visibility modifiers as ultrasound, can penetrate rating x 5 points of cumulative barrier Structure ratings (see p. 166, *SR4A*), and can be used to detect cyberware and weapons in the same manner as millimeter-wave radar (see p. 262, *SR4A*). Ultrawideband radar sensors have a Signal rating of 2 and are vulnerable to jamming.

Photographic Equipment

The camera described on p. 332 of *SR4A* is the basic digital camera most people use for recreational snapshots. Serious photographers who make a living with their cameras use professional single-lens reflex (SLR) cameras capable of accepting specialty lenses and filters, as well as advanced photographic options. Additionally some photographers still make use of traditional film for artistic purposes. Film cameras also see limited utility in forensic and intelligence work, as film has certain unique properties that make it advantageous over digital photography in certain special-case situations.

Infrared Film: Infrared film is specially treated to be sensitive to infrared radiation. It enables a photographer to take pictures in dim light or darkness without resorting to a flash. Treat images shot with infrared film as if viewed with cybernetic low-light vision.

Macro Lens: Macro lenses are close-up lenses that magnify small objects. They work on a similar principle as telephoto lenses, but in reverse: instead of decreasing distance, they increase the image size. Macro lenses increase image magnification up to a factor of 6 times.

Steadicam: A steadicam is a stabilizing mount for a motion-picture camera. It mechanically isolates the movement of the camera from that of the operator, providing a very smooth shot even when the operator is moving quickly over an uneven surface. A steadicam negates any modifiers to Perception Tests that may be due to camera motion. A steadicam cannot be used for stabilizing weapons, as it does not provide adequate support against recoil.

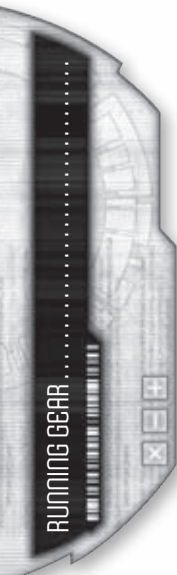
Telephoto Lens: Telephoto lenses allow a photographer to shoot pictures as if he were much closer to the action than he actually is. Moderate telephoto lenses (300 mm aperture or less) can obtain magnification up to 32 times and are generally used by amateur photographers. Professional photographers (particularly in sports photography) often employ gigantic super-telephoto lenses, which have apertures of over 400 mm and sometimes as high as 600 mm. These often require a stand to stabilize the lens as such lenses are more sensitive to vibration and blurring. A moderate telephoto lens increases distance magnification up to a factor of 6 times. (In other words, the image appears 6 times closer than it actually is.) A super-telephoto lens increases magnification up to a factor of 12 times.

Sensor Software

With the computing power available in 2070, there’s a lot you can achieve when you hook up a dedicated sensor system to a tailored software package. The following software is of particular use to shadowrunners.

Empathy: Empathy software is designed for use with standard video/trideo cameras, carefully analyzing the behavioral patterns of the subject to ascertain mood, interest, and so on. Empathy software can be used to make a Judge Intentions Test (see p. 139, *SR4A*) for emotional status using its rating as the dice pool. It does not detect falsehoods; that’s the realm of lie detection software. Empathy software can be discreetly used in real time during negotiations or social interactions, adding its rating as a dice pool bonus to the character’s Social skill tests.

Photographic Equipment	Avail.	Cost
Professional Camera	6	800¥
Film Camera	6	250¥
Infrared Film (per 25 shots)	6	10¥
Macro Lens	6	500¥
Steadicam	6	750¥
Telephoto Lens	6	625¥
Super-Telephoto Lens	6	6,000¥



Facial Recognition: This software is used to identify or verify someone's still photo, video, or trideo image. It can be used in real time with camera sensors to scan faces against a database of images, track a particular face as it moves through a crowd, or it can be used to scan an accessed online database for a match. In either case, use its rating for the Perception Test (the gamemaster determines the threshold). Facial recognition software excels at identifying age, metatype, and sex, and is sometimes used for tailored direct advertising.

Gait Analysis: When used in conjunction with a camera or pressure sensor system, gait analysis software can be used to identify a particular person's gait, compare a gait against an accessed database, or track a particular person through a crowd. This software can also be used to identify age, sex, if someone is carrying a heavy weight, is injured, or surreptitiously drops something. In all cases, use the software's rating for the Perception Test against a gamemaster-determined threshold.

Lie Detection: Similar to empathy software, lie detection programs measure a subject's behavior for signs of falsehood. Lie detection software can be used to make a Judge Intentions Test (see p. 139, *SR4A*) specifically to ascertain honesty using its rating as the dice pool. If employed along with a thermographic sensor, the software receives a +2 dice pool bonus as it reaps the benefits of reading the subject's facial blood patterns.

Noise Analysis: When coupled with a microphone or similar audio sensor, noise analysis can be used to identify and pinpoint an array of sounds. Most commonly this program is used by security agencies to listen for the specific acoustic cues that signify gunfire or aggravated voices, triggering an alert. Use the software's rating as the dice pool for noise-based Perception Tests. When coupled with a spatial recognizer sensor, the software receives the standard +2 dice pool modifier for pinpointing the source of the sound.

Visual Spotter: This smart software can be used to detect, track, and index specific shapes or objects as seen through a camera. Retail stores sometimes use this software for sales and/or loss prevention, whereas security agencies use it to keep an eye out for suspicious packages or prohibited items. Use the software's rating as the dice pool for visual-based Perception Tests to identify, spot, or track a particular shape/object.

Vehicle Identification: This program is similar to facial recognition software, except that it identifies and picks out particular vehicles and drones (or simply types of vehicles/drones). Use the software's rating as the dice pool for visual sensor-based Perception Tests to identify, spot, or track a particular vehicle or type of vehicle. If a microphone is also being used, the software receives a +2 dice pool bonus as it can compare audio input against a library of vehicle sounds.

Voice Recognition: When coupled with a microphone, this software identifies voices or matches them against samples in an accessed database. Use the software's rating as the dice pool for the voice recognition Perception Test.

Weapon Watcher: This software analyzes thermographic sensor input, watching for the infrared signature of a weapon as it is fired and identifying it from a database of thousands of muzzle flashes. Use the software's rating for the Perception Test to spot a

weapon and to identify its type. Weapon Watcher software can also be used to alert the user about an attacker's relative position, and can even be used to paint a target for indirect fire.

Wildlife Spotter: Commonly used by researchers and wildlife enthusiasts, this program is designed to spot, identify, and track critters via visual sensor. Use the software's rating for the Perception Test to spot or track a critter or to identify its type. If also coupled with audio sensors, apply a +2 dice pool bonus as the software matches animal sounds against existing databases.

SECURITY DEVICES

Runners who seek to have a little home security may choose to invest in some of these items. For more details on security systems, see pp. 259 and 335, *SR4A*.

Barbed/Concertina Wire: As described on p. 260, *SR4A*, this wiring is strung on top of fencing to keep intruders out, potentially injuring anyone that attempts to climb over.

Electric Wire: This wiring is used to charge a fence with electrical energy, though it can also be used to electrify other metallic or conductive objects such as door handles or pools of water. Establishing an electrified system on one's own requires an Industrial Mechanic + Logic (4, 1 hour) Extended Test. See p. 260, *SR4A*, for rules on handling electrified fences or objects.

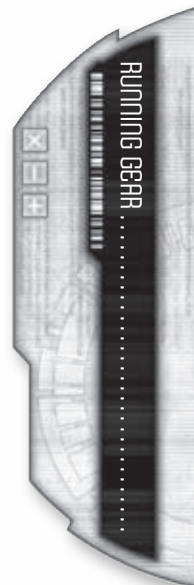
Laser Trip Beam: This emitter/detector system is used to cross an area with a visible or infrared laser and to trigger an alarm if that beam is interrupted. For more details, see p. 261, *SR4A*. The beam has a range of 10 meters.

Monowire: This dangerous and hard-to-see wiring is intended to maim or kill intruders rather than deter them, and can be strung on top of fences, across doorways, or anywhere else a trespasser might tread. For rules on spotting or running into monowire, see p. 260, *SR4A*.

Pressure Mesh and Pads: This 10-square meter pad or mesh mat is used to detect and measure weight; see p. 261, *SR4A*.

Security Equipment	Avail.	Cost
Barbed Wire (1 roll, 10 meters)	4	15¥
Concertina Wire (1 roll, 10 meters)	6	20¥
Electric Wire (10 meters)	6	10¥
Laser Trip Beam		
Visible	4	25¥
Infrared	6	50¥
Monowire (1 meter)	10F	1,000¥
Pressure Mesh/Pads (10 square meters)	8	200¥
Proximity Wire (1 standard doorway)	10	500¥
Security Lighting		
Regular Lamps	—	25¥
Active Infrared	8	50¥
Ultraviolet	4	30¥

Sensor Software	Availability	Cost (up to Rating 3)	Cost (up to Rating 6)
Sensor Software, all types (Rating 1–6)	Rating x 2	Rating x 200¥	Rating x 500¥



Proximity Wire: As described on p. 261, *SR4A*, proximity wire is used to detect the electrical charge of a metahuman (or critter) body within 2 meters.

Security Lighting: These wireless-enabled lights are used to illuminate areas and may be linked to sensor systems to be activated when an alarm is tripped. For more details, see p. 260, *SR4A*.

ODDS AND ENDS

The following gear doesn't easily fall into other categories, but can certainly be useful to runners under the right circumstances.

Forensic Tools: Police crime scene investigators (CSIs) use forensic tools to acquire, secure, and analyze evidence found at the location of a crime. Forensic tools cover measurement and analysis of ballistics, biometrics, and basic chemical and biological analysis. Use of forensic tools adds a dice pool modifier to any Success Tests made to analyze evidence in crime-related activity as listed on the Tool Modifiers table. They also preserve evidence from decay or contamination. Forensic tools are categorized by size as kits, shops, and facilities, and they follow the same rules for tools as listed on p. 332 of *SR4A*.

Glasscutter: When you want to get through a window quietly, this glasscutter and a set of suction cups works much better than smashing.

Hypersonic Sound Beam: This handheld device allows the user to transmit a directed beam of sound just like a flashlight at a particular person. The sound remains invisible and silent except at the point of impact, where the sound waves disperse and target hears the audio as if it was inside his head or he was wearing headphones. Commonly used in some museum and art gallery exhibits to decrease noise pollution, the hypersonic sound beam is also a discreet way to pass a private audio message that can't be intercepted to a target even in a crowded room. At the gamemaster's discretion, the person wielding the sound beam may need to make an Agility + Exotic Ranged Weapon Test to "hit" the intended target. The beam has a range of 100 meters.

Inline Skates: Equipped with smart wheels for improved road-holding, and power flywheels for momentum conservation, these high-tech skates can get you almost everywhere. Inline skates increase the character's Walking or Running Movement rate by one half (round up). At the gamemaster's discretion, difficult situations or terrain may require an Agility + Reaction Test for the character to stay on his feet.

Science Tools: Science tools are used for on-scene scientific analysis. They must be specified by discipline (for example, biology, chemistry, or geology). Usage of science tools adds a dice pool modifier to any Success Tests made to analyze materials or items per the appropriate scientific discipline, as noted on the Tool Modifiers table. Science tools are categorized by size as kits, shops, and facilities, and they follow the same rules for tools as listed on p. 332 of *SR4A*.

Smart Pack: A smart pack is an internal-frame backpack incorporating piezoelectric crystals in its load-bearing elements. When connected to a PAN, it allows the wearer to monitor the weight of the pack's contents. Smart packs are popular with outdoorsmen, athletic trainers, and soldiers, due to the pack's aid in expedition training and fatigue management. A smaller butt-pack variant is also available for shorter day trips or casual hikers.

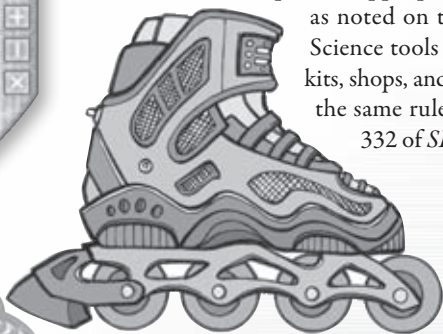
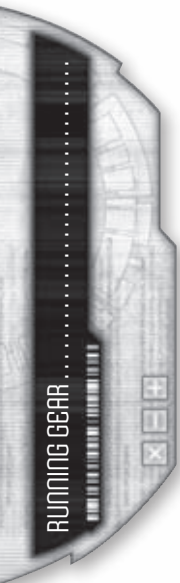
Smart Pouches: The military takes the smart pack concept one step further with the smart pouch system. Smart pouches are specially designed ammunition or supply pouches that are configured to carry only one or a small class of expendable items (for example, rations, first aid supplies, or water). By measuring the weight of the items carried and the tension exerted on certain straps or collars, the smart pouch can calculate the exact quantity being carried, which greatly aids in logistical management. The pouches attach to a combat load vest with its own internal inventory subprocessor, which allows for a flexible modular system. (The load vest can be worn over most armored vests and armored jackets and also contains a built-in case for carrying a standard military commlink.)

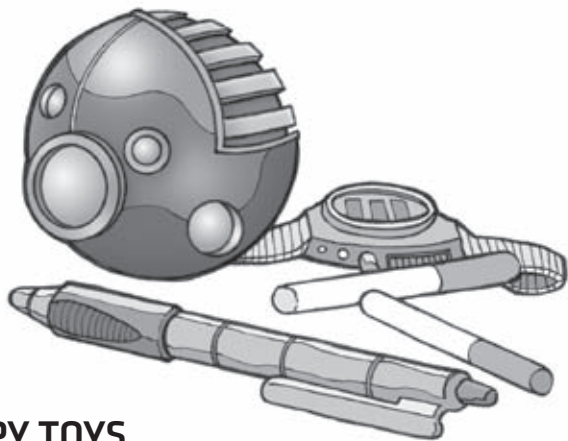
Ammunition pouches may carry up to three clips of ammunition, specified by weapon class. (For example, an assault rifle ammo pouch only holds assault rifle clips.) The carrying capacity of supply pouches depends on the type of item being carried, but as a general rule can go up to approximately 2 liters of volume.

TOOL MODIFIERS	
Tool Size	Modifier
Kit	+2
Shop	+4
Facility	+6

Odds and Ends

	Avail	Cost
Forensic Tools	8	per tool size (p. 332, <i>SR4A</i>)
Glasscutter	4	10¥
Hypersonic Sound Beam	8	200¥
Inline Skates	—	100¥
Science Tools	8	per tool size (p. 332, <i>SR4A</i>)
Smart Pack	4	500¥
Butt Pack	4	80¥
Smart Pouch System		
Ammunition Pouch	8	25¥
Ration Pouch (3-day supply)	8	50¥
Smart Canteen (1 liter)	8	5¥
Combat Load Vest	8	300¥





SPY TOYS

Sometimes a shadowrun will call for stealth and secrecy, rather than guns and explosives. Nobody knows this better than the intelligence agencies of the world's countries and corporations, who develop and produce specialized covert equipment for their black ops. Occasionally, some of these spy toys make their way to the black market and into shadowrunners' hands. This section describes some of these spy toys character can use, for those covert operations where the job has to get done without anyone noticing.

Appraisal Tools: Appraisal tools assist antique appraisers in determining the age and value of a particular artifact. Within the spy world, appraisal tools are essential for creating accurate forgeries of physical items, including written documents. Usage of appraisal tools adds a dice pool modifier to any Success Tests made to forge items, as noted on the Tool Modifiers table (p. 61). Appraisal tools are categorized by size as kits, shops, and facilities, and they follow the same rules for tools as listed on p. 332 of *SR4A*.

Body Cavity Escape Kit: This miniature toolkit is packaged in a smooth flesh-colored plastic tube. It includes items suitable for a desperate attempt to break out of a maximum-security facility, including a set of wire lockpicks, wire saw, a small diamond-edged ceramic file, and a one-shot Rating 3 maglock passkey/sequencer (see p. 263, *SR4A* for information on defeating maglocks). Treat the escape kit as betaware for escaping detection by cyberware scanners (see p. 262, *SR4A*).

Fingernail Data Storage: A fingernail data storage unit is a datachip that is constructed to appear as an artificial fingernail. Data is uploaded and downloaded to the unit, either wirelessly or using a special cable that attaches into any standard commlink port. Fingernail storage units will fool anyone making only a casual inspection, but a careful examination will reveal subtle anomalies

Spy Toys	Avail.	Cost
Appraisal Tools	12	per tool size (p. 332, <i>SR4A</i>)
Body Cavity Escape Kit	12F	10,000¥
Fingernail Data Storage	—	200¥
Operations Cleanup	12F	per tool size (p. 332, <i>SR4A</i>)

Sensor Package	Capacity	Signal	Avail.	Cost
Spyball	3	3	12	5,000¥

that will alert a trained observer who is actively looking for them. Fingernail storage units have a Concealability modifier of -4.

Operations Cleanup: Operations cleanup tools are essential for covert operatives in destroying evidence and covering up black ops. Usage of cleanup tools adds a dice pool modifier to any Success Tests to hide the presence of criminal activity, as per the Tool Modifiers table (p. 61). Cleanup tools are categorized by size as kits, shops, and facilities, and they follow the same rules for tools as listed on p. 332 of *SR4A*.

Spyball: A spyball is a black sphere approximately the size of a billiards cue ball, with an array of lenses on one side. The interior contains shockproof floating electronic components that continue function no matter how the spyball is thrown, bounced, or rolled. When it comes to a rest, the spyball automatically steadies itself with internal gyroscopes, so that its camera lenses are up for viewing. The camera is capable of full 360 degree horizontal rotation, as well as vertical rotation from 90 degrees upward to about 30 degrees below center. The spyball also contains a microphone to pick up audio and sound. Spyballs transmit their data feeds via standard commlink protocols.

DISGUISED EQUIPMENT

Intelligence agencies often disguise special equipment as everyday items to fool casual observers. Rather than listing an infinite array of disguised items, these rules provide gamemasters with guidelines for disguising equipment as otherwise ordinary objects.

Equipment may be disguised as any ordinary item that is at least 1.5 times the size of the device being concealed. Disguised equipment will fool anyone making a casual inspection, and anyone making a detailed inspection receives a -2 dice pool modifier on Perception Tests to spot that the item is not what it appears. Disguised equipment costs double its normal value.

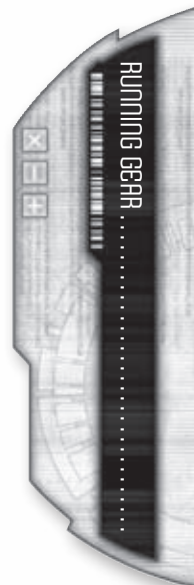
More cleverly disguised equipment, which is even harder to discern from the real thing, is also available, but at an increased cost. Improved disguised equipment may have dice pool modifiers from -3 to -6, but every -1 increase beyond the standard -2 increases the cost multiplier by 1. (So a disguise with a -3 modifier against detection costs three times normal.)

Two or more separate devices may be concealed in the same item. (For example, a fountain pen that contains both a bug and an acid dispenser.) In this instance, the cost of the item is based on the sum of all disguised devices, with the multiplier and dice pool modifier applying equally to both.

Listed below are some sample disguised objects that runners may commonly encounter:

Ballpoint Pen Micro-transceiver: This device resembles a fancy twist-top roller-ball pen, rather than the cheap throwaways sold in packs of ten at the local Stuffer Shack. It actually consists of three devices: a micro-recorder, a micro-transceiver (capable of receiving transmitted signals from a listening bug), and a digital memory core. The twist-top cap also contains an embedded wireless earpiece, so the user can listen in on conversations through the transceiver. The Signal rating equals the Device rating.

Briefcase Rocket: This resembles an ordinary briefcase, but it carries a nasty surprise: a single-shot high-explosive rocket. To arm the rocket, the user lifts and twists the briefcase handle 180 degrees. To fire the rocket, the user presses the brass nameplate set underneath the handle. Use the same statistics as for the M79B1 LAW rocket (p. 32), but reduce all ranges to half normal.



Chemical Cosmetics: These look like ordinary cosmetic or hygienic products, such as a makeup compact, lipstick, cologne, or deodorant (aerosol and roll-on). The “cosmetics,” however, are actually gels laced with DMSO, mixed with a pharmaceutical chemical of the agent’s choice. The makeup compact can hold three separate chemicals, with up to 10 doses. The lipstick, cologne, and deodorant hold only a single chemical, but contain many more doses (100 for the lipstick, cologne, and roll-on; 200 for the aerosol.)

Hollowed Objects: Even in the micro-digital world of *Shadowrun*, the classic hardcover book with a hollowed-out space between the pages still plays an important role in espionage. This group of objects includes other classics such as the false-bottom suitcase. As a general rule the hollowed space should be no greater than half the normal volume of the object.

Laés Cigarette: This cigarette is laced with the notorious Tir Tairngire drug *laés*, which erases short-term memories. (Ironically, the *laés* cigarette itself was developed by NAN intelligence services, for use against Tir operatives infiltrating the Pacific Northwest.) After smoking the cigarette, the subject must make a Body + Willpower (3) Test; the drug erases memory for the past (12 – net hits) hours (minimum 1 hour). Additionally, the user falls unconscious for 20 x 1D6 minutes. Memories erased by *laés* are not recoverable by any means, including magic. For more information on *laés*, see also its entry on p. 76.

Scent-Masking Cigarette: When lit, a scent-masking cigarette releases odor-absorbing chemicals that defeat most scent detectors, both natural and artificial. After a character smokes a scent-masking cigarette, a –4 dice pool modifier applies to any scent-based Perception Test made against the character for the next 6 hours. This also includes artificial detectors, such as those used to detect the presence of explosives. After 6 hours, the modifier drops to –2 up to 12 hours, when the effect dissipates completely.

Disguised Equipment	Avail.	Cost
Ballpoint Micro-transceiver (Rating 1–6)	Rating x 3	Rating x 500¥
Briefcase Rocket	12	1,400¥
Chemical Cosmetics		
Makeup Compact (3 chemicals, 10 doses each)	12	300¥
Lipstick (1 chemical, 100 doses)	12	1,500¥
Cologne (1 chemical, 100 doses)	12	1,000¥
Deodorant, roll-on (1 chemical, 100 doses)	12	1,000¥
Aerosol (1 chemical, 200 doses)”	12	2,000¥
Hollowed Objects		
Hollowed Book	12	50¥
False-Bottomed Attaché Case	12	300¥
Laés Cigarette	12	25¥
Scent-Masking Cigarette	12	10¥

MANATECH

As the Sixth World advances, more and more engineers and magicians have conspired to combine magic and technology in new ways. The results of these collaborations have been dubbed *manatech*. Recent breakthroughs have focused the majority of research on the products of Awakened critters and enchanting. Here are a few examples:

Ambient Magical Potentiometer (AMP): The AMP is a sensor for measuring the ambient magical potential of an area, known colloquially as the background count (see p. 117, *Street Magic*). Within the heart of the device, iron-rich dual-natured fluorescing astral bacteria (FAB) circulate in a container of nutrient gel; the FAB exhibit greater activity in mana-rich environments, generating magnetic currents that can be picked up and interpreted by the integral expert system. The output of the device is a fairly accurate reading of the local background count. An AMP cannot reveal if a background count is aspected.

Currently in its infancy, AMP technology is somewhat fragile and expensive, but it does work. The FAB colony in the device is Force 1, and can be destroyed by astral combat, a Cure Disease spell, or entering either a void or a mana warp. Area spells such as Mana Static (see p. 173, *Street Magic*) may give false positives. The FAB colony has a lifespan of 1D6 + 4 weeks, after which it must be replaced.

Astral Pigments: Astral pigments are made from the extracted arcanachromoplast cells of a dual-natured Awakened butterfly. The cells are maintained in a tube of nanite paste. Users squeeze the clear paste from the tube, and the astral pigment activates on contact with oxygen. Observers in the astral can “see” the pigment as vivid colors. Because they are nontoxic, astral pigments are popular as a form of astral body paint in Awakened clubs. Other magicians use them to create simple symbols (such as a hexagram) to mark a location, or to leave short two- or three-word astral messages (such as “Follow me. –JNo.”)

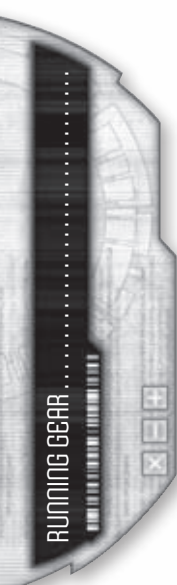
The paste is clear on the physical (unless the user adds dye), washes off with alcohol, and lasts for twelve hours once applied. Astral pigments are available in a variety of colors.

Awakened Ivy: See p. 126, *Street Magic*.

Biofiber: Biofiber is a form of bio-engineered plant life similar to wood or algae, grown in large, flat sheets. It is dual natured, existing on the astral and physical planes simultaneously. As long as the biofiber is kept alive, it functions as a barrier against astral forms. The biofiber has a Force rating like any other astral barrier and functions in the same manner (see *Mana Barriers*, p.194, *SR4A*). Biofiber sheets are placed inside the walls, floors, and ceilings of high-security areas, provided with nutrients, and carefully monitored. Destroying the astral barrier kills the biofiber. Biofiber is notoriously sensitive and is damaged by contact with pollutants as if it had a Severe Allergy (see p. 94, *SR4A*). It is available in a maximum Force rating of 10, and requires nutrients (delivered automatically or through an access port) every week.

Esprit “Petite Brume” Grenade: In early 2069, the druids of Brittany and French weapons manufacturer Esprit Industries made a breakthrough in manatech: a smoke grenade that impedes astral perception. The puck-shaped grenade dispenses a cloud of fluorescing astral bacteria strain II-Beta (FAB-IIb) within a fine suspension of water droplets, forming a mist that obscures physical and astral perception.

The “Petite Brume” Grenade releases a cloud of light mist over an area with a diameter of 10 meters. The mist obscures vision, applying visibility modifiers for light mist to relevant tests.



FAB-IIb does not form an astral barrier; it prevents astral movement through the mist faster than 100 meters per Combat Turn and increases the threshold for Assensing Tests by 2 when looking through the mist. It lasts for approximately 4 Combat Turns (less in windy areas, longer in confined areas at the gamemaster's discretion). Use the rules for *Grenades*, p. 155, *SR4A*.

Flourescing Astral Bacteria: See p. 126, *Street Magic*.

Forensic Thaumaturgy Kit: Thaumaturgical Crime Scene Investigation (TCSI) units make use of forensic thaumaturgy kits to analyze the physical remains, if any, at the scene of a magical incident. Unlike standard forensic kits, the forensic thaumaturgy kit contains unusual and arcane paraphernalia: samples of herbs and spices at odds with the biology of common paracritters, probes with cold iron, silver, and white oak tips, a lodestone and compass for analyzing the remains of elemental electricity spells, a small amount of *aqua fortis* to test for the presence of orichalcum, and small laser pointers to track line-of-sight angles. Forensic thaumaturgy is a boon at times when magical operations would disrupt the scene, for when assensing is potentially dangerous to the magician, and for mundane forensic specialists.

A character using a forensic thaumaturgy kit gains +2 dice to any test to locate ritual samples and analyze magical-crime related activity. For a character to use a forensic thaumaturgy kit, the spell or effect must have left physical traces for the character to analyze. Spells with Elemental effects always leave such traces.

Warrant Officer Charlene Two-Feathers is conducting an investigation of a magical crime scene. She begins by making a careful survey of the area, and the gamemaster rolls a Perception Test. Charlene has a Perception of 4, an Intuition of 3, and gains 2 dice from her forensic thaumaturgy kit, so the gamemaster rolls 9 dice against a threshold of 2, scoring two hits. Charlene has found traces of acid and the partially-dissolved bodies of thirteen dead ghouls in two overlapping six-meter radius circles, with no indication of source or direction—indicating two elemental acid area-effect combat spells, cast one after the other, overlapping. Given the area of the spell, the Force of the spell should be 6; however, an acid spell of that intensity would have reduced the surroundings to toxic sludge. This tells Warrant Officer Two-Feathers that the magician probably expanded the range of a lesser spell.

GloMoss: See p. 127, *Street Magic*.

GloWand: A staple of modern security, this plastic wand has a tip that contains a small quantity of GloMoss (see p. 127, *Street Magic*). When the tip of the wand passes within ten centimeters of any astral activity (an active focus, a dual natured being, a spirit, an astral projection, a sustained (including Quickened or Anchored) spell, active spellcasting, etc.) it glows and emits a beep indicating the presence of magic. The GloWand cannot penetrate Masking.

Guardian Vines: See p. 127, *Street Magic*.

Haven Lily: See p. 127, *Street Magic*.

Leech Constructs: These genetically engineered, vat-grown creatures are based on biotech originally developed by Renraku's Seattle laboratories. Leeches are slimy, sluglike creatures with a unique life cycle. During the first few days, they slither around slowly, clamp onto objects with small, fibrous tendrils, and exude

a resilient, fast-drying adhesive secretion. This makes them ideal for fastening prisoners to beds or walls, or for reinforcing surfaces by layering the leeches over barriers or around rooms. The leeches give these surfaces a gooey feel. After two days, the metabolism of the leech slows considerably; it stays fastened into place, and its skin hardens into a dense material.

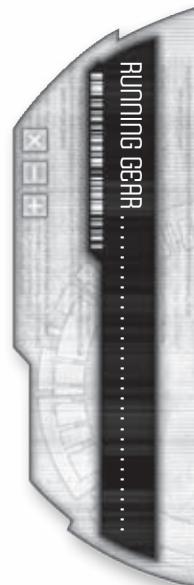
The most interesting aspect of leeches is that they serve as an astral alarm system. Leeches are able to detect when an astral form moves through them, and they emit a high-pitched wail for several minutes afterward, alerting any mundane security to the presence of an astral intruder. Individual leeches have a dice pool of 10 against a threshold of 4 for detecting an astral form passing through them (see *Astral Detection*, p. 193, *SR4A*). For an entire wall of leeches, at least some are likely to detect the intruder, so the gamemaster may assume detection is automatic.

Leeches have no statistics; a hit on one automatically kills it. A Strength + Body (4) Test or a special solvent is required to remove an epoxied leech.

Leechband: With a simple operation during the first few days of its life, a leech construct can be outfitted with a transducer chip and skinlink that sends out an electrical signal (rather than a high-pitched wail) whenever it senses an astral form passing through it. Wrapped around a wrist or ankle and allowed to harden, the leechband can pass for a leather watch or anklet.

Tied into a character's PAN via the skinlink, a leechband can warn when a character's physical body is passing through an astral form. Leechbands have a dice pool of 10 against a threshold of 4 for detecting an astral form passing through them (see *Astral*

Manatech	Avail.	Cost	
		(F = Force, M = Meter)	
AMP	12	10,000¥	
AMP FAB Refill	10	100¥	
Astral Pigments	—	30¥	
Awakened Ivy	(Force)R	F x 150¥ per sq. m	
Awakened Ivy Nutrients	(Force)R	F x 2.5¥ per sq. m	
Biofiber	(Force x 3)R	F x 100¥ per sq. m	
Biofiber Nutrients	(Force x 3)R	F x 5¥ per sq. m	
Flourescing Astral Bacteria			
FAB I	10	50¥ per cubic m	
FAB II	16R	F x 50¥ per cubic m	
FAB II-b	12R	3¥ per cubic m	
FAB III	20F	F x 15,000¥	
FAB Nutrients	10	1¥ per cubic m	
Forensic Thaumaturgy Kit	2	500¥	
GloMoss	(Force)R	F x 25¥ per sq. m	
GloWand	4R	60¥	
Guardian Vines	(Force + 2)R	F x 500¥ per sq. m	
Guardian Vines, Black	(Force + 3)F	F x 1,000¥ per sq. m	
Haven Lily	(Force + 3)R	F x 1,000¥ per sq. m	
Leech Constructs	5	300¥	



Detection, p. 193, *SR4A*). Characters can use the signal as a trigger for pre-programmed commands, as a means of communication between the astral and the physical, and for many other uses.

Leechbands have no statistics; a hit on one automatically kills it. A Strength + Body (4) Test or a special solvent is required to remove an epoxied leech.

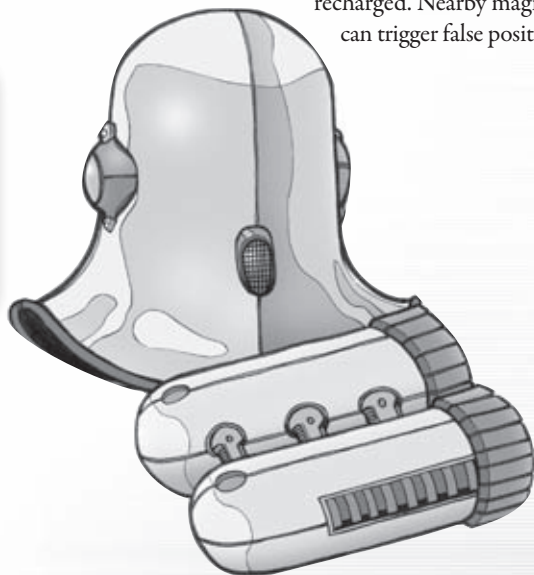
Lucifer Lamp: In 2066, metaphysicists discovered that a modulated electrical current introduced through a filament laced with orichalcum causes the filament to shed dual-natured light, illuminating both the physical and astral planes. Physical and astral solids both block dual-natured light, causing unusual shadows on the physical and greater definition on the astral. Lucifer lamps (available as flashlights, lanterns, vehicle headlights, and signal beacons) make excellent additions to magical security setups and as a form of astral communication via semaphore.

The light given off by a Lucifer lamp is dim on the physical, but sufficient for characters with low-light vision to see by. Characters in areas lit by a Lucifer lamp receive +2 Astral Visibility modifier (see p. 114, *Street Magic*) and a +2 Perception Test modifier to notice magic (see *Noticing Magic*, p. 179, *SR4A*). Activated Lucifer lamps tend to attract wild spirits (see p. 110, *Street Magic*); what effect this has, if any, is left up to the gamemaster.

Lucifer lamps burn hot and have limited lifespans; more expensive bulbs last longer.

Magecuffs: A more effective and PR-friendly containment measure than the magemask, magecuffs were first developed by Lone Star's Department of Paranormal Investigations in conjunction with the Star's Penal Department. They're designed to block a magician prisoner's ability to astrally project while incarcerated. Commonly designed as a reinforced plastic manacle or collar, the magecuff contains a circular tube of Force 1 glomoss (see p. 127, *Street Magic*) suspended in a nutrient gel, a photoreceptor, tamper proofing system, basic biomonitor, shock system, and a battery.

Should the magician attempt any magic, including astral perception or projection, the incandescence from the glomoss triggers the shock system, and the magician resists 12S Electrical damage. The shock is designed to knock the magician out and jerk her astral form back to her body. Attempting to remove the magecuff without the proper deactivation code triggers the shock system. The magecuff can be triggered four times before the batteries must be recharged. Nearby magical activity can trigger false positives.



Magemask: Dealing with Awakened criminals is a serious issue for many jurisdictions. Magicians have abilities beyond those of mundanes and cannot be easily “disarmed.” Prisons cannot afford the expense of providing an Awakened guard for each magical prisoner, so they generally use more expedient methods.

For short-term imprisonment or restraint of a criminal magician, a device known as a magemask is used. It consists of a plastic hood that fits over the prisoner's head, completely cutting off line of sight. A gag-tube prevents the magician from speaking but allows him to breathe normally. The mask also contains a white-noise generator that creates sufficient static to drastically increase the difficulty of mental actions the prisoner takes (including attempts to use magic).

Actions that a magician normally performs automatically, like astral projection, require a Willpower + Intuition (4) Test. The magemask is used in conjunction with other restraining devices such as handcuffs, magecuffs, and straitjackets.

Mage Sight Fiber Optic Security System: Corporations and government facilities are often protected by extensive mage sight (see *Mage Sight Goggles*, p. 332, *SR4A*) systems, in which a security magician plugs her mage sight goggles into a system of fiber optic cables. Each cable comes out at a different part of the facility, tipped by a precision-ground optical lens. Because no electronic vision enhancement is involved, the security magician has line of sight on each location. Switching from one location to the next is accomplished with mirrors and prisms, usually triggered by the magician through her commlink.

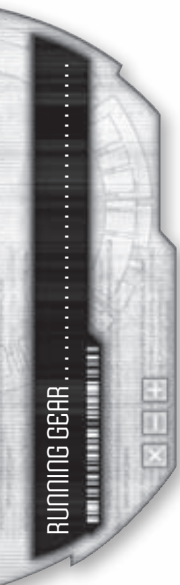
A character plugged into a mage sight system has line of sight on whatever area is on the other end of the fiber optic cable she's accessing at the moment. Since mage sight fiber optic cables can extend up to 2,500 meters, a mage sight network can greatly extend the range of a character's line of sight. A security magician can cast spells at intruders and provide spell defense for security forces within reach of the network without fear of reprisal, because magicians on the other end of the fiber optic cable cannot see her.

Unfortunately for security magicians, however, the system does leave them vulnerable to lasers. If a character fires a laser into the end of a fiber optic cable as the security magician is viewing through it, the attack hits automatically. Spotting the end of a fiber optic cable requires a Perception Test (see p. 135, *SR4A*): the gamemaster determines the threshold based on the cable's placement.

Manahazard Containment Device: An object that might be subject to ritual sorcery is known in security circles as a manahazard, and the secure containers used to transport such objects are Manahazard Containment Devices, or MCDs. Standard MCDs consist of a one-millimeter-thick layer of natural earth containing a simple self-contained symbiotic ecosystem consisting of dual-natured earthworms, three strains of bioengineered bacteria, and a nanite hive, all sandwiched between a pair of two-millimeter thick plasteel boxes. The earthworms generate a weak astral static that inhibits ritual sorcery and astral tracking.

When sealed, MCDs are airtight, watertight, and apply a -2 dice pool modifier to all Ritual Sorcery and Astral Tracking Tests against the MCD or its contents. The MCD's earthworm colony has a projected lifespan of five years, after which these dice modifiers no longer apply; destruction of the case kills the earthworms. The three most common types of Manahazard Containment Devices are:

- **Manacases:** Armored briefcases with a Barrier rating of 8 and a Structure rating of 3.



- **Manacoffins:** Armored troll-sized sarcophagi with a Barrier rating of 8 and a Structure rating of 7.
- **Manasheaths:** Meter-and-a-half long metal tubes with a Barrier rating of 8 and a Structure rating of 3.

PocketMage Library: The PocketMage is an expert system, search engine, and datasoftware library concerning paranormal animals, spirits, and magic in general that may be incorporated into a character's PAN and interfaced through the character's commlink. Users may prompt the system with questions, visual data (such as a feed from an eye camera), or files (such as a scan of a spell formula) and the PocketMage will output the search results.

The PocketMage comes in ratings from 1 to 3. Whenever a character with a PocketMage enters a query regarding paranormal critters, spirits, or magic use, she can make a Data Search + Rating using the Data Search rules on p. 230, *SR4A*. PocketMage searches have an interval of 1 Initiative Pass. The PocketMage does not give any understanding of the principles or terminology of magic; if a character asks a highly arcane question, the correct answer may be in the form of undecipherable mystical technobabble.

Quicksilver Mana Sensitive Film Camera: Modern magicians have updated the ancient process of daguerreotype photography, exchanging the essential chemical actions with alchemical processes. When set up, physical light is focused through a lens onto a specially-prepared plate containing several photosensitive layers. As the physical image forms on the plate, an astral resonance is set up between the developing photograph and the entities, objects, or area being photographed; which in turn excites the manasensitive alchemical elements in the plate to form full-color physical projections of the astral objects.

While early astral photography required exposure times of several hours, improved technology and thaumaturgical research has produced the Quicksilver camera. The Quicksilver is a handheld astral camera with a built-in collapsible tripod; it can hold five manasensitive film plates and requires 30 minutes of exposure per photograph. An internal transponder (Signal 1) allows the camera to be slaved to the photographer's commlink.

Taking an astral photo is a Complex Action, and requires an Assensing + Perception Test. An astral photo can capture astral signatures and background count levels, as well as the auras of astral barriers, Awakened characters, spirits, critters, and foci. Characters may attempt to use Assensing to analyze any astral being or object captured in an astral photo; the threshold for such Assensing Tests is 2 greater than normal, and the maximum number of hits a character may achieve on the test is equal to the number of hits scored on the test made when taking the astral photo. Each "shot" uses up one plate and requires thirty minutes of full exposure; moving the camera before the full exposure time ruins the astral photograph. Once the exposure time has elapsed, the astral photo develops automatically.

Assensing can only reveal information about a being or object at the time it was photographed, which may be far different from its current state. The camera will only capture entities, astral signatures, or objects that remain in the area for the entire exposure time—beings or objects that pass through the area while the photo

is in progress may show up as "ghost images," but no information can be gleaned from them. Mundanes may use astral photography, but in every case they are "shooting blind." Many police corporations and intelligence agencies create high-definition duplicates of astral photographs for archival purposes.

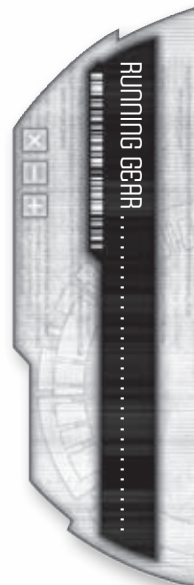
An astral photograph serves as a recently handled object for the purposes of being used as a sympathetic link (see p. 29, *Street Magic*) toward any entity or object that remained within the shot for the duration of the exposure. A duplicate of an astral photograph counts as a symbolic link where the creator is not a member of the ritual sorcery team (see p. 29, *Street Magic*) for the same purpose. A duplicate of an astral photograph may be made into a symbolic link focus (see p. 85, *Street Magic*), but always counts as mundane telesma (see p. 83, *Street Magic*).

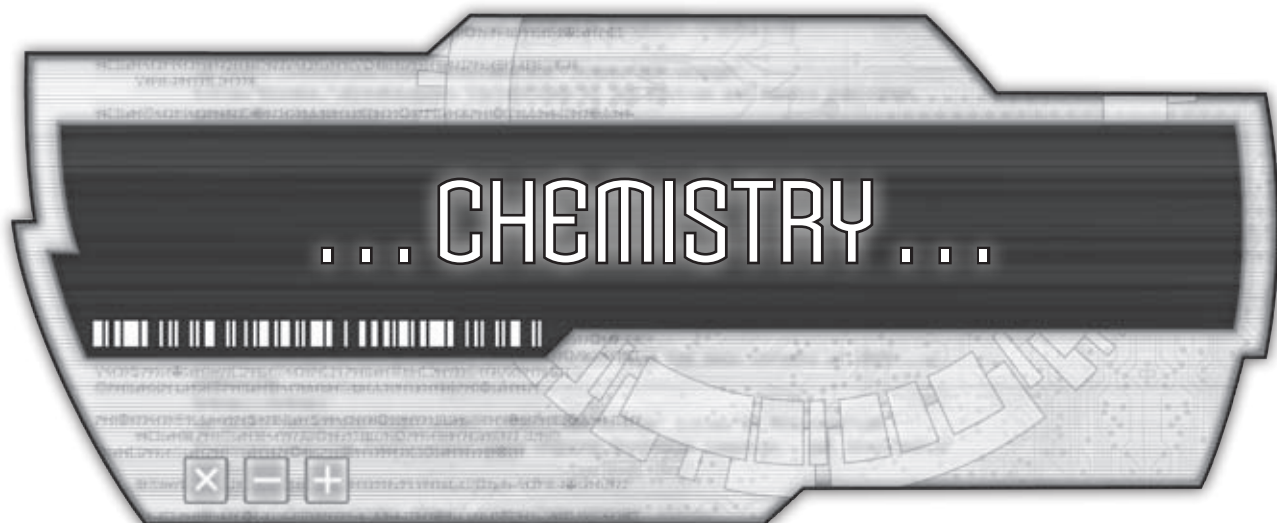
Wyrd Mantis Essence: The preserved sex glands of the female wyrd mantis, a giant Awakened version of the preying mantis, can be distilled to produce a slightly musky, oily substance known as wyrd mantis essence. While nearly undetectable by metahumans, the smell of wyrd mantis essence acts as an insect spirit repellent. This property makes wyrd mantis essence a relatively popular accessory for insect spirit hunters and the paranoid.

Insect spirits must make a Force + Willpower (4) Test to approach or attack a character covered with a dose of wyrd mantis essence. This test does not apply for Mantis spirits; the smell seems to attract them and is highly sought after by Mantis magicians for this purpose. Each bottle contains 4 doses. Wyrd mantis essence retains its potency for three days unless washed off.

Manatech	Avail.	Cost
Leechband	6	450¥
Leech Solvent	5	30¥
Lucifer Lamp	10	150¥
Lucifer Lamp Bulbs	10	100¥ per hour (Max. 500 hours)
Magecuffs	5	1,000¥
Magemask	2R	200¥
Mage Sight Cable	8R	60¥ per meter
Mage Sight Goggles	12R	2,000¥
Manahazard Containment Device		
Manacase	4R	200¥
Manacoffin	8R	1,200¥
Manasheath	6R	300¥
PocketMage Library (Rating 1–3)	3	Rating x 600¥
Quicksilver Camera	4	2,500¥
Manasensitive Film Plate	4	25¥
Wyrd Mantis Essence	6	600¥

Grenade	Damage	AP	Blast	Availability	Cost
Esprit "Petite Brume"	—	—	5m Radius	12R	1,000¥





A man in a dirty lab coat stood before a counter, tapping a needle. I noticed the needle was an antique, flawless glass with fittings made of stainless steel, and filled with a red fluid. The chemical held the man, not the other way around. It was his strength, and his embarrassment. I could see it call to him, and imagined the growing ache as his body sang for it. I watched as he fought the urge. He set it down. His eyes drifted from the syringe, refusing to stare at it and the seductive contents.

The man beheld the counter instead. Wood, dark with age and inscrutable stains. I knew that the good doctor knew where those marks had come from. He had helped make them. I'm sure if he tried, the doctor could still hear them moan and whimper. Their world was pain and burning and death and screams. The source of the stains. His world was clean, orderly, sanitized. A place for the renewing of energies of the body and mind, where ailments were defeated and he gained praise for his efforts. A world apart.

His labcoat was as filthy as the counter. Like him, it had once been clean and freshly washed, a sign of confidence and ability. Now they were both dirty, both used. The man had not slept in many hours. Patients screamed in pain, but he did not hear them. Something of the sound echoed in the space behind his eyes. It would never go away.

A smile flickered across my face as the doctor picked up the syringe. He thought the vial would stop the screams for a moment. The doctor's pain would be washed into another world. If only he knew.

The tourniquet was drawn. I saw fingers going numb. He placed the needle's gleaming tip against the same spot as he had the day before. And the day before that. The wound was ugly. His pale blue veins stood out, rivers along the white flesh of his arm. I saw the doctor sigh as his pain was drowned in the ecstasy of morphine. The weight of the world lifted from his shoulders and his eyes cleared once more. Then he saw me.

His scream was worth the wait. The shade I had slipped in his morphine opened him up to the astral ... opened him up to me. I tore at his aura with my mageblade, severing the stuff of his life. The doctor was too weak from the morphine to resist.

MCT had financed the doctor's free clinic in order to conduct unlicensed drug trials—trials on pharmaceuticals that routinely facilitated miscarriage and stillbirth in metahuman patients. When the grieving parents asked me to take the job, I was almost willing to do it for free.

Almost.





DRUGS

Posted By: Nephrite

Drugs—whether natural or synthesized in a lab, whether designed to send you to new planes of ecstasy, help you contemplate the deeper secrets of the universe, or amp your body up so it can perform otherwise impossible feats of physical prowess—are here to stay. Awhile back, many people sincerely believed that BTLs and other chip-based addictives would drive the old-fashioned stuff off the market, but don't think for a minute that it ever happened. Our kind has been doping ourselves up for various purposes since the dawn of time, and nothing's changed in the Sixth World. Nothing, that is, except the growing ingenuity of the people who create and distribute the stuff. These days there are more varieties of drugs than ever—many of them more potent and potentially dangerous than ever before.

- True that. People will stop taking drugs about the same time they stop drinking, swearing, and insulting each other's mothers. That is to say, never.
- Slamm-0!

THE DRUGS FLOW IN, THE DRUGS FLOW OUT

Illegal drugs, like any other “forbidden fruit,” are highly desirable and hence highly profitable. As in any other endeavor where there are illegal profits to be made, the organized crime syndicates have their fingers in just about every drug-related pie. The process of getting the drugs from their places of origin—often in remote areas of countries with liberal or avaricious governments—to their end users is big business.

In the old days, the drug distribution channels were mostly controlled by the Triads and the Latin American drug cartels—at least on paper. The Mafia and the Yaks claimed that they didn't get involved with drugs, considering them “dirty.” This is, and always was, of course, horseshit. The truth is, these two organizations just kept their involvement a little more at arm's length and took more pains to distance themselves from being associated with it.

- Don't forget the legal drug channels, too. Most of the syndicates are heavily invested in legitimate pharmaceutical companies and other corps in the business of producing drugs for the medical industry. There's a lot of profit to be made there as well.
- Cosmo

When it comes to the large-scale growing operations, the Triads and the Ghost Cartels are the kingpins, with groups like the Kabul Maffiya taking second tier. Whether it's large-scale coca fields in South America or massive poppy plantations in the Golden Triangle, these outfits excel at cultivating large amounts of drug crops in remote locales despite the best efforts of police pesticide operations to curtail them. These operations are massive, starting with swarms of drones and peasant slave-labor to work the fields, entire indentured communities dedicated to processing and packaging the product, teams of scientists dreaming up new cocktails, an army of goons and mercs to protect it all, dedicated smuggler crews with tried-and-true routes, and enough lawyers and bought politicians that even dragons think twice before getting involved.

• Truth is, some regions of the world are entirely dependant upon the drug trade to support their local economies. Narcotics production is their way of life and the only thing keeping them from complete poverty and misery. Even though the Cartels only let a small percentage of their profits trickle down, it makes a world of difference.

- Am-mut
- Maybe in some areas, hombre. In others, the Cartels are pushing farmers to grow coca plants and the like when what they really need to be growing is food for their own survival.
- Marcos

In the developed world, running such megascale crime operations isn't as easy, but plenty of syndicates prefer to grow the goods close to home. Instead, they operate smaller grow operations, mixing the drug crops in with standard food crops that provide camouflage, or mixing drugs from scratch in secret basement labs loaded with the latest chemistry gear available. The volume doesn't match the output of the Cartels or Triads, but it complements BTL sales nicely enough.

The other syndicates also tend to focus on drugs that are more high-end, or that cater to the performance-enhancement market. Designer drugs are worth the expenses of a small lab and a few good chemists, as long as you have a dedicated market of rich corp brats ready to pay through the nose for them. Likewise, impotency cures, date-rape drugs, and illegal steroids sell well on the black market, and are easy to acquire via a lab insider, a pharmacy break-in, or a hijacked corporate shipment.

The corporations, of course, are some of the biggest suppliers out there. Many take advantage of murky legalities and grey market schemes to legally produce brainbenders in one region that are sold to syndicates in a region with less dubious laws. The corporations also need test populations for their last batches of performance boosters, and running by-the-book clinical trials takes far too long when you can get the same data by flooding your local z-zone with the drug and scanning the news reports. Certain corporate environments tacitly approve of using chemical aides to enhance work performance and keep ahead in the rat race, and corporate labs are more than happy to make those drugs available.

I Get High With a Little Help From My Friends

Getting your hands on drugs has never been difficult, depending on your drug of choice and the amount of cred you're willing to drop to get it.

At the bottom of the heap in the drug-distribution department is your garden-variety street dealer. You can find these guys and girls in every city if you know where to look, and they can hook you up with most of the common street drugs. This might be the shady guy hanging out in the park, the gal lurking at one end of the bar, your old college buddy, or the code monkey two cubicles down from yours. Most of them deal to a circle of friends and people they know, and occasionally friends of friends. They buy “in bulk” to make a slight profit, but they typically don't carry enough stock to keep a whole neighborhood supplied. A lot of these street pushers are addicts themselves, selling to make enough money to support their own habits. When dealing with them, just remember that they'd sell out their own mothers for their next fix and act accordingly.



- It's always a good idea to find a dealer that somebody you know can vouch for. Too many of them are cutting the drugs to increase their profit margin—or worse, doing a little backroom chemistry of their own and adding “special” ingredients to the mix. More than one poor street slot has died or ODED due to tampered batches.
- Haze

On the same level, but slightly more organized, are the street gang distributors. These dealers have larger quantities of dope and sell to a lot more strangers, so they also take a lot more risks with law enforcement. As a result, they've developed some sophisticated ways of dealing to strangers on the street without risk of getting busted, usually involving lookouts, brokers who take your order and payment and zap you ARO directions to someplace well-defended/out of sight, and a delivery person who will actually hand you the goods. If you want to avoid police involvement, you're better off dealing with a z-zone gang, but the drawback is that they may just decide to rip you off or worse.

- Quite a few of these gangs easily smoke, snort, or shoot as much as what they sell, though dipping into the gang's stash is a quick way to piss off your homies.
- 2XL

For those who don't want to trust themselves to some strung-out junkie dealing out of a back alley but are still, shall we say, on the wrong side of the law—a better bet is the syndicates. Keep in mind that the gangs and street dealers are usually getting their product from a syndicate source, so dealing with mobsters directly is a way to eliminate the middleman. The challenge here is that they're usually only interested in selling in bulk—they leave the small-time deals to the gangs, from whom they take their cut, of course.

The syndicates are not unsympathetic to customer demand, however, so they do make accommodations for dealing direct—usually in the way of established drug parlors, smoking dens, and the full-service bar of illegal casinos, clubs, betting parlors, bordellos, etc. These joints are usually run behind the façade of a legit business, so you have to know someone, be in the know, or wave a lot of cred around to get access. Because they have a vested interest in keeping their customers happy and coming back, you can usually (operative word *usually*—as always, caveat emptor) count on them to sell you what you paid for as well as keep the Star off your back with generous donations to the local constabulary's fraternal order.

- A word to the wise—be careful when dealing with the syndicates. Do not get yourself into them for more than you can afford to pay. These guys have no sense of humor when it comes to money, and if you're lucky they'll just break a few random bones or have their hackers fuck up your life to the point where you'll beg them for mercy.
- Turbo Bunny

If you're higher up on the food chain—say you work for a corp or are an otherwise “respectable” citizen, you have other options. It's not that hard to find a medical professional who wants to make a little extra cred on the side, and if you know the right people inside a corp you can almost always get a line on someone who will hook you up with your drug of choice.

- “Medical professionals” doesn't necessarily mean doctors, though there are plenty of street docs out there who make a big chunk of their nuyen dealing drugs under the table. Nurses, lab techs, and DocWagon guys can get their hands on some good stuff—even veterinarians can be good places to look.
- Butch

- It's funny: corps will often look the other way if they catch their employees taking drugs—as long as they're the right employees and the right drugs. Anything designed to help you work longer and harder, focus your attention, or otherwise increase your productivity is tolerated, and occasionally even encouraged. If they catch you doing stuff that cuts into the bottom line, though, look out.
- Cosmo

BUSTED

Just because drugs aren't as prevalent as BTLs and other Matrix-based addictives doesn't mean that law enforcement turns a blind eye to them. Most law enforcement entities have a branch that's dedicated in whole or in part to enforcing drug laws (for example, Lone Star's Drug Enforcement Division, or DED) and these branches are always overworked.

With limited resources to work with, law enforcement groups focus most of their attention on the distribution end: shutting down the smuggling operations that bring the stuff into their countries, nailing the big fish and the middleman, and hatching stings involving intelligence gathering and informers to try to intercept shipments before they reach the end stages of the chain.

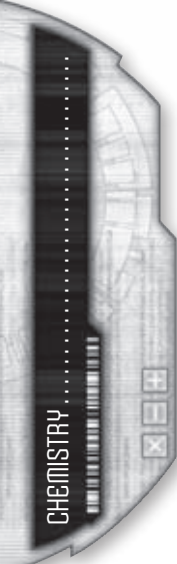
- In reality, the cops don't tend to go after the pushers or the end users unless they're doing something blatant (like selling to kids or getting themselves high as a kite in the middle of the corp district)—this isn't due to a lack of desire, but rather due to a shortage in manpower. There are a lot of drugs flowing out there, and they have to focus on what gets them the biggest bang for the buck.
- Sticks
- If you have the right connections, crooked cops are a great source for illegal drugs. All those seized shipments have to go somewhere, and you'd be surprised at how many cops are dealing out the back of their police cruisers. Needless to say, though, this is an area where you're going to want to be *very* careful.
- Hard Exit

BAD NEWS

One thing the drug industry has in common is that progress continually marches on. In order to keep up with the advances in BTL technology that keep making Matrix- and chip-based stuff more alluring and addictive every day, the old-fashioned drug purveyors have responded with some not-so-old-fashioned solutions—namely BADs and Awakened drugs.

“BAD” stands for Bioengineered Awakened Drug—that is to say, a drug that originates with an Awakened critter or plant, but that has been tweaked in a lab to make it more potent or to alter its basic effects. This alteration comes in many types: genetic engineering, cross-fertilization, exposure to mutagens or spells, and so forth. The bottom line is that these drugs are highly addictive, often have magical side effects (such as giving the user the





temporary ability to see the astral plane or to view auras), and are still in the early stage of their evolution. This means that they're not well understood by either the public or the law enforcement agencies charged with keeping them out of the hands of citizens. I expect to see a spike in both the varieties and the availability of BADs and other Awakened drugs over the coming years, as more players come on the scene and the boys and girls in the labs get more creative.

- Right now, the Ghost Cartels down in Latin America are in control of most of the BAD trade. That's not going to stay true for long, though, if I don't miss my guess. The other syndicates have already been quietly extracting a few of the key figures in the BAD production chain, and I've heard rumblings that Aztechnology is even more quietly bankrolling a couple of labs that are on to some new varieties.

- Glasswalker

- Amazonia is a treasure trove for the kind of raw materials you need to build these puppies. As yet, I've never heard of anyone being able to synthesize them—you have to start with the real deal and then screw around with it until you get the next big thing. Hualpa and rest of the greenies down there aren't happy about a bunch of people tromping around there tearing up the ecosystem in search of the right flora and fauna, but the Ghost Cartels, especially, are very good at keeping their presence quiet.

- Am-mut

- Maybe so, but something's going on down there. Nobody's sure quite what yet, but word is that the other syndicates have just about had it with the Cartels' near-monopoly on the BAD market. Mark my words, something's in the air.

- Marcos

- Bring it on. More work for us.

- Kane

GETTING THE MONKEY OFF YOUR BACK

One part of the drug trade that hasn't changed with the times and probably never will is addiction. Though some drugs are more addictive than others, no one has as yet come up with a drug worth its salt (that is to say, one that gives the user what she craves) that isn't addictive in some way. Whether physical, psychological, or both, most drugs keep their users coming back for more—and as time goes by, larger or more frequent—fixes, causing a vicious cycle that can lead the user down into the pit of poverty (at best) and destruction (at worst).

"Drug abuse" comes in many degrees. Not every abuser is a tripped-out junkie squatting in an alley and holding up Stuffer Shacks for fix money. Sure, there are plenty of those out there, but abusers can also include everything from athletes, shadowrunners, and soldiers who get hooked on performance drugs for that little extra edge to socialites hung up on party drugs to high-level corporates who use designer drugs to escape their pressure-cooker lives or stay on top of their games.

- I've found this last part to be true. Show me a corp at the top and chances are she's addicted to something, even if it's just nicotine or alcohol. It goes with the territory—they don't get a release anywhere else.

- Mihoshi Oni

- I thought they got their release from fucking over the people below them.

- Kat o' Nine Tales

Whether you're able to kick the habit and get clean of your addiction depends on a lot of factors, not the least of which is whether you even want to. Contrary to what the "Just Say No" crowd says, it is possible to function and even live a relatively normal life while addicted to drugs. Some addictions are even legal—there are plenty of corporate executives who manage their back pain or their old sports injuries with painkillers, and plenty more who can't get it up without pharmaceutical help. Still, though, the sorts of drugs we're talking about here don't tend to be kind to their users' ability to function in society. If you work for a corp or someplace else with good insurance (or if you're a high-profile sports, entertainment, or political figure), it's a relatively simple matter to ship yourself off to a rehab clinic for some discreet personalized treatment. If your finances are a bit more street-level, you've got a longer and harder road to follow.

- He makes it sound so easy—just sign yourself up, lounge around the clinic for a few days with the beautiful people, and poof, you're cured! Like hell. Back in my misspent youth, I put in a couple of stints at one of these places, and let me tell you, they're nightmares. Just because you have money doesn't mean getting clean is any easier. We all got the same body, folks.

- Mr. Bonds

- Yeah, cry me a river. It's still true that if you've got money, you're looked at differently. You see a guy on the street with a problem, he's a "dirty junkie." Some rich corporate asshole hits the novacoke a little too hard, he's "got a substance abuse issue," or he's "suffering from exhaustion."

- Jimmy No

- They've been making good progress the last few years with some "alternative" methods of rehab—things like Matrix-based treatment (which sometimes can be as bad as the problem, since some patients walk away with their drug addiction replaced by a chip habit) and some magical approaches that have shown promise. Mainstream medicine doesn't quite trust them yet, though.

- Hannibelle



ADVANCED SUBSTANCE ABUSE

Drugs are a part of the Sixth World, and include everything from legitimate medicines to recreational pharmaceuticals. This section deals mainly with illegal and performance enhancing drugs, rather than the plethora of pills, ointments, elixirs, and other substances that many metahumans ingest daily for the supposed benefits they bring. Drug use may be a temptation for some characters eager for a quick fix, but can quickly lead to drug abuse and addiction.

All of the rules in this section should be considered optional—use them if you like them, don't if you feel they complicate matters too much. For additional rules on substance abuse, see p. 256, *SR4A*.

DELIVERY SYSTEMS

Most drugs have more than one vector, and the sheer variety of options available with Sixth World drug paraphernalia can be mind-boggling. Legal pharmaceuticals and recreational drugs are pre-packaged as patches, pills, ampoules, or disposable syringes, while street drugs come in whatever's available. What that means for runners is that drugs can come in many forms and be taken many ways—whether by swallowing a pill, snorting a powder, drinking a liquid, smoking a laced cigarette, taking hits from an inhaler, sniffing a gas, injecting a liquid intravenously, rubbing a powder or oil into gums or other exposed tissue, or applying a patch, among other means. The form of any given drug and how it must be taken to gain its effects should be a function of the story.

The amount of a dose varies based on the drug, and by the active substance(s) within the drug.

2XL is sampling different varieties of hurlg at the local pub. The stuff on tap is pretty weak—he needs to drink a couple of pints to get the same buzz as he would from a bottle of Orkstaff's XXX or a shot of Fomorian us-quebaugh. A little later he rubs on one of the green dermal patches the kids call Goblin Heads, and nearly hits the floor as the drug slips directly into his bloodstream.

TOLERANCE

They say you can never get high like the first time. That may not be strictly true for some of the weirder designer drugs available in the 2070s, but as a general maxim it remains correct. Over time, characters who use a drug steadily will need to consume more of the drug at once to achieve the desired effect. Tolerance is tied to the character's history with drugs, represented by the Addiction quality (see *Addiction*, p. 93, *SR4A*). Every time a character's Addiction increases, the character must consume twice as much of the drug to obtain the same effects. Characters with a tolerance only suffer overdoses when taking more of a drug than they need to achieve the effects of a single dose.

2XL has been hitting the hurlg a little hard lately, and has picked up a Mild addiction. From now on, he needs to take two doses of hurlg to get the effects of one dose. If 2XL continues on this path and his Addiction increases to Moderate, he'll have to consume three doses at once just to get the effects of one dose.

BUT I WANNA GET HIGH!

The *Shadowrun* rules treat drugs differently from toxins and other chemicals. It is, for example, assumed that the character desires the drug's intended effect and no Toxin Resistance Test is called for. In some cases, however, a character may be drugged against their will. Characters who are naturally or magically resistant to toxins must also be taken into account, as must characters who have a buzz-killing Antidote spell or antidote patch applied.

When a situation like this arises, the gamemaster may choose to call for a Toxin Resistance Test, as noted on p. 254, *SR4A*. The gamemaster determines the drug's Power, as appropriate to its nature and effects. As a standard rule of them, most street drugs have A Power of 6. If the Power is not reduced to 0, the drug still affects the character as normal. Alternately, the drug's modified Power must still exceed the character's Body for the drug to take effect.

CUTTING DRUGS

Many drugs are debased, or cut, with a filler material so the drug dealer can realize a greater profit. If the filler is harmless, the worst the character has to deal with is being ripped off. Many dealers, however, are completely unscrupulous about what they cut their drugs with, and players may end up mainlining rat poison or dish detergent with their brainburner of choice.

It is up to the gamemaster to determine if the drugs the characters use are cut or contaminated. If the filler is inert or harmless, the duration and effects of the drug are halved. If the filler is toxic or poisonous, users suffer as if ingesting the relevant compound in addition to the drug's normal effects.

MIXING DRUGS

Habitual users often develop a tendency to “speedball,” or mix drugs in order to increase the level of their high. Speedballing is more addictive than taking drugs separately. Characters who mix drugs receive a -1 die penalty to their Addiction Test for drugs that they have mixed.

DRUGS OF THE SIXTH WORLD

Drugs are omnipresent in the Sixth World. The hustlers and gangers on the streets take what they can get for an edge or a few hours' escape. Corporate wageslaves enjoy a regimen of pills and slap patches for illnesses real and imagined. Soldiers are issued packets of combat drugs that incite psychotic fury. Tribal medicine men take youths out of squalid cities to the few preserves of nature left, to commune with the spirits and get royally smashed. In the Sixth World, drugs are a fact of life.

What follows is only a sample of the pharmaceutical cornucopia that exists in *Shadowrun*; the street names of other drugs with similar effects are included in parentheses after the most common drug, but gamemasters are encouraged to come up with their own drugs that fit their campaigns.

Aisa (Eau de Vivre, Tex-Mex Tea)

Duration: 20 + 2D6 minutes

Effect: Disorientation

Aisa is one of the most popular party drugs on the market. This drug is most often ingested by licking a “blot” off a piece of paper or plastic. Users experience intense giddiness, lassitude, and mild hallucinations. When the drug wears off, the user can feel slightly fatigued.



Derived from a synthetic form of atropine, aisa can be very dangerous when overdosed. In addition to standard overdose rules, users who take more than one dose at a time suffer 3S damage per additional dose.

Betameth (Buzz, Rigger's Cocktail)

Duration: (9 – Body) hours, minimum of 1 hour

Effect: +2 Reaction, +1 Intuition

A number of pseudomethamphetamine derivatives are sold as betameth. This stimulant suppresses the appetite and speeds up the user's metabolism and thought processes, making it a popular diet drug, especially among adolescents and teenagers. Characters on betameth are energetic and prone to jumpiness. When the effect wears off, the user crashes and suffers 5S damage (unresisted).

Betameth users tend to suffer from attention-deficit disorders and feel unable to properly focus when not on the drug, leading to extended binges. Habitual users are often gaunt from malnutrition, which renders them susceptible to infection, especially of the teeth, gums, and mouth.

Betel (CorpCandy, Jaw)

Duration: 10 x 1D6 minutes

Effect: +1 Perception

An ancient and widespread Asian practice of chewing the nuts and leaves of the betel tree with lime has led to the synthesis

of Wuxing's highly addictive and legal betel chewing gum. Betel is a mild stimulant with cavity-fighting properties; users commonly feel awake and alert while using it.

Rather than making an Addiction Test, characters who use betel, even once, gain a Mild addiction to it. A character may never have worse than a Mild addiction to betel. Characters who add dice to Toxin Resistance Tests (through adept abilities, implants, metatype, magic, etc.) are immune to this effect if they succeed at the Toxin Resistance Test. Because it is instantly addictive, betel often serves as a gateway drug to more powerful stimulants.

Dopadrine (Bitter, Werden)

Duration: 10 x 1D6 minutes

Effect: Cancels Berserk (see below), –1 die to all physical actions

A combination of antipsychotic medications and narcotics designed to cancel the rampant drug abuse by gangers, dopadrine has become a popular narcotic as well. Dopadrine prevents characters from going berserk (see *Bear*, p. 200, *SR4A*) for the duration of the drug; if a user who is already berserk is dosed with dopadrine, the berserker rage automatically ends and they cannot become berserk again until the duration ends. Dopadrine heightens the apathy of users, making them feel disconnected from their concerns.

eX (Eros, Galak)

Duration: (8 – Body) hours, minimum of 1 hour

Effect: +1 Charisma, –1 Logic, +1 Perception

A favorite party drug, eX is a mild stimulant and aphrodisiac used by revelers to relax, open up, and become aroused. The drug leaves the user open to suggestion, especially toward sexual encounters, and users become more sensitive to changes in light, temperature, and pressure. When the effect wears off, the user suffers disorientation (see p. 254, *SR4A*) for a like period.

Galak is an Awakened drug (p. 76) made from the pollen of an Awakened orchid, and is similar to, though more potent than, eX. The duration for Galak is (9 – Body) hours, minimum 3 hours.

G3 (Gerilixir, Vitalité)

Duration: (15 – Body) hours, minimum 1 hour

Effect: +1 Body when resisting Fatigue damage, Longevity (see below)

A “gerispice” pharmaceutical believed by many to help prevent aging, G3 takes its name from the main ingredients: ginseng, guarana, and ginkgo biloba. G3 contains vitamin additives and antioxidants that help combat fatigue, making it a popular supplement for athletes, professional mercenaries, and other individuals who face regular strenuous activity. At the gamemaster's discretion, characters who regularly take G3 on a daily basis may suffer the effects of old age somewhat less than others.

Guts (NoFear, Brass Balls)

Duration: (12 – Body) hours, minimum 1 hour

Effect: Immunity to Fear (see below)

This drug suppresses the functions of the genes that govern fear, both innate and learned. For the duration of the drug's effect, the character is immune to fear and fear-based powers/attacks. As a drawback, however, the character becomes reckless, incautious, and also less inhibited. At the gamemaster's discretion, he may

call for the character to make a Logic + Willpower (3) Test to avoid doing something that would normally be considered foolish, dangerous, or socially inappropriate.

Hurlg (Fomorian Usquebaugh, Orkstaff's XXX)

Duration: (12 – Body) hours, minimum 1 hour

Effect: –1 Logic, +1 Willpower

A potent alcoholic beverage developed *by orks for orks*, hurlg is a dark, thick ale the consistency of soup, swimming with hops and nutmeg. Orks, trolls, and the occasional dwarf appreciate the combination of 160 to 180 proof alcohols. With the mildly hallucinogenic properties of large amounts of nutmeg, hurlg generates a terrific buzz. When this effect wears off, the user crashes and suffers 8S damage (unresisted).

Humans and elves don't normally possess the constitution to hold their hurlg, and suffer severe and painful stomach cramps (treat as disorientation, p. 254, *SR4A*, for the duration of the effect) unless they possess an implant or magic that gives them bonus dice for their Toxin Resistance Test. Hurlg has a robust, nutty flavor, and is inflammable.

K-10 (Blood of Kali)

Duration: 5 x 1D6 minutes

Effect: +3 Body, +3 Agility, +6 Strength, +1 Willpower, +3 Initiative Pass, High Pain Tolerance 3, Berserk

Users of this experimental combat drug automatically go berserk when wounded, in a manner similar to Bear magicians (see *Bear*, p. 200, *SR4A*). At the end of the duration, the user suffers 18S damage (unresisted). Berserk character must also make an Edge (1) Test; if they fail, they stay berserk *permanently*.

All of the initial research subjects of kamikaze grade ten, aka K-10, died from the drug's side effects or wounds sustained while under the influence. The formula for K-10 was hacked from the lab's medical database, and the drug itself only hit the streets as a combat drug in the beginning months of 2071. Buzz regarding K-10-fueled suicide assaults is already on the rise.

NoPaint (Numb, PBG)

Duration: 1D6 hours

Effect: High Pain Tolerance 3

Popular with intercity gangs with a tribal motif, nopaint is a medical-grade, water-resistant novocain gel that comes in a number of colors. NoPaint is applied to the skin with a swab or brush. Characters lose tactile perception in areas covered with nopaint for the duration of the effect, and must make a First Aid + Logic Test to judge how badly they are injured while the drug is active. One dose of nopaint can cover a dwarf, human, or elf; orks and trolls require two doses for full coverage.

Oxygenated Fluorocarbons (Blue Blood, P4MO)

Duration: 1 week

Effect: +1 Agility, double the amount of time character can hold his breath

The oxygenated fluorocarbon compound known as P4MO is widely used as a blood substitute. Its use in emergency situations helps to prevent the mismatching of blood types. Fluorocarbons like P4MO also exceed the capabilities of the blood's natural hemoglobin as a vehicle for gaseous exchange. In other words,

P4MO dissolves a higher percentage of oxygen from the lungs into the blood. When introduced into healthy subjects, P4MO allows them to achieve higher levels of physical performance.

P4MO is added to the bloodstream in 5-liter treatments along with a dose of carcerands containing a chemical that allows the body to metabolize the oxygenated fluorocarbons, clearing out of the user's system by the end of the drug's duration. If another P4MO treatment is taken while the first is active, the character will suffer an embolism, inflicting 15P damage (unresisted).

Push (Nanohi, Rush)

Duration: (15 – Body) minutes, minimum 1 minute

Effect: See below

Push was designed for users seeking a quick, no-frills high. The active chemicals in the drug are theobromine and cathinone. Push users experience a mild euphoric state that has been compared to eating large amounts of chocolate or the moment after sex.

Excessive consumption of push over long periods of time can result in exacerbated hyperactivity leading to psychosis, and genetic mutation in metahumans. Gamemasters may represent these effects on push addicts at the burnout level by Essence loss and drastic, violent mood swings.

Red Mescaline (Manashrooms, Vertigo)

Duration: (18 – Body) hours, minimum 1 hour

Effect: +1 Charisma, –1 Reaction, +2 Perception, +1 Willpower, Disorientation

A popular drug with musicians, technicians, and magicians, red mesc is a profound combination of psychoactive substances ten times more potent than natural peyote. Many drug users consider a red mesc trip equivalent to a religious experience, with their awareness heightened to an almost cellular level; coming down from a red mescaline high is often accompanied by crushing depression. At the end of the duration, the user's Charisma and Willpower are reduced to 1 for an equivalent duration.

Red mescaline complements the effects of the street drug psyche (p. 258, *SR4A*), and speedballing the two is common. Users do not suffer the Addiction penalties when speedballing red mesc in combination with psyche (see p. 258, *SR4A*). A psyche/red mesc speedball is commonly called a loco.

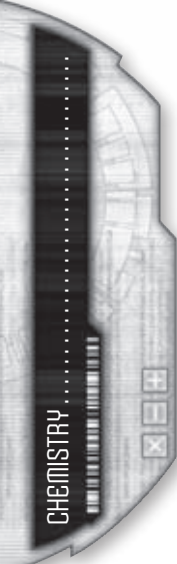
Ripper (J-H, Roid Patch)

Duration: 10 x 1D6 minutes

Effect: +1 Strength, –1 Willpower

A potent mix of synthetic steroids, pseudolipids, sugars, and amphetamines that cause short-term muscle growth and an energy boost, ripper is used as quick way for many to "bulk up." At the end of the duration, the user takes 2 boxes of Fatigue damage (unresisted); the muscle growth remains. Regular use (at least three times a day for three to six weeks) of roid patches reduces the Karma cost for improving the Strength attribute by 1.

Muscles developed with ripper often leave users disproportionate. Side effects of prolonged use may include sterility, baldness, lack of sexual desire, development of secondary sexual characteristics of the opposite sex (such as breast growth in males), and cancer of the testes or ovaries. Ripper is most often sold in dermal patches or disposable syringes.



Slab (Coeur d'Hiver, Ghulpille)

Duration: (10 – Body) hours, minimum 1 hour

Effect: Suspended Animation (see below)

Originally designed as a surgical aid, slab places the user in a state of near hibernation where breathing and heart rate are lowered to an almost imperceptible level. A Perception + Medicine (4) Test is required to determine the character is still alive without proper medical equipment (a medkit is insufficient). At the end of the duration, the user receives a –4 modifier to Reaction for a number of hours equal to half the equivalent duration of the drug (rounded down). Side effects commonly include shakes, chills, and excessive appetite.

Snuff (Aztec Chew, Indian Tobacco)

Duration: 10 x 1D6 minutes

Effect: +1 Reaction, Pain Resistance 1

This legal drug first gained popularity in the early days of the Native American Nations, and is traditionally made from an ancient formula including tobacco leaves, cannabis resin, and willow bark. Modern snuff typically forgoes the expensive natural ingredients by directly combining the active chemical compounds involved: THC, nicotine, and salicin. Snuff users claim the drug has a calming effect. At the gamemaster's discretion, long-term snuff users may be more susceptible to Fatigue damage and cancer.

Woad (Bozoku, Frenetico)

Duration: 5 x 1D6 minutes

Effect: Berserk (see below)

A synthetic hallucinogen derived from North European mushroom species, woad is the cheapest legal combat drug on the market. Users automatically go berserk when wounded in a manner similar to Bear magicians (see *Bear*, p. 200, *SR4A*). Side effects include frothing at the mouth, fever, and a desire to bite.

Zero (Cybertram, Doctor Bob's Allergy Elixir)

Duration: (20 - Body) hours, minimum of 1

Effect: –2 to Disease Resistance Tests and Toxin Resistance Tests

Zero is the street name for a number of different immunosuppressant drugs used to help the body adjust to new cyberware or reduce the effects of allergic reactions. Street docs commonly use small quantities of the drug to suppress the body's immune system for a period of time, reducing the chances that the body will reject implanted 'ware. Habitual drug users use zero to lower their tolerance to other drugs.

For the duration of effect, zero users are no longer subject to penalties from allergies, though they still suffer damage for Severe allergies (see p. 94, *SR4A*). Furthermore, users can treat their tolerance rating as though their addiction is one level lower than it actually is for the duration of the Effect. At the gamemaster's discretion, characters that undergo surgery for implants may be dosed with zero.

AWAKENED DRUGS

Awakened drugs differ from normal drugs in two very important respects. First, each Awakened drug is made from an Awakened plant or animal. Second, Awakened drugs *cannot* be synthesized by modern science. The normal cost difference between natural and synthetic drugs is about the same as that between natural food and the mycoprotein-soy that the average citizen lives on. Drug artists write manifestos about their attempts to capture magic in a needle and shoot it into their corroded veins, but this is as close as they can get. Just a taste.

Crimson Orchid (H-Red, Scarlet Bliss)

Duration: (12 – Body) hours, minimum 1 hour

Effect: –3 Reaction, +1 to all thresholds, Pain Resistance 6

The red orchid is a Southeast Asian Awakened plant whose dual-natured pollen helps attract dual-natured insects. This distinctive red pollen, while not a narcotic itself, amplifies the narcotic properties of the poppy-derived opiates such as bliss and heroin, resulting in crimson orchid. In recent years, crimson orchid has been the subject of vicious Triad wars in the Golden Triangle.

Users of crimson orchid possess a distinctive red tint to their auras, and gain the Astral Beacon negative quality (see p. 94, *SR4A*) for the duration of the effect.

Laés (Leäl, Laésal Wine)

Duration: 20 x 1D6 minutes

Effect: Stun Damage (see below), Memory Loss (see below)

Laés was created by the government of Tír Tairngire from the Awakened laésal fruit, thought to grow only in their government-controlled orchard. Upon taking a dose of laés, the character must resist 10S damage (treat as a Toxin Resistance Test with an ingestion/injection vector and a Speed of 1 Combat Turn) falls unconscious for the drug's duration, and her memories of the last (12 – Body, minimum 1) hours are erased retroactively from the mind, starting from the moment the Awakened drug was administered and working backward. Laés changes the chemical structure of the memories themselves, rendering them impossible to recover with technology or magic.

Laésal wine is a type of brandy made from the fruit of the laésal tree—its effects are the same as those of laés.

Drugs	Availability	Cost
Aisa	—	15¥
Betameth	3R	20¥
Betel	—	1¥
Dopadrine	2	15¥
G3	—	5¥
eX	3R	10¥
Hurlg	—	5¥
K-10	16F	900¥
Loco	4R	350¥
NoPaint	3	15¥
Oxygenated Fluorocarbons	—	2,000¥
Push	—	15¥
Red Mescaline	4R	50¥
Ripper	—	25¥
Slab	5R	150¥
Snuff	—	5¥
Woad	3R	15¥
Zero	2R	100¥



Leäl is a less potent—and expensive—version of laés, and a popular date-rape drug among the Seattle club scene. Leäl has the same effects as laés, but the user only loses the last (120 – Body, minimum 100) minutes of memories; the duration is 5 x 1D6 minutes.

Overdrive (X-cyte)

Duration: (10 – Body) hours, minimum 1 hour
Effect: +1 Reaction, +1 to all Logic-linked skills

From the steamy jungle pharmacopoeia of Latin America comes a central nervous stimulant with sizzle. At the end of this drug’s duration, users suffer 8S damage (unresisted). Aside from a few brain-damaged hacker junkies who complain that overdrive causes nosebleeds, most users of the so-called “hacker drug” report few side effects other than a pleasant tingling across the forebrain and the sudden crash. Certain long-term users who seem more profoundly affected by overdrive have exhibited signs of psychosis, but the true long-term effects of the drug are unknown.

Pixie Dust

Duration: 1D6 minutes
Effect: +1 Charisma, +1 Perception, High Pain Tolerance 1, Memory Loss (see below)

A recent bastardization of traditional cocaine cut with leäl, and sometimes with other substances including raw sugar, ground glass, and powdered caffeine tablets. A character on pixie dust loses all memory of the past 1D6 minutes after the drug takes effect; this effectively means they forget they ever took the drug, but the high remains.

Snorting pixie dust is the painful but preferred method of taking the drug because users forget the agony almost immediately. Consequently, nosebleeds are a common side effect of using pixie dust. Recovery from pixie dust addiction is notoriously difficult, because users cannot remember how often they use it, and overdoses are common.

Trance (Toadstone, Zuvembie Powder)

Duration: (6 – Body) hours, minimum 1 hour
Effect: +1 Intuition, +2 to all Logic-linked skills, Paralysis (see below)

A paralytic neurotoxin secreted by an Awakened Latin American tree frog, trance is often erroneously sold as an opiate. Popular with hackers, magicians, and other professions that don’t require excessive movement, trance causes paralysis and a speeding up of the higher brain functions (treat as a Toxin Resistance Test with a Power of 10, a Speed of 1 minute, and the Duration listed above; see *Paralysis*, p. 254, *SR4A*). At the end of the duration, users remain paralyzed for an equivalent duration. This paralysis only affects voluntary muscle groups; breathing and other autonomous functions are not affected.

Awakened Drugs	Availability	Cost
Crimson Orchid	4R	30¥
Galak	3R	25¥
Laés	10F	500¥
Leäl	8R	180¥
Overdrive	5R	150¥
Pixie Dust	6R	40¥
Trance	5R	120¥



MAGICAL COMPOUNDS

The creation of magical compounds involves alchemy (see *Magical Compounds*, p. 88, *Street Magic*). While the effects of Awakened drugs are completely chemical, the effects of magical compounds are magical in nature. Any character, Awakened or mundane, can benefit from a magical compound. Each magical compound has a shelf life of 1D6 weeks, after which it has no effect.

Animal Tongue

Duration: Essence + 1D6 hours, maximum 12 hours
Effects: This mixture grants the critter power of Animal Control.
Exotic Ingredient: A natural herbal radical of pulp from the manzana cactus in Aztlan.

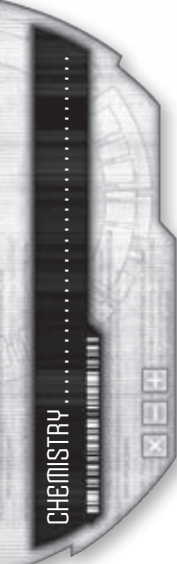
When animal tongue wears off, the user has an unnatural fear of animals for a period of time equal to the mixture’s duration. Treat this as if animals—mundane or paranormal—that come near the character exude the Fear power. Spirits do not count as animals.

Immortal Flower

Duration: Essence + 1D6 hours, maximum 12 hours
Effects: This mixture grants the critter power of Regeneration.
Exotic Ingredient: A natural herbal radical of petals from the immortal flower in the Mojave Desert.

For every 20 boxes of damage sustained under the influence, reduce the character’s Essence by 0.1. A character with cyberware





or bioware who takes this drug also suffers 2D6 boxes of Physical damage (unresisted) when the drug wears off, as the regeneration ability attempts to “repair” the implants.

Little Smoke

Duration: Essence + 1D6 hours, maximum 12 hours

Effects: This mixture grants the Concealment and Confusion critter powers.

Exotic Ingredient: Three units of natural herbal refined grasses from the Great Plains of North America.

At the end of the duration, the user’s Perception and Willpower are reduced to 1 for an equivalent duration.

Rock Lizard Blood

Duration: Essence + 1D6 hours, maximum 12 hours

Effects: This mixture grants the critter power of Immunity against Diseases and Toxins.

Exotic Ingredient: A natural herbal radical of pulp from a North American weeping tree.

At the end of the duration, the character suffers 2P damage (unresisted) and –4 dice for all tests to resist diseases and toxins for an equivalent duration.

Shade

Duration: Essence + 1D6 hours, maximum 12 hours

Effects: Astral projection.

Exotic Ingredient: A natural herbal radical of pollen from the red orchid of Southeast Asia.

This compound forces the user, even a mundane, to astrally project. This grants all users, including mundanes, access to the metaplanes if they are in the company of a spirit guide or initiate. At the end of the duration, the user suffers 10 boxes of Stun damage (unresisted). Characters must return to their bodies before the duration ends or they die. Shade does allow users to retain their astral form longer than normal.

Wudu’aku

Duration: Essence + 1D6 hours, maximum 12 hours

Effects: The user receives +2 dice on all Conjuring Skill Group Tests and adds +2 to her effective Charisma when dealing with Spirits of Man.

Exotic Ingredient: A natural mineral radical of powdered fossils from the Australian Outback.

The user suffers –2 dice to Conjuring Group Tests and –2 effective Charisma when summoning any other type of spirit for 24 hours after using Wudu’aku.

OPTIONAL RULE: CHEMISTRY ACTIVE SKILL

If the use and abuse of chemicals is going to play a large role in your campaign, you may want to consider transforming Chemistry from a Knowledge skill to an Active Skill (part of the Technical skills category):

Chemistry (Logic)

The Chemistry Technical Active Skill governs the use of and understanding of the properties of matter. It includes proper laboratory procedure and the ability to read chemical formulae.

Default: Yes

Skill Group: None

Specializations: Compounds, Drugs, Toxins

Urgent Message...

USING CHEMISTRY

Chemistry is the scientific equivalent of a gun: those skilled in its use have the advantage over those who are not. From the lowest gutterpunk cooking drugs on the street to the corporate scientist mixing chemical weapons in her ivory tower, a knowledge of chemistry translates to the ability to create substances of use and value.

CREATING CHEMICALS

The following rules apply whenever a character seeks to create or alter a chemical compound, whether it be a drug, toxin, explosive, or other application.

Formulae

Before a character can attempt to create a chemical compound, she needs a formula detailing the correct chemical ratios and processes. Illegal drug recipes, patented formulae, and directions for making explosives are available throughout the Matrix. Any character with access to the Matrix can locate the formula for a chemical compound with a Data Search + Browse Extended Test with a Threshold equal to the compound’s Availability and an interval determined by the system the character is searching (see *Using Data Search*, p. 227, SR4A). A compound’s formula has the same legality rating as the compound itself.

Ingredients

Obtaining the component materials to create compounds can be difficult—access to certain key ingredients is often restricted precisely to prevent people from synthesizing some compounds on their own (restricted ingredients are also often tagged in some way so that a forensics examination can determine its origin and locate the purchaser). Generally speaking, the ingredients for a compound have an Availability equal to that of the compound and are usually 1/10th the price. Key ingredients for chemical weapons and Awakened drugs are not commonly available for public sale, and obtaining them can constitute a shadowrun in itself.

Tools

Characters require tools and vessels to synthesize any compound. The minimum tools considered adequate for a Chemistry Test are noted under *Home Cooking*, below. Using a more advanced setup than

Magical Compounds	Availability	Cost
Animal Tongue	8R	1,000¥
Immortal Flower	14F	1,900¥
Little Smoke	12F	1,350¥
Rock Lizard Blood	8R	1,500¥
Shade	8R	1,000¥
Wudu’aku	12R	1,150¥



required counts as using superior tools (see the *Build/Repair Table*, p. 138, *SR4A*). Using lesser tools counts as an Inadequate modifier, or may make the operation impossible if the gamemaster so decides.

A *chemistry kit* is the most basic setup, easy to fit into a padded briefcase or backpack. The chemistry kit's expert system can be tied into the user's PAN for heads-up displays and interactive assistance.

Chemistry shops are generally small but permanent setups that require a location with access to a power point and running water. Safety guidelines mandate special protective features for chemistry shops, such as eyewashes, fume hoods, smoke detectors, and chemical fire suppressant systems.

Chemistry facilities are normally restricted to corporate, university, and government use. They take up a lot of space and feature a great deal of large, immobile equipment. Chemistry facilities must contain security precautions to keep out trespassers, as well as proper methods to deal with toxic chemical byproducts.

The state of the art in chemistry tools is the *chemistry microfac*, a portable solar-powered chemistry facility made from foamed metal and piezoelectric plastic that can be set up and operated in nearly any environment. Originally developed by Evo for off-planet scientific expeditions, chemical microfac have proven popular on Earth for on-site chemical weapons analysis, mineral surveys on the ocean floor, and mobile drug labs.

Home Cooking

A character with the correct formula and ingredients can produce a compound by making a Chemistry + Logic Extended Test with an interval of 1 hour and a threshold as noted on the Home Cooking Table, further described below. Characters receive dice pool modifiers to this test based on the *Build/Repair Table*, p. 138, *SR4A*. Each hit can produce a single dose of the compound, or increase the Rating of the compound (where applicable) by 1.

The number of doses (for drugs/toxins) or kilograms (for explosives and other chemicals) produced is determined by the equipment used, as noted on Chemistry Tools Table. The base interval for this test is 1 hour. To produce a higher amount of doses, simply double the interval time for each doubling of the amount of doses.

Simple: Natural products. This includes isolating something that is relatively easy to find. Examples: dye from a plant, sea salt from ocean water, natural drugs, or venom from a critter. These sorts of preparations do not require any specialized tools, so a chemistry kit or higher would be considered Superior tools (see p. 138, *SR4A*).

Complex: Simple compounds and isolates. This would be things that are just a matter of mixing or purifying a natural product. Examples: distilling liquor; mixing saltpeter, sulfur, and charcoal to make black powder; or increasing the volatility of common acids and bases. A chemistry kit is considered adequate tools for this type of operation.

Intricate: This is where you get to chemistry as cooking. It includes mixing reagents as well as many synthetic street drugs or advanced explosives. Examples: cram, plastics, TNT, plastic explosives. A chemistry shop is considered adequate tools for this type of cooking. Having the wrong tools can also be dangerous (which the gamemaster should keep in mind for glitches).

Exotic: Complex synthetic compounds and isolating volatile substances. Most of the processes involve precise pressure and temperature control, as well as timing. Examples: complex plastics, radioactive substances, advanced synthetic drugs, etc. A chemistry facility or minifac is considered adequate for these types of chemical processes.



HOME COOKING TABLE

Threshold	Type of Chemical
4	Simple chemicals. Example: opium.
8	Complex chemicals. Example: morphine.
12	Intricate chemicals. Example: heroin.
16+	Exotic chemicals. Example: methadone.

CHEMISTRY TOOLS TABLE

Doses/ Kilograms	Tools
1	Chemistry Kit
10	Chemistry Shop
50	Chemistry Facility or Chemistry Microfac

Tools	Availability	Cost
Chemistry Kit	—	500¥
Chemistry Shop	8R	5,000¥
Chemistry Facility	12R	100,000¥
Chemistry Microfac	16R	200,000¥



Urgent Message...

A NOTE ON GAME BALANCE

Gamemaster need to take care when they have a character skilled in chemistry. By its vary nature, chemistry can disrupt game balance: making dangerous chemicals in vast quantities is actually quite easy, whereas making something that actually cures someone or improves themselves is much harder. Gamemaster should not feel ashamed to throw the brakes on a chemist character who is simultaneously churning out homemade explosives for his team, deadly toxins for assassins, and enough street drugs to keep the entire Barrens high for a week.

Step one is to make the basic ingredients challenging to get. Step two is to make chemicals challenging to make by limiting the number of rolls on the Extended Test to the character's dice pool (see p. 64, SR4A). Step three is to throw on legal pressure: the Star isn't fond of drug labs, IED manufacturers, or people who provide tools for assassination or chemical warfare. Any character who engages in hefty productions of illegal chemicals is going to draw attention fast. Step four is to simply apply gamemaster fiat: the chem lab gets ransacked by gangers looking for drugs, suffers a horrible chemical fire, or gets seized by the city government using eminent domain and bulldozed for a new shopping mall.

Gamemasters may also run into other challenges posed by chemist characters. It's impossible to cover all of the possible uses and abuses of chemistry in these rules, so at some point the gamemaster is simply going to have to make a judgment call and wing it. If the amount of chemicals a character is producing seems unreasonable, don't be afraid to limit it. Characters who spend all of their times in the lab juggling beakers and Bunsen burners should be encouraged to get out more anyway.

CHEMTECH

Due to the volatile nature of many compounds, specialized chemtech gear is needed to use and handle them. Here are a few examples.

Inhaler: Drugs that must be smoked or inhaled typically do long-lasting damage to the respiratory system. Inhalers bypass this risk by injecting a concentrated mist of the pharmaceutical directly into the user's lungs. Inhalers were picked up commercially as a "safe" medium, first for prescription drugs and then for tobacco, marijuana, and recreational drugs. Inhalers may be incorporated into respirators at no cost, and many drug users choose this option. Hacker junkies have cobbled together freeware programs for use with CAGS units and inhalers that test the purity of the drug before it hits the user's lungs.

Mule Log: Originally developed to safely transport potentially volatile chemicals, this device has its own uses on the street. Mule

logs are elastic balloons loaded with a chemical compound suspended in nanotubules. Drug smugglers (known as "mules") typically swallow the mule log before crossing international checkpoints, and retrieve the bag through vomiting or induced diarrhea.

A chemistry kit is required to load or recover a compound from a mule log. A metahuman can carry a number of mule logs equal to his unaugmented Body, each of which can hold up to 10 doses of a drug, toxin, or chemical compound. Mule logs and their contents cannot be detected by chemical detection or olfactory systems, and the log itself cannot be distinguished from undigested food or a bolus of waste by X-ray or MRI. The chance always exists that a mule log will break while inside a character's body: at the gamemaster's discretion, he can roll 2D6, and on a result of 2 (2 or 3 if the character has digestive expansion bioware) the log has broken and the character must make a Toxin Resistance Test against the combined dosage of the substances carried within it. Mule logs cannot be reused.

Slap Patches: These coin-sized disks are backed with nanopore adhesive and DMSO. When peeled off and applied to the skin, the disk's chemicals immediately enter the subject's system. Any drug, compound, or toxin can be mixed into a slap patch, changing the drug or toxin's vector to Contact (see p. 254, SR4A). Compounds delivered in this way are treated as toxins (see below).

COMPOUNDS

The following compounds are typical of industrial products that characters can purchase on the street or create themselves; toxins, drugs, and magical compounds are covered separately.

Unless otherwise noted, all compounds are toxic if ingested or injected (see *Ingested or Injected Compound*, p. 81).

Acids and Alkalis: Shadowrunners use industrial strength acids and alkalis as weapons and destructive agents. Acids are corrosives, able to eat through minerals, etch metal, and dissolve flesh. Alkalis negate acids they come into contact with in a chemical reaction that produces heat. Acids and alkalis have a rating from 1 to 6. The damage code for an acid or alkali is (Rating)P and inflicts Acid damage (see p.163, SR4A). Applying an alkali to an acid reduces the rating of the acid by the rating of the alkali, and vice versa.

Adhesives: Industrial-strength dry, liquid, and aerosol superglues and binding agents are available that are easy to apply, fast acting, and form strong bonds between two surfaces. Adhesive compounds have a rating from 1 to 6. An adhesive requires a number of Combat Turns equal to its rating to set, after which the adhesive bonds together with whatever surfaces it touches. A successful Strength + Body Opposed Test against the compound's rating + 8 is required to separate two surfaces joined by an adhesive compound. A special solvent will dissolve the adhesive.

Alkahest: This legendary multipurpose solvent was allegedly developed by an underground chemist and hacker. A single

Chemtech	Capacity	Availability	Cost
Inhaler	—	2R	5Y
Mule Log	—	3R	50Y
Slap Patches	—	—	1Y





INCOMING FEED.....

dose quickly dissolves freeze foam, jackstop, and splat glue, along with most other adhesives, removes leech constructs (see *Leech Constructs*, p. 65), and washes off body paint, olfactory camouflage, stain, and most other non-permanent dyes.

Antivenins: Antivenins are serums specifically made to counteract critter venoms. Creating an antivenin for a specific venom requires a medkit, a sample of the venom, and a successful Medicine + Logic (8, 1 Minute) Extended Test. Treat an antivenin as a specialized Rating 6 antidote patch that only applies to a single venom. At the gamemaster's discretion, an antivenin may also be somewhat effective (Rating 3) against a group of related venoms. Some venoms, particularly paracritter toxins, has no known antivenin.

Artificial Skin: This special adhesive is a permanent part of most medkits, though many special forces units insist each trooper carry an ampoule with them in the field. Artificial skin bonds to natural skin and flesh quickly and cleanly, preventing bleeding and infection. The scar tissue from wounds sealed by artificial skin is somewhat larger than if they healed normally. When a character suffers 2 or more points of physical damage that pierces the skin, the character may apply a dose of artificial skin and reduce the damage by 1 point in lieu of treatment with First Aid or a medkit or magical healing (any subsequent treatment is less effective by 1 box). Applying artificial skin is a Simple Action. A character with platelet factories gains no benefit from artificial skin.

Blister Pack: Some fires, particularly chemical fires, cannot be put out by water. For these cases, firefighters pack concentrated

INGESTED OR INJECTED COMPOUND

Vector: Ingestion, Inhalation, Injection

Speed: Immediate

Penetration: -2 (or Rating, if applicable)

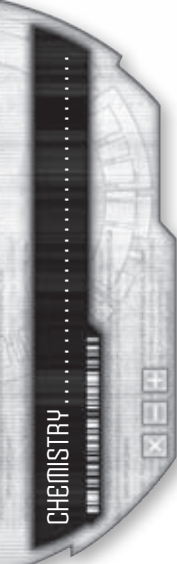
Power: 6 (or Rating, if applicable)

Effect: Damage, Nausea

Ingesting or injecting industrial-strength compounds, or even inhaling the fumes the more noxious ones give off, is extremely hazardous to metahumans, and can cause considerable damage to the digestive tract and respiratory systems. Few, if any, antidotes are normally available for these compounds, and the character may require medical intervention. Some metahumans use household chemicals (Rating 1 or 2) as cheap and readily-available intoxicants. The gamemaster determines the exact vector, effects, and other details, as appropriate to the compound.

Urgent Message...

chemical foams that smother the blaze and neutralize or isolate the acting chemicals. The latest generation of fire suppression agents are non-toxic, biodegradable blister packs. About the size of an unpopped bag of popcorn, the heat-sensitive blister packs are



triggered by throwing them into the fire where they harmlessly burst, covering a 1-meter diameter circle with neutralizing foam. A blister pack can douse any normal fire within its area of effect; it has no effect on high-intensity blazes such as those caused by rocket fuel or fire elementals.

Body Paint: This compound is actually a number of different temporary dyes, paints, and other forms of makeup in different colors, used for a number of purposes ranging from decorative designs to urban camouflage patterns to a fake corporate facial tattoo to deceive a guard. Characters who use body paint receive +1 die for Stealth Skill Group Tests in an environment where the body paint is appropriate, as determined by the gamemaster. This bonus does not apply if the character is invisible.

Carcerands: Carcerands are molecular bodies whose structures resemble empty spheres. When they are created, small amounts of other compounds can be trapped within them. Carcerands can be injected into a metahuman, where they slowly dissolve, releasing the compound when they finally decompose. In this way, carcerands are ideal for delaying the onset of a drug or toxin. Characters can purchase carcerands with durations from 1 minute to 1 year. The presence of carcerands is revealed in most blood tests; a full blood change is required to eliminate them before their onset time elapses.

Chemical Heater: Many chemical reactions generate heat as a useful byproduct. Military forces and people in extremely cold environments have long used hand-held chemical heaters to prevent frostbite and hypothermia. Chemical heaters add +2 dice to tests for resisting environmental Cold damage (see p. 163, *SR4A*). A chemical heater can be activated with a Free Action and lasts for 1 hour.

CleenTac: CleenTac (and numerous brand copies) is a simple and effective double-sided adhesive patch that can be applied to hold an object to almost any surface. The bond is strong and will hold an item despite shakes or bumps, but any jolt stronger than Strength 2 will pull it right off. The CleenTac adhesive strip pulls off cleanly without leaving any mark or residue.

C-Squared: Street slang for “Cleaner Cleaner,” referring to any sort of industrial cleaning agent. Professional hitmen and serial killers concerned about leaving evidence often take a moment to spray or splash C-Squared over any area that might conceivably harbor any incriminating DNA evidence, such as hair, skin samples, blood, or semen. C-Squared adds its rating to the threshold of any test to find DNA samples in an area treated with it.

DMSO: Dimethyl sulfoxide is a utility chemical with a number of applications, though its most common use is as a carrier that forces the skin to absorb delivered chemicals. DMSO is soluble in acetone, alcohol, ether, and water; upon contact with the skin the DMSO, along with whatever other compound is dissolved in solution with it, is instantly absorbed into the body. Any compound mixed with a dose of DMSO is deployable via the Contact vector (see p. 254, *SR4A*).

Dry Lubricant: In deserts, polar zones, and other extreme environments, typical oil-based lubricants for weapons and equipment are prone to freezing or gumming up with sand and other wind-blown debris. The solution is a dry lubricant. A common example of a dry lubricant is powdered graphite. Each “batch” is good for one cleaning. Weapons in such environments not cleaned with dry lubricants may jam at the gamemaster’s discretion.

Fingerprint Dust: This fine powder of fluorescent particles is attracted to the oily residue left by metahuman skin. Forensic technicians dust for prints at crime scenes, scanning and uploading any prints discovered to their database to look for potential matches. Any runner with a little forensic know-how, the right tools, and a hacker or law enforcement contact can do the same thing herself.

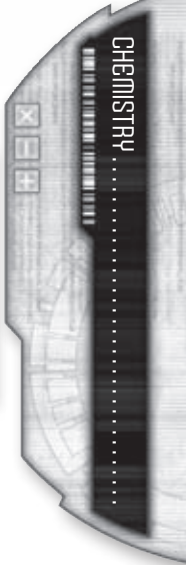
Flash Paper: Actually a type of nitrocellulose, flash paper was a standard gimmick of legerdemain before the Awakening. A tiny spark causes flash paper to combust into a small but impressive ball of flame with no hint of smoke or ash. While some skilled practitioners of legerdemain still use flash paper to accomplish illusions, it is mostly favored by arsonists-for-hire. Flash paper produces real flame and can, by effort or accident, injure someone or catch an object on fire. The damage code for flash paper is 2P Fire damage.

Freeze Foam: This sticky, white foam begins to harden almost immediately into a solid, dense consistency when released and exposed to air. Once hardened, the concretized foam restricts movement, though it does remain porous to reduce the risk of suffocation. The solid foam breaks down in a matter of hours and can be easily dissolved by a special solvent. Freeze foam is used by medical professional to immobilize broken limbs in protective casts, and by security forces to incapacitate rioters and build impromptu barricades. The Armor and Structure ratings of the resultant barrier is equal to the rating (1–6) of the compound (see *Barrier Ratings*, p. 166, *SR4A*); the rating of the compound (and

Compounds	Availability	Cost
Acid	(Rating)R	Rating x 500¥
Adhesive	(Rating)	Rating x 5¥
Adhesive Solvent	(Rating)	Rating x 2.5¥
Alkali	(Rating)R	Rating x 100¥
Alkahest	6F	100¥
Antivenin	As venom	As venom ÷ 2
Artificial Skin	—	25¥
Blister Pack	—	15¥
Body Paint	—	10¥
Carcerands	3	50¥
Chemical Heater	—	4¥
CleenTac (per patch)	—	1¥
C-Squared	—	Rating x 15¥
DMSO	3	10¥
Dry Lubricant	—	2¥
Fingerprint Dust	4R	2¥
Flash Paper	2	10¥
Freeze Foam	(Rating)R	Rating x 4¥
Jackstop	4R	15¥
Luminol	4R	10¥
Olfactory Camouflage	—	10¥
Molotov Cocktail	—	30¥
Stain	3R	5¥



Urgent Message...



its associated Armor and Structure ratings) reduces at a rate of 1 per hour after being deployed.

Jackstop: This simple epoxy plug fits into a standard datajack, then expands to fill the cavity, blocking access to the datajack completely. Jackstop is a routine precaution for inmates at prison facilities, mental hospitals, and BTL addiction recovery clinics. A simple solvent will dissolve the plug.

Luminol: A staple of forensic detectives, luminol powder is typically mixed with water and sprayed or misted over an area. Luminol causes blood and other bodily fluids to glow under the effects of UV light. In the Sixth World, luminol is an effective means for magicians to locate potential ritual samples.

Olfactory Camouflage: This waterproof cream is designed to disguise a metahuman's scent with one appropriate for the desired setting, such as a light perfume for corporate environments or the familiar reek of three-week-old Thai takeout for slumming with squatters. It won't cover the smell of blood or other strong odors, but does help the user blend in with the olfactory background. Characters who use olfactory camouflage receive +1 die for Stealth Skill Group Tests in an environment where the olfactory camouflage is appropriate, as determined by the gamemaster.

Molotov Cocktails: A favorite of paramilitary forces and savvy gangers, these low-tech incendiaries are simply glass bottles filled with gas, with a soaked rag stuck in the top to light as a wick. A bit of oil or sugar is often added to make the homemade incendiary's fire cling to the target. Lighting a cocktail is a Free Action. Stats for Molotov cocktails can be found under *Improvised Weapons*, p. 20.

Stain: A thermosensitive, semipermanent dye, stain is normally visible only under exposure to UV light. Exposure to heat, however, makes the dye-mark visible to anyone with thermographic vision. Police and security units typically use stain in freeze foam to mark rioters, while some troll and dwarf gangs use it to mark themselves and their territory.

TOXINS

Any substance is potentially toxic, but metahumanity has discovered—and created—toxins that can kill in the smallest quantities. Not everyone who uses toxins sees herself as an assassin or terrorist, but their victims and the law have other opinions—at least when they're not using toxins themselves. Many toxins, in much smaller concentrations than presented here, have medical or industrial uses.

Dosages for toxins vary considerably from substance to substance, and prices and descriptions given are for a standard dose effective against most metahuman physiology.

The toxins detailed here follow all of the rules for toxins given on p. 254, *SR4A*.

Arsenic

Vector: Ingestion

Speed: 1 hour

Penetration: 0

Power: Special (see below)

Effect: Physical Damage, Nausea, Numbness (see below)

A naturally-occurring element found in small quantities throughout nature, arsenic must be chemically distilled from plants and arsenic-heavy soils. Arsenic is a cumulative poison, often delivered in multiple small doses over time until a lethal concentration is reached. The Power of arsenic is equal to the number of doses the victim has received. An arsenic antidote will remove

VENOMS

The biological toxins secreted by natural and paranatural critters with the Venom power (see p. 297, *SR4A*) are as deadly as any poison made by metahumans, and some are far deadlier. Venomous creatures are hunted or milked for their toxins, and venoms are a commodity that characters and NPCs may purchase and make use of. The cost for creating an effective toxin from venom is minimal if the character harvests the venom himself, but this requires subduing or slaying the critter first. Venoms may also be harvested from critters with the Corrosive Spit and Noxious Breath powers, at the gamemaster's discretion.

The naga venom listed on p. 84 is a typical representative of a venom toxin, whereas ekylebenle (p. 84) and nova scorpion (p. 84) venoms are more exotic. Gamemasters are encouraged to be creative with the venom of other critters. Toxins from rarer creatures may incur Acid damage, Fire damage, paralysis, nausea, or any of the effects listed on p. 131, *Augmentation*.

Certain Awakened critters have venoms that are magical in nature. These may not be harvested in the same manner as a biological toxin (such venoms lose their magical potency when removed from the critter), but they do form the basis for certain magical compounds or Awakened drugs.

any arsenic in the character's system. Victims of arsenic poisoning suffer vomiting, diarrhea, tingling sensations, and numbness (-2 dice modifier to any test requiring tactile perception, such as knowing whether they pulled the trigger).

Atropine

Vector: Injection

Speed: Immediate

Penetration: 0

Power: 5

Effect: Physical Damage, Disorientation, Nausea

Atropine is a distilled alkaloid and the active component of the medicinal agent belladonna, which is derived from the deadly nightshade plant. A powerful tranquilizer, atropine relaxes the victim's involuntary muscle system, inhibiting the actions of the body's organs. Victims of atropine poisoning continue to take damage every 15 minutes until the atropine has been neutralized.

Breathtaker

Vector: Inhalation

Speed: 1 Combat Turn

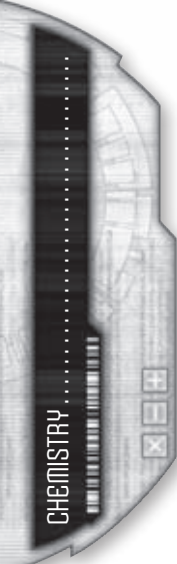
Penetration: 0

Power: 8

Effect: Stun Damage, Breathlessness (see below)

This nonlethal crowd control agent is derived from endothelin and tachykinin peptides. It causes the muscles around the lungs to restrict, severely inhibiting the victim's ability to breathe. The effect of breathlessness is similar to agony (p. 130, *Augmentation*); the





character suffers a -1 wound modifier for every point of Power that is unresisted. If the unresisted Power exceeds the target's Willpower, he is incapacitated by his struggle for breath. Breathtaker has been criticized for sometimes sending victims into convulsions or causing death with asthmatics. Characters with internal air tank cyberware or oxyrush nanoware are immune to breathtaker's effects; characters with extended volume receive extra dice on their Toxin Resistance Test equal to the bioware's rating.

Cyanide

Vector: Ingestion, Inhalation, Injection
Speed: 1 minute if ingested, otherwise Immediate
Penetration: 0
Power: 8
Effect: Physical Damage

Cyanide is a fast-acting poison that blocks the enzyme that controls the oxygen release from red blood cells. The result is death by cellular asphyxiation, though an antidote can save the victim if administered in time. The most notable symptoms of cyanide poisoning are the taste of bitter almonds, an almost immediate lapse into spasmodic breathing, and turning blue around the lips and extremities.

Ekylebenle Venom

Vector: Contact
Speed: 1 Combat Turn
Penetration: 0
Power: 8
Effect: Physical Damage, Blindness (see below)

This potent venom is spit at victims of the ekylebenle, an Awakened green mamba native to sub-Saharan Africa. If the Power of the toxin after the Toxin Resistance Test exceeds the target's Body, the target will be blinded and unable to see for 1 hour. If the target glitches on his resistance test, this blinding is *permanent*.

KE IV

Vector: Contact
Speed: Immediate
Penetration: 0
Power: 8
Effect: Acid Damage, Berserk (see below)

With the advent of insect spirits and various deadly Awakened insects such as the wyrd mantis, chemists have been working for a more potent insecticide than commercially available products. KE IV is a combination of concentrated insecticides; their combined effects on insect physiology produce internal acids (treat as Acid damage) that dissolve the critter from within. KE IV is also toxic to metahumans if ingested (but not on contact). Insect spirits hit with KE IV may go berserk in the same manner as Bear shamans (see p. 200, *SR4A*).

Naga Venom

Vector: Injection
Speed: 1 Combat Turn
Penetration: 0
Power: 6
Effect: Physical Damage

Naga venom is a highly developed neurotoxic saliva. There is no known antivenin.

Nova Scorpion Venom

Vector: Injection
Speed: 1 hour
Penetration: -2
Power: 12
Effect: Physical Damage

This highly-concentrated and deadly venom is utilized by Awakened nova scorpions to kill their prey. Though slow-acting, this toxin is quite often lethal; luckily, several commercial antivenins are available.

Ringu

Vector: Contact, Inhalation
Speed: Immediate
Penetration: -4
Power: 20
Effect: Physical Damage, Disorientation, Nausea

The formula for the deadliest nerve gas known to metahumankind, designed to penetrate standard chemsuits with ease, was leaked from the MCT archives only two years ago. Fortunately, no terrorist group seems to have the capability yet to manufacture it in quantity. It is colorless, odorless, and has no known antidote. It cannot penetrate suits with a chemical seal. Ringu is harmless 10 minutes after contact with the air.

Warp

Vector: Contact, Inhalation
Speed: Immediate
Penetration: -1
Power: 10
Effect: Stun Damage, Disorientation, Hallucinations (see below)

Warp is a century-old superhallucinogen. Initially developed as a chemical weapon, it sees use by terrorist groups and some truly massive raves. Warp is harmless 5 minutes after contact with the air. The hallucinations produced by warp are intense and last 72 hours from initial exposure; hallucinating characters suffer a -2 dice pool modifier to all actions from being distracted. This drug has been known to permanently alter a victim's brain chemistry;

Toxins	Availability	Cost
Arsenic	12R	120¥
Atropine	12R	700¥
Breathtaker	8R	50¥
Cyanide	14F	450¥
Ekylebenle Venom	16F	500¥
KE IV	8	10¥
Naga Venom	10F	800¥
Nova Scorpion Venom	16F	1,000¥
Ringu	24F	2,500¥
Warp	12F	550¥
White Star	18F	600¥
Ymir	20F	800¥



at the gamemaster's discretion, a character who glitches her Toxin Resistance Test gains a Mild Addiction to warp or the Scorched negative quality.

White Star

Vector: Contact, Inhalation

Speed: 3 Combat Turns

Penetration: 0

Power: 12

Effect: Physical Damage (see below), Nausea (see below)

A mix of phosgene and chlorine gas, white star resurfaced as a chemical weapon during the Euro Wars and has seen sporadic use around the world since then. Victims of white star remain nauseated and take damage every hour until they are treated. White star has no antidote; treatment involves removing the chemicals from the body as fast as possible. White star settles to the ground 30 minutes after contact with the air, and remains active in any contaminated soil for 3 hours before becoming harmless. Under certain conditions (such as a damp environment where a crust can form over the substance), pockets of contaminated soil may last for years until stumbled upon, much like old land mines. While in the air, white star imposes a visibility modifier as heavy smoke (see *Visibility Modifiers*, p. 136, *SR4A*).

Ymir

Vector: Contact, Inhalation

Speed: 1 Combat Turn

Penetration: 0

Power: 6

Effect: Physical Damage, Paralysis

A biochemical toxin used by the Ragnarok-cult Winternight in their bid to destroy the world, Ymir is harnessed by many terrorists and paramilitary groups in their assaults. Ymir coagulates blood by inducing crystallization in hemoglobin. Surrounding tissues begin to necrotize in a process superficially similar to severe frostbite. Ymir becomes harmless 20 minutes after contact with the air.

DEMOLITIONS EQUIPMENT

Clearly, blowing something up requires explosives—but explosives by themselves are only going to get you so far. Explosives require detonators to set them off, while wires, cables, and tools are needed to link different charges together. All this adds up to a fair amount of equipment for runners to carry around when they want to use explosives.

See *Advanced Demolitions*, p. 88, for rules on how to use this equipment.

EXPLOSIVES

In addition to the explosives on p. 325, *SR4A*, the following are also in widespread use:

Bangalore Torpedo: Developed for clearing minefields and barbed wire, or making slit trenches quickly, a bangalore torpedo is a pipe, a meter and a half long, filled with 6 kilograms of Rating 6 explosives. A screw thread at each end allows multiple sections to be screwed together into a single long charge, which can then be pushed under an obstacle. A detonator can be fitted into either end of the charge, though obviously one is normally only fitted on the side of the person pushing the charge.

When detonated, a bangalore torpedo is treated as a cratering charge (p. 90). Instead of a spherical hole, it blasts a path along its entire length.

Binary Explosive: One of the safest explosives to handle, binary explosive consists of two liquids that are harmless individually. When mixed, they react to form a potent liquid explosive. Properly mixing the two parts takes one Complex Action per kilogram of explosive, rounded up. Subtract 1 from the explosives' rating for every required Complex Action that was not spent mixing; additional mixing beyond the necessary time does not improve the rating.

Both parts must be of the same rating. If the two parts are not mixed in equal quantities (a 1:1 ratio), the number of kilograms of explosive and the mixing time are based on the smaller quantity of the two. For example, when mixing 1 kilogram of part A with 1.5 kg of part B, this counts as 2 kg of explosives, not 2.5 kg: only one kilo of part B will actually react with all of part A, wasting the remaining 0.5 kg of part B. In this case, mixing only takes 2 Complex Actions, not 3.

Detonating Cord: Also known as "det cord," this is a thin tube filled with a powdered high explosive. It explodes along its entire length in a fraction of a second, making it very useful to create cutting charges (see p. 93)—in many case it can just be wrapped a few times around the object to be cut. One meter of detonating cord contains 10 grams of Rating 8 explosives.

Another use of detonating cord is as a kind of instantaneous safety fuse (see p. 88) that sets off a blasting cap the moment the detonating cord is ignited. See *Firing Charges at the Same Time*, p. 89.

Linear Cutting Charge: Developed for making straight cuts with a minimum of effort, this is basically a piece of angle iron with a layer of explosives on the outside. This focuses the explosive blast onto the line to be cut, giving much greater armor penetration than it would otherwise have. One meter of cutting charge contains a kilogram of explosives of the charge's rating.

Liquid Explosive: Also known as "liquid plastique," this is similar to normal plastic explosives but is a liquid at room tem-

Explosives	Rating	AP	Availability	Cost
Bangalore Torpedo (per section)	6	1	16F	2,500¥
Binary Explosive (per kilogram*)	4-12	—	18F	Rating x 150¥
Detonating Cord (per meter)	8	-1	10R	25¥
Linear Cutting Charge (per meter)	4-15	-5	14R	Rating x 200¥
Liquid Explosive (per kilogram)	4-15	—	16F	Rating x 125¥

* 0.5 kg of each part





INCOMING FEED.....

perature; it turns into a brittle, solid mass below freezing. While liquid, it can be poured easily into the desired quantity (one kilogram being approximately one liter) and is frequently used together with an atomizer (p. 88) to increase its effects.

OLDER EXPLOSIVES

Although the majority of explosives used in the 2070s are plastic explosives of various kinds, older types are also still in common use, especially in commercial applications such as construction and mining.

Ammonium Nitrate: Because this compound is also used as a component of fertilizer, ammonium nitrate is easy to get (more so in rural areas than in a major city, though), and it's legal as well. For use in explosives, it is often mixed with a fuel oil to increase its effectiveness; this mixture is known as ANFO (Ammonium Nitrate-Fuel Oil). Because it consists of a powder or granules, ammonium nitrate must be put into a container before a detonator can be fitted.

Ammonium nitrate will catch fire if set alight, but will not explode if burned except when it is enclosed. It will not detonate when wet.

Dynamite: Made famous by Westerns, dynamite is typically sold in sticks weighing 0.25 kilograms each, but multiple sticks can be taped together quickly to create larger charges, and a stick is easy to cut into smaller sections with a knife.

A stick will accept one detonator of any kind (see p. 87). The price for dynamite listed in the explosives table is per kilogram—that is, four sticks.

Gunpowder: This is a catch-all name for modern smokeless gunpowder as well as older black powder and all sorts of other propellants used in firearms ammunition. Like ammonium nitrate, gunpowder must be put into a container before a detonator can be inserted. Setting fire to gunpowder that is not enclosed in a container will only burn it (producing a cloud of heavy smoke) but not cause it to explode. Gunpowder will not burn or detonate if it is wet.

An easy way to obtain gunpowder is to take it from cased ammunition (caseless ammunition contains a plastic explosive instead of gunpowder), although about 500 rounds are needed for a kilogram.

Nitroglycerine: A very powerful explosive, nitroglycerine is also infamous for its instability—it can detonate from mere jolts, let alone other explosions. Because it is a liquid at room temperature, it is difficult to use in explosive charges. Any time a character handles nitroglycerine, roll an Agility + Reaction Test; a glitch

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Explosives, per kilogram Rating Availability Cost

Ammonium Nitrate	2	5	60¥
ANFO	3	6	70¥
Dynamite*	3	9R	80¥
Gunpowder	2	4	75¥
Nitroglycerine	6	10F	300¥
TNT	4	9F	200¥

* 4 sticks, 1 kilogram in total.

means that the nitro detonates by accident. Transporting it in a vehicle requires the driver to make a Vehicle Test (p. 168, *SR4A*), with the nitroglycerine detonating if a glitch is rolled. Should a character carry a flask on his person, a bullet or punch hitting him will set it off on a roll of 1 on 1D6. Dropping a flask is almost guaranteed to cause it to detonate (at the gamemaster's discretion).

TNT: The standard by which all other explosives are measured, trinitrotoluene or TNT has been used for a century and a half and still remains in the military inventory. It is difficult to obtain on the civilian market, though.

TNT is available in blocks of varying weight that can be cut up when smaller amounts are needed, or taped together for larger charges. Any kind of detonator can be inserted easily.

DETONATORS

Modern explosives do not easily blow up; to make that happen, a detonator is normally inserted into the explosive charge. Many different types of detonators are available, especially to the military, to suit different applications.

A single explosive charge can be equipped with multiple detonators: for example, a block of plastic explosives can be fitted with a timer so that it will go off at 23:00 hours, but also have a pressure detonator embedded in it to prevent anyone from removing the explosives.

Just as is the case with explosives themselves, detonators are not reusable—at least, not after the charge has been set off (removing a detonator from a charge is simply a matter of pulling it out, unless it is fitted with an anti-removal device).

Anti-Removal Device: An addition to any other type of detonator, the anti-removal device gives a nasty surprise to anyone attempting to remove the detonator from an explosive charge. (If a charge has multiple detonators, each must be fitted with its own anti-removal device.)

The character removing the detonator rolls Agility + Demolitions in an Opposed Test against the antiremoval device's rating x 2; the Build/Repair modifiers from p. 138, *SR4A*, apply to the character's roll. If the character rolls more hits, the detonator is safely removed from the charge; but if the anti-removal device scores more hits or the character rolls a critical glitch, the charge is immediately set off. In case of a tie, the charge does not explode but the detonator is not removed, either.

Blasting Cap: The simplest form of detonator is a blasting cap, which is about the size of a hold-out pistol round. A length of fuse or detonating cord (p. 85) is inserted into the cap, and set alight when required. After the fuse has burned up, the cap sets off the explosives.

To put together a blasting cap and a fuse or detonating cord requires the use of a Demolitions tool kit.

Electrical Detonator: This type of detonator is similar to a blasting cap and is normally used for demolitions. It can also be used in booby traps by wiring it to things like a light switch or a vehicle's ignition. Electrical detonators require a strong pulse of electricity to function; this is normally supplied by an exploder (p. 88), but can also be from a car battery or even a wall socket. The current provided by a normal battery, as used in electronic appliances, is not enough.

Optical Detonator: A more high-tech alternative for the electrical detonator, this works on similar lines but must be connected to a fiber-optic line instead of an electrical one. It is

used most frequently in booby traps involving electronic devices containing optical chips, such as computers or most household appliances. Another common use for optical detonators is to connect one to a sensor system (p. 333, *SR4A*), which will set off the detonator when the sensor detects something. For example, an optical detonator connected to a motion detector will detonate when there is movement nearby.

Pressure Detonator: This type of detonator functions on ambient pressure (of air or water), detonating when the pressure gets too high or too low. The most common use is to create depth charges for use underwater. The character setting it can specify at which pressure(s) the detonator will work; for underwater use, the desired depth at which the detonation should occur can be set, as this is directly related to the water pressure.

Pull Detonator: Pull detonators will go off when a ring on the detonator is pulled out; a string or wire can be tied to the ring to connect it to a nearby object (for example so that it will detonate when a door is opened), or to create a tripwire.

Pull detonators can also be set in a "pull-release"-mode. In this case, the detonator is set up with a constant pull on the ring, usually from a taut tripwire. When the ring is pulled out, the detonator will go off as usual, but it will also detonate when the pull is taken off. This prevents someone from disarming the booby trap by simply cutting the wire: doing so causes an immediate explosion.

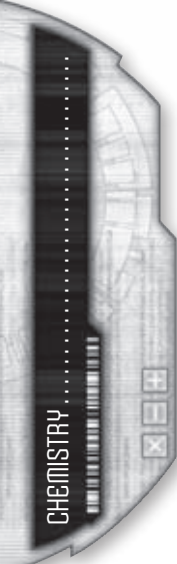
Push Detonator: One of the most familiar booby traps, a push detonators explode when it is pushed in. The character setting the detonator can choose the minimum amount of pressure in kilograms that must be exerted on the detonator before it goes off, as well as the maximum amount—the detonator will not work if a weight outside this range is applied. (The minimum weight can be set to zero, and the maximum to infinite, if required.)

A push detonator also has a "push-release" mode. Using this, a weight must be placed on the detonator, and it will go off when that weight is removed. This has many uses, all of them nasty for the unsuspecting victim.

Radio Detonator: One of the most common detonator types in both military and civilian demolitions, this will set off the explosive charge when it receives the appropriate radio signal. Modern radio detonators are actually wireless devices detonated by a commlink; to prevent tampering, they are normally switched to passive mode (see *Device Modes*, p. 223, *SR4A*). A radio detonator has a Device rating of 1, but Firewall and Signal ratings of 4.

Detonators	Availability	Cost
Anti-Removal Device (Rating 1–6)	+(Rating)F	+(Rating x 25¥)
Blasting Cap	5R	10¥
Electrical Detonator	5R	20¥
Optical Detonator	7F	35¥
Pressure Detonator	10F	150¥
Pull Detonator	9F	60¥
Push Detonator	9F	60¥
Radio Detonator	8R	40¥
Shockwave Detonator	10F	Rating x 25¥
Timer Detonator	8F	35¥





Using radio detonators in combination with sensors (p. 333, *SR4A*) is also common, giving much the same effect as described under the optical detonator above.

Shockwave Detonator: Though many explosives are vulnerable to the blast of a nearby explosion, they do not always go off in a sympathetic detonation (p. 90). Shockwave detonators exist to ensure they do: add the detonator's rating to that of the explosives into which it is stuck to determine whether or not a sympathetic detonation occurs (see *Sympathetic Detonation*, p. 90).

Timer Detonator: An electronic or mechanical clock that sets off the explosives. It can be used to either detonate at a specific time (in which case the character had better make sure the clock is synchronized with her watch ...) or to count down from the desired delay—adjustable in one-second steps, with no maximum delay. Unlike on the trid, these detonators do not have bright red digits showing the time remaining.

EXPLOSIVES ACCESSORIES

Even though they are not actually explosives themselves, these items make working with explosives easier.

Atomizer: Similar to the atomizers used to spray water, perfume, or medication, this device works on a somewhat larger scale to quickly spray a cloud of liquid explosives. The atomizer can hold a number of kilograms of explosive equal to its rating, which can be sprayed at a rate of half a kilogram per Simple Action. Each kilogram of explosives fills one cubic meter when properly atomized. It will settle to the ground in about a minute, however.

The advantage of atomization is that the Damage Value is the same throughout the cloud: the Blast rating is only used outside of it. The drawback is that a detonator cannot ignite the cloud because it is too dispersed, so a small amount of another explosive is normally used instead (see *Sympathetic Detonation*, p. 90). This can be as simple as throwing a hand grenade into the cloud, though.

When used with binary explosives, the explosive must either be pre-mixed, or a separate atomizer must be used for each of the two parts. No time needs to be spent mixing them if the parts are sprayed separately (into the same area, of course).

Exploder: A hand-held device that provides the pulse needed to set off an electrical or optical detonator (p. 87). Electrical and optical systems need separate exploders; an exploder of one kind cannot be used to activate the other type of detonator.

A number of circuits (see *Detonating Charges at the Same Time*, p. 89) equal to the exploder's rating can be connected to it at a time, and an exploder can set off a number of detonators up to its rating x 5 at the same time. These do not all need to be on the same circuit, but all detonators in a single circuit are always detonated simultaneously. Operating an exploder takes a Complex Action, regardless of the number of circuits being detonated.

Explosives Accessories	Availability	Cost
Atomizer	6R	Rating x 300¥
Exploder		
Electrical	8R	Rating x 250¥
Optical	9R	Rating x 150¥
Safety Fuse	6R	5¥ per meter

Safety Fuse: A safety fuse is a length of waterproof cord that burns at a rate of 1 centimeter per second (3 centimeters per Combat Turn), allowing it to be used as a cheap and simple time delay by inserting it into a blasting cap (p. 87). It can be lit with a cigarette lighter or a similar source of flame.

ADVANCED DEMOLITIONS

Demolitions is the act of destroying something—in *Shadowrun*, this means using Demolitions skill (p. 127, *SR4A*) to set explosives for maximum effect. The rules in this section replace those listed under *Explosives*, p. 325, *SR4A*.

Explosives are generally used for three basic types of job: breaching/cratering, cutting, and making improvised explosive devices (IEDs). *Breaching* is used to make big holes in walls, while *cratering* is making big hole sin the ground; *cutting* is used to sever beams or columns and to make neat holes in structures; and *IEDs* are home-made bombs and grenades designed to injure and maim as many as possible. Each of these is described in more detail below, after the rules for working with explosives in general. There is some overlap in the different methods, and often more than one can be used to achieve the same effect. For example, in order to blast a hole in the side of a ship, a breaching charge could be used to simply blow in a large hole, or a cutting charge can be applied to make a much neater hole.

The rules in this section assume characters will employ military-style demolitions, rather than the controlled implosions used by civilian demolitions contractors. The difference is that the military methods take little time and give a big bang that might cause collateral damage, while the civilian methods take weeks or months of preparation but will do the job much more neatly and with far less explosives. Shadowrunners do not normally have that luxury, though.

GENERAL DEMOLITIONS RULES

These rules apply to working with explosives regardless of the desired effect.

Tools

The only tools needed for demolitions are included in a Demolitions toolkit (p. 332, *SR4A*). Demolitions shops and facilities do not exist, though additional tools beyond those contained in a kit may be required depending on the task at hand. Making a frame charge (p. 94), for example, requires wood- or metalworking tools.

Handling Detonators

Though explosives themselves are safe to handle, the same cannot be said for detonators, which contain a small amount of much more volatile explosives. Any time a character handles detonators, he or she rolls a Demolitions + Agility Test; if this results in anything but a critical glitch, all is fine. On a critical glitch, though, an accident occurs and the detonator goes off—should the character be working with explosives at the time, those explosives are set off as well. (Bomb-makers who aspire to a long life keep detonators well away from the explosives for as long as possible.)

Mixing Explosive Types

When a charge consists of different ratings of explosives, calculate their average rating by multiplying each rating by the



Urgent Message...

ENVIRONMENTAL EFFECTS ON EXPLOSIVES

Modern explosives are relatively insensitive to the effects of weather and the environment. Plastic explosives work perfectly fine when wet, and will even function completely underwater. Detonators are similarly sealed against moisture and dirt, and so also work equally well in almost all environments.

The same is not true for many older explosives. Gunpowder, for example, will not explode if it is soaked. Explosives that are sensitive to such effects have this noted in their descriptions. To use such explosives underwater requires a waterproof container—depending on the depth and how long the explosives are to remain submerged, however, this could be as simple as putting them into a zip-lock bag.

Liquid explosives, on the other hand, do not dissolve in water, but they do simply get washed away by it, making it impossible to use them underwater except in some kind of sealed container.

Heat does not really affect modern explosives, and neither does fire—plastic explosives can be burned without exploding, and in fact are often used as a firelighter or even for cooking by soldiers in the field. Many older explosives, though, detonate when set on fire.

At very low temperatures (–20 degrees Celsius and below), plastic explosives become brittle and much more sensitive—treat them as nitroglycerine (p. 86) for purposes of accidental explosions.

Shadowrunners might be understandably nervous about bullets impacting on their explosives. Luckily, this rarely causes explosives to detonate if regular ammo is used. With explosive and EX-explosive rounds, though, the rules for sympathetic detonation (p. 90) should be used if the gamemaster decides a bullet strikes an explosive charge. Tracer rounds can ignite fire-sensitive explosives in a similar way, while both stick-n-shock rounds and taser darts hitting an electrical detonator or circuit will set it off instantly.

number of kilograms of that rating, adding all these figures up, and dividing by the total weight of explosives; do not round anything off before you have completely finished all calculations for the charge.

An explosive charge that consists of two kilos of commercial explosives (Rating 3) and half a kilo of Rating 5 plastic explosive, has an actual rating of $[(2 \times 3) + (.5 \times 5)] \div (2 \text{ kg} + .5 \text{ kg}) = 8.5 \div 2.5 \text{ kg} = 3.4$. Its DV is based on this rating before rounding off, so it is the square root of 2.5 (the total weight of explosives) \times 3.4 (the average rating) $= 1.58 \times 3.4 = 5.3$, which rounds to a DV of 6P.

MAGIC AND EXPLOSIVES

Magic can also affect explosives in both desirable and undesirable ways. For example, an electric detonator (or a whole circuit of them) can be set off by a spell using the elemental effect of electricity—this is obviously bad if it happens unintentionally, but it can also be done on purpose (if a character has no exploder, for example). Since modern explosives are not sensitive to being burned, fire-based spells do not particularly affect them. However, older explosives such as gunpowder can be set off by Fireball and similar spells, or by the touch of a fire spirit.

For purposes of Object Resistance (p. 183, SR4A), simple explosives like ammonium nitrate and gunpowder have a Threshold of 2, slightly more complex explosives (dynamite, nitroglycerine, TNT, etc.) have a Threshold of 3, and modern plastic and liquid explosives have a Threshold of 4.

One smart application of magic when dealing with explosives is to use Magic Fingers and/or Levitate spells to work with charges and detonators from a safe distance, to put them into position in hard-to-reach places, or even to set them off. Magic Fingers is especially useful to dismantle booby traps, and is frequently used by Lone Star magicians on explosive ordnance disposal teams. To provide tamping (p. 91), a Physical Barrier or Armor spell is much easier than sandbags or rubble. Hermetic magicians also frequently use spirits for these purposes (water elementals being a favorite), as they consider them a lot more expendable than shamans do.

Setting Off Explosives

Modern plastic explosives are very stable and very unlikely to go off accidentally—they are safe to handle under almost all circumstances. To make an explosive charge actually blow up will require either a detonator, or another explosion nearby. Simply setting fire to a block of C12 or dropping it to the ground is not enough to blow it up, regardless of what the trideo shows. Many older kinds of explosive, however, like gunpowder or the infamous nitroglycerine, can be set off by fire or rough handling.

To use a detonator, it needs to be stuck into the explosive (see *Handling Detonators*, p. 88); when using any kind of liquid explosive, at least part of the detonator must be submerged in it. The different types commonly used by both the military and shadowrunners appear under *Detonators*, p. 88.

Detonating Charges at the Same Time

Frequently, explosives-inclined runners find themselves needing to detonate different charges at the same time—for example, to blow up all four sides of a building simultaneously so it collapses straight down instead of falling sideways into the neighboring apartment block. The easiest way to do this is to use a radio detonator in each charge and let them respond to the same signal.

Urgent Message...

Another common way is to use detonators wired together into what is known as a *circuit*. Both electrical and optical detonators can be used like this, but a single circuit cannot contain both electrical and optical detonators. An exploder (p. 88) will activate all detonators in a single circuit at the same time, as long as the number of detonators in the circuit does not exceed the exploder's rating x 5.

For a cheaper solution, charges can also be detonated at the same time using blasting caps. Each charge is fitted with a blasting cap, and these caps are then connected to each other via identical lengths of detonating cord—as many as there are blasting caps. A further detonator is then attached at the point where all the detonating cords come together; this can be another blasting cap (with a fuse, or with more detonating cord) or any other kind of detonator. When this one is set off, the detonating cord sets off all the blasting caps simultaneously.

Rigging up detonators to go off at the same time requires a Demolitions + Logic (2 minutes) Extended Test, with a threshold equal to the number of detonators involved. When different types of detonators are used in the same circuit, add 1 to the threshold per type of detonator after the first. A glitch usually means one or more detonators or lengths of det cord were not rigged up properly, so not all charges actually go off as intended. The gamemaster decides which charges do not detonate.

Wally has made himself an enemy, and decides to deal with him by booby-trapping his apartment. Having snuck in, he hides explosives all around the place, five charges in all. He puts a blasting cap in each, and in order to make all this a booby trap, Wally links two pull detonators to the doors of some of the closets, hides a pressure detonator in the enemy's favorite seat, and adds a radio detonator so he can manually set the whole thing off if he needs to. Wally links all of these with det cord, hidden above the apartment's false ceiling.

In all, this circuit consists of 9 detonators: 5 blasting caps, 2 pull detonators, 1 pressure detonator and 1 radio detonator. That makes the Threshold for the Demolitions + Logic Test 9, but because there are 4 different types of detonators, a +3 modifier is added, making the Threshold 12.

Sympathetic Detonation

The other way to set off explosives—unintentionally, most of the time—is through sympathetic detonation: when an unprotected explosive charge is struck by the blast of another explosion, roll the basic rating of the explosive that gets struck (unadjusted for the number of kilograms involved). The threshold for this test is 10 minus the remaining DV of the explosion, with a minimum of 1. When the explosives are enclosed or protected somehow—even by being under a character's armor jacket—add the Armor rating (or Impact armor rating) to the threshold. If the test rolls any net hits, the explosives detonate immediately.

While sneaking up on a camp in the middle of a field, Axxon is carrying 5 kilograms of Rating 12 plastic explosives. Unfortunately, he sets off a booby trap: a high-explosive grenade on a tripwire. As he is only a meter

away, the blast hits him with a DV of 8P. The explosives Axxon has on his person roll their rating (12 dice) against a Threshold of 10 (base) – 8 (the DV) = 2. Not surprisingly, the roll easily gets the hits needed, and Axxon is plastered all over the countryside by the 27P damage from the resulting explosion.

Axxon could have put the explosives under his armor jacket for safety, increasing the threshold by +6 (the Impact rating of the jacket), to 8—but if they do explode like that, the result will be even nastier.

For purposes of sympathetic detonation, commercial hand grenades contain Rating 8 explosives, their plastic outer shell giving them Armor Rating 2. Mini-grenades, rockets, and missiles use Rating 12 explosives, with an Armor rating of 1. When a character carries multiple grenades, consider all of them a single charge in order to reduce the number of dice rolls. If these accidentally detonate, the DV is equal to that of the most powerful grenade carried, with a +1 modifier for each grenade after the first, regardless of its type.

When two or more explosives are in physical contact, they are considered a single charge, and the above rules are not needed. If there is a gap of more than a few centimeters between them, they should be seen as separate charges.

BREACHING AND CRATERING

Breaching is used to make holes in walls and other strong structures that are reasonably thick. It is probably the most common thing shadowrunners do with explosives, and also one of the easiest. Cratering is very similar, but uses explosives to blast holes in the ground. This is not very common on shadowruns, and more likely to be used by mercenaries and other military operations to rip up roads or quickly create foxholes.

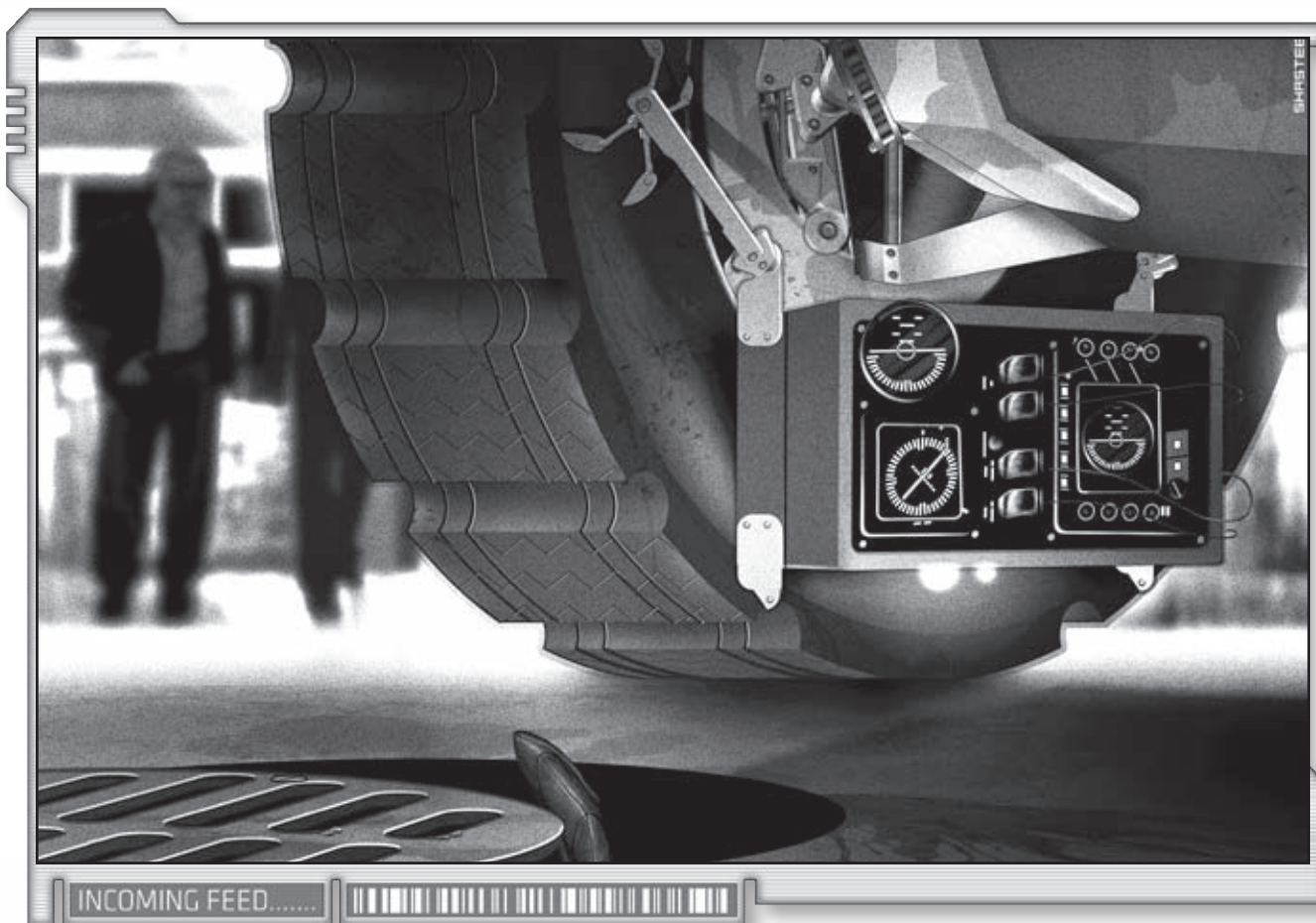
To determine the size of the hole made by an explosive, start by figuring out its DV. If the explosive is up against a structure, it will actually have two DVs: one is calculated as outlined on p. 325, SR4A, and is used as the blast against characters, vehicles, and anything else that happens to be inside the blast radius. The other DV is calculated as explained below, and is used to figure out the effects of the explosion on the structure being blown up.

This second DV is equal to the square root of the number of kilograms of explosives used, times the rating of those explosives, and also multiplied by the appropriate factor from the Charge Positioning Table. Note that no skill test is required here (be-

CHARGE POSITIONING TABLE

Position	DV Multiplier
Against the structure	
On the ground, untamped	x1
On the ground, tamped	x2
Higher above ground than hole radius, untamped	x2
Higher above ground than hole radius, tamped	x3
Inside the structure	x4
Underwater	
Water depth smaller than hole radius	x2
Water depth larger than hole radius	x4





yond the one for *Handling Detonators*, p. 88)—anyone can jab a detonator into a block of C4 and stick that block against a wall. Demolitions skill applies only if the character wants to actually work out how the quantity of explosives needed, as explained under *Calculating the Charge Needed*, p. 92.

Tamping

Covering an explosive charge with material will direct the blast more effectively toward the structure to be demolished. This is known as *tamping* the charge, and reduces the amount of explosives needed, (see the Charge Positioning Table, p. 90). Water forms very effective tamping, but can usually be used only if the demolitions occur underwater.

In order to count as tamped, the explosive must be tightly covered with material with an Armor rating of at least half that of the structure being attacked. Sandbags, rubble, and similar materials are traditionally used, but a quick way to do it is to place body armor over the explosive (and weigh it down a bit), or cast an Armor or Physical Barrier spell with sufficient hits up against the explosive charge.

Placing the explosives inside the structure is also a form of tamping, but requires a lot of effort. (Note that to qualify for this multiplier, the explosive must be actually inside a wall, pillar, or similar—if it is in a room inside a building, it does not count as being “inside” the structure unless the whole room is somehow filled with explosives.) The character must drill a hole large enough

for the explosive charge, then put it inside and seal the hole back up. The advantage of this is not only the x4 DV multiplier, but also that the breaching radius can be halved: instead of having to use enough explosives to blow through the entire wall thickness from one side, the charge will only need to blow through half the wall, in both directions. Designers of structures that may have to be demolished sometimes incorporate space for such charges, and some even put the explosives into the building from the start.

Effects of Breaching Charges

The structure being breached subtracts one-quarter its Armor rating from the explosive’s DV, using the rule for buying hits (the gamemaster can of course roll the Armor rating, each net hit reducing the DV by 1, but buying hits makes demolitions somewhat more predictable). If any DV remains, divide this by the material’s base Structure rating, and read the result as the radius of the hole that is made by the explosion, in meters (the diameter will be twice this number).

The hole made in the structure is spherical, centered on the position of the explosive charge. This does not matter much for large holes in thin walls, but when trying to blast through a bunker wall, the diameter of the hole made on the inside will be much smaller than the one on the outside. The gamemaster could use trigonometry to figure this out, but it’s easier to simply estimate. As a rule of thumb, the size of the hole doesn’t reduce much until halfway along its depth; after that, it rapidly becomes narrower.

EXPLOSIVES RATING TABLE

Material	1	2	3	4	5	7	10
Fragile	.6 kg	.15 kg	.1 kg	.03 kg	.02 kg	.01 kg	.005 kg
Cheap Material	2.25 kg	.6 kg	.25 kg	.15 kg	.1 kg	.05 kg	.02 kg
Average Material	12.25 kg	3 kg	1.5 kg	.75 kg	.5 kg	.25 kg	.15 kg
Heavy Material	25 kg	6.25 kg	2.75 kg	1.5 kg	1 kg	.5 kg	.25 kg
Reinforced Material	42.5 kg	10.5 kg	4.5 kg	2.5 kg	1.75 kg	1 kg	.5 kg
Structural Material	72.5 kg	18 kg	8 kg	4.5 kg	3 kg	1.5 kg	.75 kg
Heavy Structural Material	110 kg	27.5 kg	12.25 kg	7 kg	4.5 kg	2.25 kg	1.1 kg
Armored/Reinforced Material	185 kg	45.5 kg	20 kg	11.5 kg	7.25 kg	3.75 kg	2 kg
Hardened Material*	275 kg	70 kg	30 kg	17 kg	11 kg	5.5 kg	2.75 kg

* Armor Rating 32, Structure Rating 17

CALCULATING THE CHARGE

$$\text{DV required} = (\text{Radius} \times \text{Structure Rating}) + (\text{Armor Rating} \div 4)$$

$$\text{Explosive weight} = (\text{DV} \div \text{DV Multiplier} \div \text{Explosives Rating})^2 \text{ kg}$$

It is customary to round explosive weights up, to ensure the explosion will be powerful enough.

The charge from the last example has a DV of 10, and is now placed against a brick wall (Armor Rating 12, Structure Rating 11). Its Armor rating buys it 3 bits, so that leaves $10 - 3 = 7$ DV to be applied to the wall. This is divided by the Structure rating of 11, giving $7 \div 11 = 0.63$. The hole made in the wall is 0.63 meters in radius, or 126 centimeters in diameter—easily large enough for a person to climb through. However, if the wall is more than 63 centimeters thick, the hole would not be made all the way through, and either some manual labor or another explosive charge would be needed to complete the hole.

Also, don't forget the rubble. If the barrier is fully breached, part of this will be blasted out on the far side, halving the Blast of the explosive (doubling its radius) for that part of the DV that penetrates the barrier. Much of the rubble will also be left in and near the hole, reducing its size by up to half the radius (gamemaster's discretion).

Cratering is basically the same as breaching, except the intention is to make a pit in the ground rather than a hole in a wall or floor. Consider normal ground to have both Armor and Structure ratings of 3; decrease these for soft soil and increase them for hard or frozen ground as seems appropriate.

Calculating the Charge Needed

The rules in the previous section more or less assume that a character setting an explosive charge will simply pile some explosives against the wall, set them off, and see what the result will be. Usually, though, she will do some homework first in order to work out the amount of explosives needed to get the desired result. It is, after all, a bit embarrassing to find out the hard way that your explosion still leaves you unable to get through the wall, but security is on the way now ...

QUICK DEMOLITIONS

The Explosive Rating Table can be used as a quick reference for the approximate amount of explosives to be used in typical demolitions jobs. Cross-reference the class of material (see p. 166, SR4A) with the explosives rating to find the number of kilograms of explosive needed to blow a hole of 1 meter in diameter in different types of structural material. This size of hole is big enough for anyone except maybe a troll to crawl through.

This table assumes the charge is placed on the ground and is untamped; divide the number of kilograms of explosive by the applicable multiplier from the Charge Positioning Table, p. 90, if necessary.

Note that to create a hole of a different size, the number of kilograms should be doubled for every extra meter in diameter the hole should be. For example, to make a 3-meter hole in an average wall using rating 5 explosives would need $.5 \text{ kg} \times 2 \times 2 = 2 \text{ kg}$.

Urgent Message ...



Wally has been hired to cause some trouble on the I-90 westbound into Seattle. He decides to do this by bringing down an overpass—blowing up one of its support pylons should do the trick. These turn out to be made from reinforced concrete, and the 3D-scanner on his commlink tells Wally they are 1.5 meters thick. He decides to do things the easy way and just pile sacks of ammonium nitrate fertilizer on the ground against the pylon (a Rating 2 explosive).

The Structure rating of reinforced concrete is 15 and its Armor rating is 24. The radius Wally needs to blow up is 1.5 meters—he needs to get all the way through the column to be sure it will collapse. The calculation is now 1.5 (radius) \times 15 (Structure rating) = 22.5 . Added to this is one-quarter the Armor rating of 24, which is 6, making 28.5: a DV of 28.5 is needed for a 1.5-meter hole. Since Wally just piles the explosives on the ground, the DV multiplier is 1. Because he uses Rating 2 explosives, all this together gives $28.5 \div 1 \div 2 = 14.25$; squaring that is $14.25 \times 14.25 = 203$ kilograms and a bit.

Yes, Wally will need over 200 kilos of explosives to blow through 1.5 meters of reinforced concrete. He can decrease this quite a lot by spending money on better explosives (with Rating 5 plastic explosives, he would only need 32.5 kilograms) or by better placement of his charges (if he were to have a magician buddy cast *Levitate* on the stack of fertilizer sacks, qualifying Wally for the *Higher Above Ground Than Hole Radius* modifier of $\times 2$, he could use “only” 51 kilograms).

In order to perform these calculations accurately, the character must have some information on the structure he intends to blow up. The easiest way to get the data is to actually look at and measure up the target; alternatively, good plans, such as detailed building plans, will also work.

The gamemaster (not the player of the character doing the demolitions) now rolls a Demolitions + Logic Test for the character. The dice pool is modified for the information the character *does not* have from the Breaching Calculations Table. After making the roll, the gamemaster informs the player of the weight of explosives the character thinks are needed. This is the weight as calculated, plus or minus a factor based on the number of hits rolled—see the Breaching Calculations Table. Roll a die: on an odd roll, the character overestimated the amount needed, on an even roll, it was underestimated.

The gamemaster did the calculations for Wally’s demolition of a highway support pylon, and found he needed 203 kilograms of explosives. Now he rolls Wally’s Demolitions + Logic, with a -1 modifier because Wally did not have plans for the column (which means he may have missed things like cavities inside it, which could have made his work easier). The gamemaster still get 2 hits, and her additional D6 rolls an odd number: Wally overestimates the charge needed by 10%. Instead of 200 kilograms, the gamemaster tells Wally’s player that Wally reckons he will need $203 \times 1.10 = 223$ kilograms. Still, that’s better than being 10% short ...

BREACHING CALCULATIONS TABLE



Information Not Available	Modifier
Material of target	-2
Plans	-1
Rating of explosives to be used	-2
Thickness of target	-3

Number of Hits Rolled	Charge Weight*
None	$\pm 50\%$
1	$\pm 25\%$
2	$\pm 10\%$
3+	As calculated



* Roll 1D6: add this percentage on an odd roll, subtract it on an even roll.

CUTTING

Explosives can also be used to make cuts through beams, girders, or trees, as well as to make holes in thin but fairly strong materials, such as steel plating or even a house door. When a character wants to make a neat cut instead of simply a big hole, the rules for cutting should be used.

Cutting requires far less explosives than breaching, but more preparation time. The explosives must be placed more carefully, which means cutting cannot be done as quickly as blasting a hole in a wall. However, if using a frame charge (p. 94), most of the preparation can be done beforehand.

Cutting charges are not tamped—their effects depend as much on careful shaping of the explosives as on brute force.

Placing Cutting Charges

A cutting charge needs to be properly placed for it to work to full effect. The character setting the charge rolls a Demolitions + Logic (5 minutes) Extended Test, with a threshold equal to twice the number of meters to be cut, rounded up (for beams, pillars, etc. use the circumference as the distance to be cut). For example, cutting through a steel prison bar that is 3 centimeters in circumference would require only one hit (3 centimeters = 0.03 meters, so it would need 0.06 hits, which rounds up to 1), but cutting a one-meter square hole in the side of a ship needs 8 hits: a one-meter square has four sides of 1 meter each, making 4 meters in all, and $4 \times 2 = 8$.

Cutting charges are normally created using linear cutting charges, detonating cord, or explosive foam (p. 325, *SR4A*), as all of these make it easy to set up the line to be cut by simply taping or spraying them into position. However, these charges can be made from any explosive as long as the explosives can be put into the desired shape. For example, plastic explosive can be kneaded into a sausage shape, or blocks of TNT could be placed next to each other to create a line.

Effect of Cutting Charges

The DV of a cutting charge is calculated by taking the square root of the number of kilograms of explosive per meter of cutting charge, multiplied by the rating of those explosives. The charge

has an AP equal to the number of net hits rolled on the Extended Test, plus the AP of the explosives used in the construction of the charge. (Normal explosives have an AP of 0, but certain types, designed for use in cutting charges, have higher AP ratings—see *Explosives*, p. 85.)

When the charge is set off, the barrier uses its Armor rating against the charge's DV as normal; as with breaching charges, it is recommended the gamemaster buys hits instead of actually rolling the Armor rating's dice. If the remaining DV equals or exceeds the Structure rating, the barrier is cut along the entire length and shape of the cutting charge. No other hole is made in the barrier unless the character is using what the gamemaster considers an excessive amount of explosives (in that case, use the rules for breaching charges to determine the effect on the barrier, even if the character set them as a cutting charge).

A few days after his pylon job, Wally needs to get into a building quickly, and has thus made a portable door—a frame charge two meters high and a meter wide. It will cut through a total of 6 meters of wall this way, meaning Wally needed 12 hits to construct it. He actually rolled 15 hits, giving the frame charge an AP of $15 - 12 = 3$. In the charge is a kilo of rating 8 explosive per meter, which gives it a DV of $\sqrt{1 \times 8} = 2.8$. He places the portable door against the armored glass that protects the building's entrance (if it had normal glass, he wouldn't need to bother with the explosives, would he?) and sets it off. The glass has Armor Rating 8, which is reduced to 5 by the charge's AP of 3.

The blast of a cutting charge against nearby characters is determined using the normal Blast of the explosives being used, but it is measured from the point where the explosives are closest to the character. When a character is between two or more sections of the same cutting charge (for example because he is standing in the middle of it), their Damage Values are combined—the net effect is the same as if the character were hit by a blast wave rebounding off a wall (*Blast in a Confined Space*, p. 156, SR4A).

As with breaching charges, the Blast of a cutting charge is halved, doubling the blast radius on the far side of the barrier due to the debris being thrown out.

Frame Charges

A frame charge is a cutting charge made beforehand that can be carried and quickly placed at the site, avoiding having to construct it while there is a risk of being detected, or while under fire—like Wally's portable door from the previous example. This is usually done by building it on a wood frame (hence the name). Frame charges are normally used to cut holes in walls or doors, not for cutting through beams, but they could be if a character desires.

Creating a frame charge is almost exactly the same as setting a cutting charge at the actual location, except that the character also needs materials and tools to construct the frame. Construction is a Demolitions + Logic (15 minutes) Extended Test, which needs the same number of hits as a normal cutting charge (see *Placing Cutting Charges*, p. 93).

Actually placing the frame charge into position requires only a Complex Action, plus whatever time is needed to activate the detonator (see p. 87).

Gamemasters should keep in mind that a frame charge is as large as the hole it is designed to make, and frequently conspicuous as a result. Characters cannot just carry one around in many areas without attracting attention.

IMPROVISED EXPLOSIVE DEVICES

A favorite of terrorists and insurgents, improvised explosive devices (IEDs) are just that: home-made bombs constructed from a lump of explosives and a detonator. The exact shape these bombs take varies widely: they can be pipe bombs, tin cans filled with shrapnel, a truck loaded with bags of fertilizer soaked in diesel fuel, or almost anything else that can be dreamed up. Because of this, other materials may be needed at the gamemaster's discretion, based on the kind of explosive the character wants to create.

The Improvised Explosive Devices Table lists common home-made devices with the required test, threshold, and time to make them. All these are Extended Tests that take the listed time per roll, and the modifiers from the Build/Repair Table (p. 138, SR4A) apply. The *Options* from the table can be applied to any of the IEDs as long as the gamemaster allows it—these modify the required time and threshold as indicated.

Note that the quoted time is only an indicator; some IEDs will take longer or shorter to make depending on the circumstances. Gamemasters should feel free to adjust these times as necessary. A car bomb with a hundred kilos of explosives is not built in 5 minutes, for example, even though a bomb made from a 1 kilogram block of plastic explosives can be.

The Damage Value of improvised explosive devices is calculated using the normal rules: the square root of the number of kilograms of explosive, multiplied by the explosives' rating; each net hit rolled by the maker increases the DV by 1. AP is 0 and Blast is -2 per meter, unless the character applies options to modify these.

To make a fragmentation grenade, Strider fills a recently-emptied beer can with rusty nails and screws, and sprays in about a quarter of a kilo of Rating 6 foam explosives to fill the gaps. She also inserts a cheap blasting cap with a length of safety fuse in order to set the contraption off. This is a hand grenade, so Strider should roll a Demolitions + Logic (4, 5 minutes) Test. Because of the fragments, though, the gamemaster lets her use the $-1/m$ Blast option, which makes the test Demolitions + Logic (6, 7 minutes) instead. After a few rolls, Strider has a total of 8 hits, or 2 net hits. Her grenade will have a DV of 5: the base DV is $\sqrt{0.25 \text{ (weight of explosives)} \times 6 \text{ (rating)}} = 3$, with $+2$ for the net hits. All Strider now needs to do is avoid a critical glitch on the Demolitions + Agility Test, to safely add the blasting cap.

COOKING YOUR OWN

Many types of explosives are fairly simple chemical compounds that can be made in a kitchen by shadowrunners with a little chemistry knowledge. Others require slightly more complex tools, but making any kind of explosive is similar to making other chemical compounds (see *Creating Chemicals*, p. 78). The Making Explosives Table (p. 95) lists appropriate thresholds, as well as the Availability and Cost of raw materials (note that the raw materials for many explosives are not restricted or illegal, as they are fairly common chemicals with many other legal uses). A critical glitch



IMPROVISED EXPLOSIVE DEVICES TABLE

Explosive Device	Extended Test	Threshold	Interval
Bangalore Torpedo	Demolitions + Logic	12	15 minutes
Bomb or Hand Grenade	Demolitions + Logic	8	5 minutes
Flash-Bang Grenade	Armorer + Logic	4	15 minutes
Safety Fuse (per meter)	Demolitions + Logic	6	5 minutes
Smoke Grenade	Chemistry + Logic	4	15 minutes
Options			
Blast			
-4/m		-1	+10 minutes
-3/m		-1	+5 minutes
-2/m		+0	normal
-1/m		+2	+2 minutes
-1/2 m		+4	+10 minutes
Gel Ammo Rules		+2	+5 minutes
Improved AP			
per -1 AP		+2	+10 minutes
per +1 AP		-1	-2 minutes
Incendiary		+2	+5 minutes
Thermal Smoke (smoke grenade only)		+1	+5 minutes

on this test indicates an accident in which $1D6 \div 2$ kilograms (do not round off) of the desired kind of explosives blow up in the character's face. Calculate the damage of this normally; this also tends to wreck all equipment used to make the explosives.

BOOBY TRAPS

One common use of explosives, both in armed conflicts and in the world's sprawls, is to set concealed booby traps that are detonated by an otherwise harmless action. Whether it's rebels fitting a handful of plastic explosives with a tripwire on a jungle trail in Aztlan, or shadowrunners wiring a bomb to the light switch in a corp exec's apartment, the principle is the same.

In game terms, preparing the booby trap is just like making an improvised explosive device (p. 94). The difference is that the booby trap must be placed in position, which naturally first requires that the character setting it gains access to the intended location—that may be a mission in itself. Once there, all it usually takes is a test using an appropriate technical skill (p. 138, *SR4A*) to set it up: making a booby trap detonate when a car's brakes are applied requires Automotive Mechanic + Logic, for example, but attaching it to a maglock would use Hardware + Logic instead. In case of doubt, or when no skill seems to apply, use Agility + Logic.

Hiding a Booby Trap

Typically, characters will want to hide a booby trap from sight, so as not to give the game away. This calls for a Disguise + Perception Test, using the Camouflage specialization if the character has it; any net hits from the test to place the booby trap are added as extra dice. The number of hits rolled is the threshold for a Perception Test by the intended victim(s) to spot the booby trap before they activate it.

The victim should only be allowed to roll a Perception Test if he can reasonably be expected to spot the trap. For example, if a booby trap is placed on the other side of a closed door, detonating when the door is opened, a character using the door has no real chance to notice it, and so should not get a Perception Test. The

only way would be if he, for instance, checked the room through a window in another wall before entering.

Devices such as chemsniffers could be used to check an area without entering it, but the gamemaster can assign penalties to their rolls depending on the circumstances, or rule that they have no chance, either—a chemsniffer would have problems detecting a booby trap on the other side of an airtight door, for example.


This is what makes booby traps so nasty: if placed well, they are almost never spotted. Gamemasters should think twice before using booby traps (even detectable ones) against the player characters, because it takes away much of the fun of the game for players if their characters can be blown up without any warning. If you do utilize them, try to place them under conditions where a character has a chance of spotting them, or where someone else (a character's contact perhaps) sets them off by accident in the character's vicinity. On the other hand, if the player characters make a habit of using booby traps against their opponents, someone is bound to pay them back in kind.

MAKING EXPLOSIVES TABLE

Explosive	Threshold	Availability	Cost
Ammonium Nitrate	8	3	40¥
ANFO	12	3	50¥
Binary Explosive	16	10R	Rating x 250¥
Commercial Explosive	12	5	50¥
Dynamite	12	6	50¥
Foam Explosive	16	6R	Rating x 200¥
Gunpowder	12	2	25¥
Liquid Explosive	16	8R	Rating x 225¥
Nitroglycerine	12	5	100¥
Plastic Explosive	12	6R	Rating x 150¥
TNT	12	5R	75¥



... VEHICLES AND DRONES ...



Captain Jess Rucker had just finished the mission brief inside the gutted Hermes van when the van's engine switched to idle and the electric motors smoothly kicked in. She brushed her hand against the inside of the van, its skinlink sharing with her the sensor image of the target building as they began to slow across the street from it. Still, she felt her adrenalin rush come from the sound of the electrics spinning up more than from anything else

She squelched her commlink on the team frequency, an otherwise random noise, and her assault team in the van moved closer to the exit doors, including the hidden side ones the mechanics finished installing just an hour ago. The building they were about to invade was occupied by the Azzie resistance cell responsible for the bombings at the rebuilt St. Thomas Seminary, and Rucker's CAS MP SWAT team was expecting them to put up a fight.

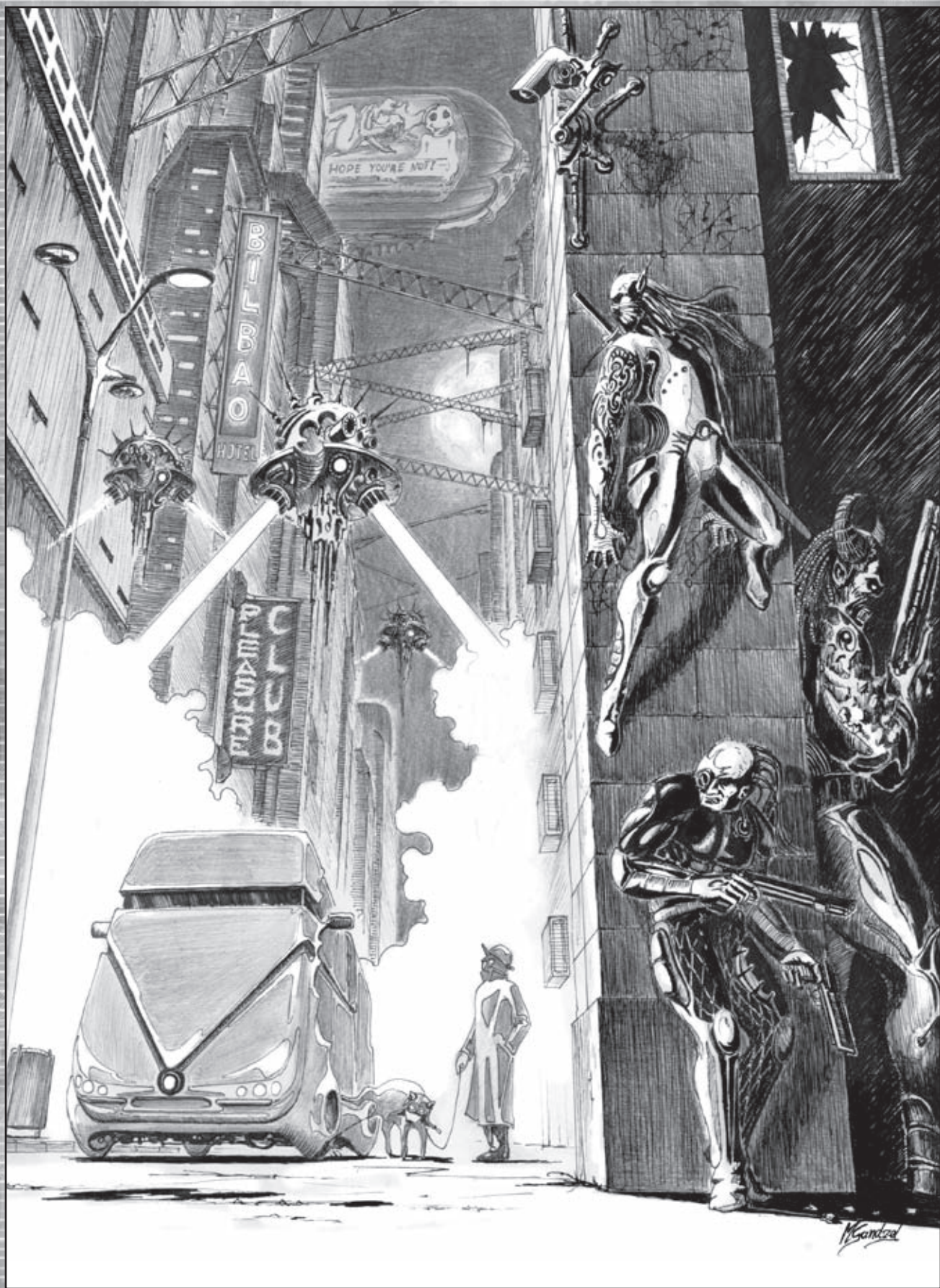
As they prepared for their exit, Rucker ran through all the drone feeds they had managed to collect since they had determined the Azzies were holing up in the rented brownstone. A fixed traffic drone on the corner caught only the front of the house. A slowly floating advertisement blimp that circled the area every three hours had partial video coverage of the roof and the side alley. A check of the pet license database discovered that seven households on the street had dogs, three of those using drone pet walkers. All the video feeds put together formed a composite record of the street's traffic. Messenger services and garbage removal companies used drones in the neighborhood, and as she reviewed the timeline it continued to fill in with video and other sensor takes from those companies as they were found and added by Matrix Intelligence back at the MP HQ.

A squelch on a different frequency told her that the rigger on overwatch had linked in from Atlanta and had subscribed to the Armadillo EW drone nestled in the van's drone racks. The plan was that the 'Dillo would help the rigger seize control of the two Samurai security drones the cell snatched last month from Wuxing. Above, the advertisement blimp had been replaced with a Tower Retrans drone to extend the reach of the offsite rigger, and a Nimrod circled a mile away with a load of Outlaws to take the drones out if the rigger's efforts to suborn them failed.

On the verge of giving the Go order, Rucker suddenly paused. A Buffalo RV pulled up in back of the building. Behind it came a Falcon Scott, ridden by a human that the intel soft ID'd as wearing Aztlan-friendly gang colors, slowing to park in front of RV. Behind them, a Horseman with a drone trailer pulled in. Rucker grimaced. It looked like another Azzie resistance cell had decided to join the party.

She wasn't about to let them go just because they had reinforcements. Twenty seconds later, Operation Hard Entry launched.





TRANSPORTATION

Posted By: Traveler Jones

The more things change, the more they remain the same, and this is especially true for transportation. Almost a hundred and fifty years since the first highway systems were built (followed shortly by the first traffic jams), our sprawls are still connected by highways and crawling with ground traffic. Though many cars are driven via AR—if not by themselves—and there's a significant increase in modern city air traffic, transportation technology hasn't really changed that much over the past few decades. There have been some incremental improvements and interesting new applications of pre-existing technology, but the basic technologies and principles remain the same.

RUNNING THE GRID

GridGuide and GridLink are the standard in city traffic management and an integral part of most cities.

GridGuide

We've all seen *GridGuide* (and its counterparts in foreign countries) in action—and we've all cursed when it's failed. GridGuide is more than a system of guiding cars and transports on the streets, however. At the heart of the auto guidance system is software based on the flocking behavior of birds that allows each car to independently select the most efficient route, knowing that enough other cars are following the same routines to speed up travel for all. This allows GridGuide to maximize the traffic flow and get the people and the cargo to their destinations within an optimized time window. GridGuide also automates traffic priorities for emergency vehicles, street meter fees, and applying citations and fines for moving violations. These days, virtually every vehicle is wireless-enabled and so the system's coverage on highways and within city limits is almost 100 percent.

- GridGuide likes to pretend their network security is nigh invulnerable, and their PR certainly helps to stave off the inevitable paranoia over Hollywood-plot hacker terrorist scenarios. Truth is, GridGuide gets hacked all the time. Despite a few notorious incidents of traffic terrorism and high body counts—and even counting the instances where GridGuide has simply failed and deaths have resulted—most GridGuide providers find it cheaper to make settlements with the victims' families than spend fortunes on extra security. That said, stay away from GridGuide white hats and spiders—they don't mess around with intruders.

- FastJack

- Needless to say, GridGuide can be spotty at best in ghettos and Z-zones. If you're slumming it, don't expect the Guide to nav your way.
- Turbo Bunny

- GridGuide may help traffic, but it's also one big surveillance network. The Star and any megacorp worthy of the name have direct access to the network's data. They can track everywhere your vehicle has been for as long as they've kept records—and last I heard, storage capacity wasn't a problem. With the right software, they can glean your regular driving habits and haunts, take a guess at whom you associate with, or compare the data with other records to locate when some random surveillance camera caught your face or what

purchases you made at certain store. So make sure your car runs silent, natch?

- Slamm-0!

Though driving in full immersion VR continues to grow in popularity, most people still enjoy steering their vehicles manually with those controls augmented by continuous traffic updates via GridGuide. Other people rely completely on their vehicle's autopilots—interfaced with GridGuide of course—and don't even bother to learn to drive or get a driving skillsoft. Using automated systems (often with a remote rigger watching over dozens of vehicles) is cheaper than hiring drivers/pilots, so quite a bit of land, sea, and air transportation is handled via autopilot.

- These days, GridGuide is often enhanced to provide several social network services to commuters. You can battle your fellow highway travelers in tournaments of RoadRage X on the way to work, or literally cruise for a date on your way home.

- Glitch

GridLink

GridLink is the system that provides power to electrically driven vehicles so that they don't have to use their internal power while driving in a GridLink prepared area. It has not expanded very far beyond the city's protected highways and A level districts due to the inherent vulnerability of power systems to energy thieves and parts scavengers. Within those limits the usage has increased, though, as most modern ground vehicles are equipped with auxiliary electric motors, so even if a vehicle cannot draw all of its power from GridLink, it will draw some percentage so it can go longer between refueling.

PROPULSION

In motor technology, hybrid systems are now standard. They combine a flexible-fuel (gasoline, bio-ethanol, and biogas) internal combustion engine with an electric motor powered by a high-capacity battery, regenerative braking, and advanced technologies like photovoltaic paint (embedded with cells made from carbon nanotubes capable of converting about 50 percent of solar energy into electric energy). The classic hydrogen-oxygen fuel cell can also be found in all areas of transportation, from the very small (microdrones) to the very large (sea travel, especially submarine propulsion).

Enhanced fuel efficiency results in lower fuel consumption, but this is in turn met by the ever-rising prices of petrochemicals and electricity generation in general. Consumers have responded by choosing smaller and lighter commuter vehicles with better mileage.

- In more eco-friendly areas, fossil-fuel vehicles are legally restricted to certain performance standards or banned entirely.

- Ecotope

- There's a drawback to the tech development of engines. While these propulsion systems cut down fuel consumption and pollutant emissions dramatically, they pack the engine compartment with state-of-the-art technology that is quite difficult to repair or even service without years of training or access to the relevant skillsofts.



Also many of the parts are highly integrated and cannot be easily taken apart to find the error—instead whole sections have to be swapped with new parts. And while this is of course in the best interest of the manufacturers, it is quite the opposite for regular customers (i.e., shadowrunners), which means that in the shadows a skilled mechanic is worth his weight in gold.

- Rigger X

VEHICLE SECURITY

The art of stealing vehicles is as old as the transportation business itself, and after over 200 years of automobile technology the sheer amount of anti-theft systems and countermeasures has long turned the art into a science, where one has to constantly study in order to stay ahead of the competition (and out of jail). To cut a long story short, it's plain suicidal to just try to snatch a car without doing some proper homework first. When you get extremely lucky, the owner has left the vehicle unlocked and with the key still in the ignition (when there is also a case full of certified cred lying on the backseat, you should start to think). Other vehicles don't even have an ignition let alone a mechanical lock to fit a key into.

Most modern cars and bikes, especially those in the lower price segment, are equipped with basic wireless security that can be easily overcome by a skilled hacker, but even after taking control, he has to make sure that all links to the previous owner are cut. His first task is to remove the vehicle's license plates—the physical one as well as the AR one—and replace them with fakes, or he won't get very far. Most vehicles are also RFID-tagged—don't feel safe after spotting and erasing the most obvious ones, there will always be a least a handful of stealth chips hidden in the inaccessible areas of the vehicle. Some vehicle chassis are practically swarming with embedded RFID chips, and it can be a real pain to get rid of all of them. In any case it's a good idea to get into the vehicle companies' databanks as well as keep an ear to the street in order to get as much information about any potential theft object as possible before laying a hand on it.

- It's standard procedure for patrolling cops and traffic drones to run automatic scans on the plates and tags of the vehicles in their vicinity, looking for a match with the stolen vehicle database. So if you jack a ride, be sure to stay out of highly-regulated traffic zones and park it somewhere discreet, or you'll be made in no time.
- Hard Exit

When it comes to the expensive rides, everything is possible, from biometrics and anti-theft systems that will tase you to termination systems that allow the vehicle to be remotely disabled. Anyone with money is also going to have physical security in the form of armed guards/chauffeurs or secured lots.

- Vehicle security systems are also sometimes used to police the driver. Some jurisdictions make it mandatory to pass a breathalyzer test (via a sensor built into the steering wheel) before the car is activated, to deter drunk driving. Other systems monitor the driver for signs of drowsiness, shocking him with alarms or even light jolts or even going so far as to deactivate the vehicle or engage the autopilot should he not respond.
- Turbo Bunny

LEGALITIES

Unless you live in a Z-zone, feral city, or failed nation-state, you've probably found that vehicle legalities are stricter than ever. Not only are operating licenses, vehicle registration, and insurance universally mandatory, but the age limits, testing standards, quality and emission requirements, and penalties are harsh—not that your local go-gang notices. The automation of traffic management systems means that it's easy to rack up violations if you're manually driving and not careful, and fines are auto-deducted from your cred account. Earn too many negative points, and your license will get revoked.

Piloting licenses for aircraft are even more restrictive, though you wouldn't guess so by all of the air traffic in the sprawls these days. Many jurisdictions even require licenses for watercraft these days, primarily to track and discourage smuggling and terrorism. Small drones of all varieties remain mostly unregulated, though many cities are slowly changing their policies to restrict these as well.

With all of the micro-nations, city-states, and extraterritorial corp zones out there, keeping track of local vehicle laws can be challenging. You can count on GridGuide or your autopilot to give you polite warnings about violations—usually after the fact, of course. To avoid complications and unfortunate run-ins with law enforcement, pay careful attention to who “owns” the space you're moving through, and get familiar with the areas where they tend to throw up random roadblocks to deter go-gangs and the like.

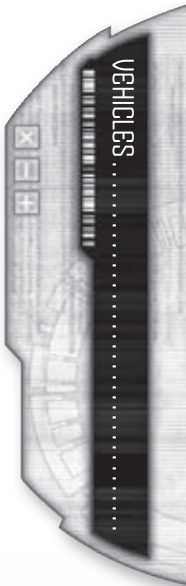
PAYING FOR A RIDE

Despite fuel prices, GridGuide, and an increase in the number of people who telecommute to work, traffic jams remain worse than ever in many sprawls. For many city-dwellers, public transportation is the economical or possibly only choice. Most sprawls maintain fleets of buses, monorails, subways, maglevs, and bullet trains to shuffle people around—at least during rush hours. The quality of service varies drastically depending on the sprawl or 'hood in question; you may enjoy a serene ride in a spotless and clean car, but you're more likely be pressed into a smelly, graffitied space teeming with the dregs of metahumanity. If you're lucky, the panicbuttons might work.

For a better ride, there's always a taxi service, usually a mini-van to accommodate any trolls. Taxis are quite often rigged by a remote driver; the few piloted by live metahumans feature secured driving compartments and numerous systems to deter carjacking. You'll face a challenge convincing any of these hired cars to pick you up in a Z-zone or take you into one, though certain wild and reckless types have been known to offer their services in such areas—with a hefty hazard surcharge, of course.

Intracity commuter air flights are more popular than ever, so that corporate suits can catch a helicopter, tilt-rotor, or lighter-than-air lift over the teeming masses and direct to their rooftop helipad. The majority of these are corporate ops for transferring their workers from burbclave to office and back again, but a few private outfits handle scheduled services from lift-off points around the sprawl.

- Port cities like Seattle and Hong Kong are teeming with ferries and water taxi services. If you know the right people, you can find a boat pilot who'll keep his mouth shut about dropping you into strange waters in the middle of the night.
- Sounder



SEA, AIR, AND SPACE

Given the rising prices of petrochemicals, shipping companies are constantly striving for new technologies to enhance their ships' fuel efficiency. During the economic disruption from the Crash, many sea vessels were equipped with football-field-size kite sails to increase their efficiency by up to thirty percent. This technology, born from sheer desperation, is still in use, even though it serves as a disadvantage in the many pirate-infested waters around the globe. As a result, there have been more attempts to arrange convoys and other protection for commercial ships, and several new mercenary companies formed out of a need for naval escorts.

Due to the rising threat of pirate attacks around the globe, the use of cargo submarines has increased. The constraints on the size of the pressure hull limit those vessels to specialized and expensive cargoes, since a way has yet to be found to build a submarine as large as a cargo ship without making it prohibitively expensive. Even so, there are several expanding cargo submarine lines, including the supply lines for the growing number of aquacologies. Also many cruise lines have switched to shallow-diving submarines, where passengers may experience something unique, using "windows" of ultra-hi-def viewscreens linked to exterior-mounted cameras with vision enhancements to see underwater sights.

Air travel hasn't changed much over the last decades. High-speed commercial transports (*HCST*) are still the workhorses of public air transportation; with the Boeing 897 series as the industry standard, carrying the vast majority of civilian passengers in cramped quarters at low supersonic speeds. Semi-ballistic and sub-orbital craft, traveling at much higher speeds, tend to be used more for business- and first-class passengers. Semi-ballistics use rocket propulsion to travel in an arc that allows them to fly above the atmosphere to an altitude of up to 90,000 meters, where the reduced frictional resistance helps to conserve much of the overall energy necessary for the trip and allows for travel times of a couple of hours to get anywhere in the world. On the downside, the physics of their travel only allow them to alter their trajectories shortly before landing—so you better pray that your landing zone is clear. Sub-orbitals use a similar technology, but their cruising altitude is only 23,000 meters, allowing them to make course corrections by descending back to the transitional altitude of 12,000 meters. This makes them the first choice for short intercontinental trips or trips requiring finesse in order to get a landing approach. Magicians are strongly advised not to go astral or assense while traveling outside the atmosphere (about 60 percent of the traveling time onboard a semi-ballistic), because the upper atmosphere also marks the outer boundaries of the Gaiosphere. Also, as semi-ballistics move at a speed of 12,000 km/h and sub-orbitals at a speed of 10,000 km/h, only the most powerful magicians are able to keep up with their fast-moving shoes.

One of the major changes in air transportation is the growth of zeppelins, rigid airships that were used for long-range or ultra-heavy lifting in the past but considered too slow and fragile to be of any other use. However, several companies were able to expand into the aircraft market in the confusion following the Crash, notably Sikorsky-Bell. Sikorsky merged the concepts of lighter-than-air and vertical-takeoff rotorcraft into massive zeppelins. These are so heavy that they cannot rely on helium for all of their

lift. Instead, they use an aerodynamic lifting body and a dozen turboprops to give them forward motion and lift. The combination of the two keeps them airborne, but the turboprops can be adjusted downward to allow the zeppelin to hover. This design allows zeppelins to carry more weight, be built of stronger materials, and fly faster. While still a niche aircraft, they are now used for cargo transport, especially cargo that is too valuable or time-sensitive for sea transport, along with some specialized military uses.

- Aztlan has been eyeing the CAS's military investment in zeppelins, believing that the CAS now has enough capacity to land a full armored brigade anywhere in Aztlan in under 12 hours. Pueblo, on the other hand, is suspected of working on aerial carrier zeppelins believed to be equipped with heavy weaponry, aerial combat drones, and manned fighters.

- Marcos

The movement of corps and nations into space continues unabated, to the point where there are now several scheduled services to orbit each day. Some cargo is still launched into orbit by rockets, while passengers now travel in specialized craft called orbiters. The standard is a modified semi-ballistic design, where the orbiter is piggybacked onto a semi-ballistic craft. At the top of the semi-ballistic's arc, the orbiter is released and makes the rest of the trip either directly to its destination or to one of the transit stations where pure spacecraft will take passengers the rest of the way. The orbiter can return to the surface on its own without having to glide on the way down.

- As one would expect, security on these craft is extremely tight; trying to sneak weapons or explosives onto orbiters remains difficult. There's no way to reach an orbiter from the semi-ballistic carrier and, purposely, no cargo room on the orbiter. Since most stations are owned by corporations, you'd better have a reason for boarding a station if you don't want to experience vacuum without a spacesuit.

- Orbital DK

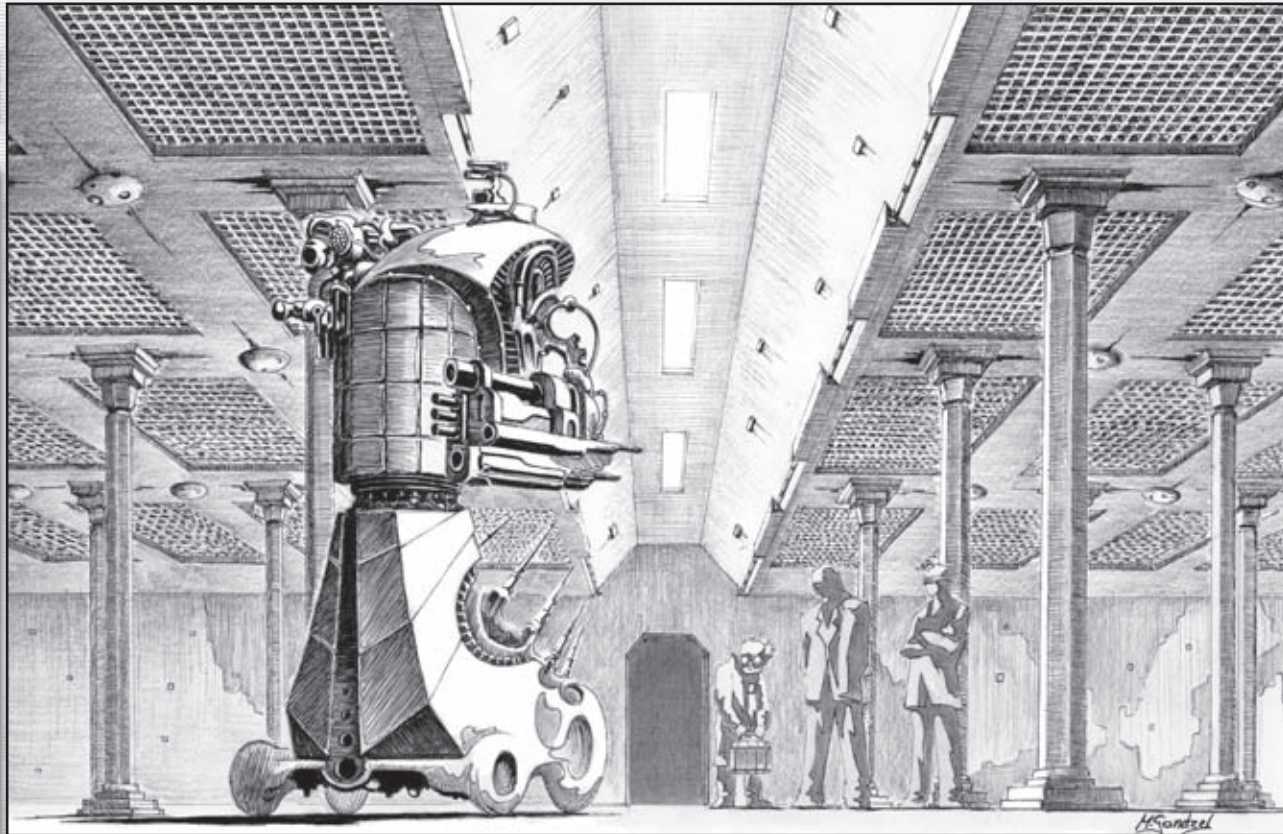
The real way to ride into orbit, of course, is the mass driver operated by the Corporate Court on Kilimanjaro. The spaceport there has drastically cut costs for boosting craft into orbit, inspiring a whole new wave of habitats and lunar colonies. Space tourism is at an all-time high—I hear Monobe's almost-complete lunar resort is a sight to behold.

SMUGGLING

Smuggling, of course, takes advantage of vehicles of all stripes, from semi trailers with forged manifests or secret compartments, to pick-up trucks loaded with gear and driven right past a bribed border guard to quiet watercraft that slink into the harbor in the dead of night. Smugglers will use whatever it takes to get the goods to their destination. Smugglers are nothing if not innovative, though, and the best smuggler craft are specialized vehicles like submarines, radar-invisible zeppelins, or any ride tricked out with hidden storage nooks. No smuggler vehicle is more specialized, however, than the good ol' LAV (low-altitude vehicle).

Nicknamed t-birds (a.k.a. thunderbirds, for the distinctive noise they make as they blur past), LAVs rely on ground effect lift





INCOMING FEED.....

and very short wings to keep them in the air, and so are limited by low altitudes and high stall speeds. Dangerous to fly, t-birds require skilled pilots (called t-birders). Though they guzzle fuel like pigs, t-birds are ideal for smuggling as they're fast, hug the ground to fly under radar, can carry good hauls, and can be geared up with armor and weapons.

- T-birds came into their own right after the Crash 2.0. Trade was severely disrupted, but various smuggling networks stepped out of the shadows for several years to take up the slack—after all, they were used to not relying on schedules or normal routes. While never becoming legal, smuggling operations became almost gray and in most cases nations were so desperate for goods that they relaxed their border security. Rural areas that were already off the beaten path didn't care who showed up, so long as someone did. T-birders were the lifeblood of many scattered and small communities. Thanks to those times, some smugglers still have a lot of friends and allies scattered around in the most unlikely of places.
- 2XL

USES AND ABUSES OF DRONES

Stories of drones going haywire and injuring or even killing people have always been around. Some reports about the Renraku Arcology situation, drone malfunctions during the Crash 2.0, and fears of technomancer subversion have spurred some people to openly distrust drones and refuse to have them in their homes.

Their fears range from simple security concerns (seeing evil hackers, technomancers, and AIs everywhere—apparently they have nothing better to do than reprogram housekeeping drones) to corporate conspiracy theories (your mopbot serves Big Brother!). Some even worry that drones will developed personalities of their own take over the world—a.k.a., “Frankenstein Fear.” The mass majority of public opinion, however, remains carefully manipulated by the megacorporations and is still quite positive towards the use of drones in everyday life.

Indeed, it is hard to imagine a world without drones, as they can be found virtually everywhere, in all sizes and for all applications, and it's sometimes difficult to clearly distinguish where a common appliance ends and a drone begins, as most items are equipped with an AR connection and at least some kind of autonomy. In jobs that are too dangerous or simply too boring to trust to employees, drones have come into common usage, with construction and surveillance being two prime examples.

- Some companies and cities are experimenting with replacing their emergency response teams with drones, because trained personnel are expensive and spend most of their time waiting for something to happen in their areas of responsibility. By replacing their field personnel with drones, then cutting the manpower controlling the drones in half, the drone controllers work continually switching to new drones as needed, but still providing the same service and response times.
- Rigger X

One area where drones are in large use is the military, leading to a very lively competition in encryption and counter-encryption as well as the good old ECM/ECCM arms race. In fact the general design and equipment of combat drones hasn't much changed in recent years, though their electronics and software are upgraded on a daily basis so one has to be careful not to fall behind the state-of-the-art, as this would lead to certain doom in the next military engagement. Still, the brass would be stupid to rely completely on drones that can be jammed or taken over by the enemy anytime, so while drones form an important branch—especially in support and surveillance roles—they are far from being dominant.

Unlike the military in times of war, corporate security has limited budgets, and this is where drones and their unbeatable cost-efficiency come in handy. They can be used around the clock, do not need expensive training to maintain their proficiency, and do not complain about patrolling in bad weather. Corps face enemies that usually have fewer resources than themselves, so they usually have little to fear about anyone suborning their drones, and the use of jammers just announces that someone is trying to disable the drones and that they need to rush out additional warm bodies to fill any security holes.

Another large range of application for drones is, of course, crime, where drones are often specially modified for certain tasks—for example, a crawler drone that fits exactly into a vertical ventilation shaft, where it can anchor itself and release a rope from a winch for easy access to the higher floors of a building. When left behind, drones are not as talkative as metahuman accomplices.

VEHICLE AND DRONE RULES

These additional rules complement the vehicle rules supplied in *SR4A*. Rules governing advanced rigging will be covered in *Unwired*.

DEVICE/SOFTWARE RATINGS

As wireless-enabled devices, every vehicle/drone is considered to have a Device rating (see p. 222, *SR4A*) that determines its standard Matrix attributes (Response, System, Firewall, and Signal). As noted on the Sample Devices table, p. 222, *SR4A*, standard vehicles have Device ratings of 3, security vehicles have Device ratings of 4, and military vehicles have Device ratings of 5. The individual Response, System, Firewall, and Signal ratings may be upgraded as normal (see p. 222, *SR4A*).

Note that Pilot rating is listed separately, and is not considered part of the Device rating.

DRONE SIZES

Exactly how big is a minidrone? To a large degree, this is fluid and up to the gamemaster. As a general rule of thumb, apply the following size ranges to different drone types:

Microdrones (Body 0): These insect-sized drones are typically under 10 centimeters in length. They receive a Concealability modifier of -6 (see pp. 311, *SR4A*).

Minidrones (Body 1): The size of a large insect or mouse, minidrones range from 10 to 25 centimeters in length and fit in the palm of one's hand (or a pocket). They receive a Concealability modifier of -2 (see pp. 311, *SR4A*).

Small Drones (Body 2): These drones range from the size of a commlink or toaster up to the size of a large dog. They have a Concealability modifier of $+4$ to $+6$ (see pp. 301–302, *SR4A*).

Medium Drones (Body 3): Medium drones range from large dog to human or motorcycle-sized. They are unable to carry an adult metahuman, though they could potentially carry a child or small dwarf.

Large Drones (Body 4): These drones range from the size of a motorcycle to a small car. With the exception of medical drones, they are typically not designed to carry metahumans and lack passenger compartments, though a metahuman (other than a troll) could potentially ride on top of one or be carried by one.

Though all drones are considered vehicles, the term drone is generally used to refer to vehicles that are not designed to carry passengers or are specifically designed for remote/unmanned usage.

GRIDGUIDE

The world of 2070 has been so heavily mapped, photographed, indexed, sat-imaged, and GPSed—with all of that data linked together—that getting from point A to point B is quite often a no-brainer. GridGuide communicates with a vehicle's Pilot to supply it with local maps, traffic data, and access to online databases. This makes it a trivial matter to look up addresses, find alternate routes to a location, circumvent dense traffic, or find the closest pizza place. GridGuide also interfaces with the vehicle's own sensors and collision avoidance systems, sending alerts and helping to deter accidents.

In game terms, GridGuide applies a $+4$ dice pool modifier on any Navigation Tests made within the area of coverage. At the gamemaster's discretion, this modifier can be reduced for areas that are off-road, underground, or otherwise “off the grid.”

At the gamemaster's discretion, GridGuide may also add additional dice ($+1$ or $+2$) to a character's (or Pilot's) Vehicle Tests when appropriate to the situation at hand (for example, speeding through heavy traffic or avoiding a collision).

GridGuide systems and components typically have a Device rating of 3, though this varies by area.

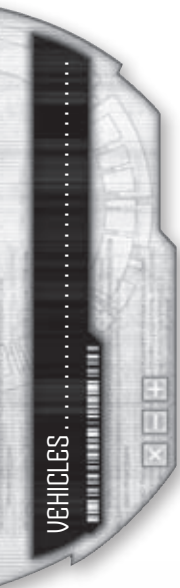
For drivers who wish to hide their activities from GridGuide systems, see *Vehicle Anonymity*, p. 104.

MECHANICAL ARMS AND LEGS

Some vehicles and many drones feature mechanical arms or legs. The standard utilization of these arms and legs is part of the vehicle's Pilot programming (see *Pilot Capabilities*, p. 103). Autosofts (p. 246 *SR4A*) can also be purchased to improve the use of such limbs with particular skill (for example, Demolitions or Blades). If any skill tests with the limb are required, roll Pilot + autosoft $+/-$ Handling (if the drone is operating on its own) or Response + skill $+/-$ Handling (for jumped-in riggers).

Attacking with Mechanical Limbs

Mechanical Limbs can be used for melee attacks, using the same skill tests outlined above. When calculating the Damage Value for such attacks, consider the vehicle/drone to have a Strength equal to the vehicle's Body. This means that for unarmed attacks, mechanical limbs inflict $(\text{Body} \div 2)P$ damage.



OPERATION TIME

A vehicle's *operation time* determines how long it can operate within its normal capacities before it needs to be refueled. As a rule of thumb, each vehicle has an operation time of 6 hours, but the gamemaster should feel free to adjust this as he feels appropriate. A vehicle that is simply idling in a stationary position should have its operation time doubled at least, whereas a jet that throws on its afterburners will drastically reduce its operation time. Likewise, many ships have an operation time of weeks, if not months.

PILOT CAPABILITIES

The Pilot program for a particular vehicle or drone serves as its operating system and general dog-brain computer. It represents the vehicle's autonomous decision-making ability, and so substitutes for attributes for any tests the vehicle must make (see pp. 168 and 245, *SR4A*). The Pilot program is what drives the vehicle when it is put on autopilot.

Pilot programs are designed to encompass the range of motions and actions a particular vehicle is capable of, as well as any sensor operations and situations that vehicle is likely to encounter. This means, however, that a particular Pilot program only functions for a particular type of vehicle. A Pilot program created for a Harvey-Davidson Scorpion motorcycle is going to know how to activate the throttle and clutch, brake carefully in unsafe weather, and even drive the motorcycle on its own if equipped with gyro stabilization (see p. 140), but if loaded into a Northrup Wasp autogyro, that Pilot will have no clue how to spin up the rotorblades, read the altimeter, or bring it in for a safe landing.

In game terms, this means that each Pilot program only functions for the particular type of vehicle it is designed for. At the gamemaster's discretion, a Pilot program could possibly function for a similar type of vehicle (a Eurocar Westwind Pilot could *possibly* operate a Honda Spirit subcompact, as they're both cars), but it should suffer dice pool modifiers ranging from -1 to -4, depending on how different the vehicles are in make, model, and function.

As noted under *Issuing Commands* (p. 245, *SR4A*), Pilots can only follow commands that relate to their vehicle's usual range of function.

Autopilot/Autonavigation

All Pilot programs include the built-in ability to operate the vehicle without metahuman intervention. This can be handy if the driver lacks a license, is tired or drunk, or simply wants to slot a sim rather than man the wheel. This autopilot function automatically interacts with GridGuide systems (see p. 102) for navigational purposes and optimized travel. Vehicles can, of course, be controlled remotely, so you can send your vehicle to pick up packages or have it come and pick you up, assuming you can reach it via Matrix/wireless link.

In game terms, Pilots receive the -1 threshold modifier on Vehicle Tests from driving with virtual reality (see p. 168, *SR4A*).

Note that motorcycles are not capable of driving themselves unless they have the gyro stabilization modification (p. 140).

SAFETY SYSTEMS AND CRASHING

Commercially sold vehicles are required by law to feature seat belts and air bags for forward-compartment passengers (and sometimes for side compartments as well); many jurisdictions also require travelers to wear safety belts or risk heavy fines. Putting on a seatbelt takes a Complex Action, removing one is a Simple Action.

Air bags automatically go off when a vehicle suffers a serious jolt or crash (gamemaster's discretion). For this reason, shadow-runners often disable such systems, to avoid having them go off in the middle of a chase or fight. Disabling an air bag system requires a Logic + Automotive Mechanic (4, 5 minutes) Extended Test. When an airbag is activated, the protected character is pinned for a full Combat Turn; the airbag also obstructs line of sight.

According to the standard *SR4A* vehicle combat rules, passengers are not injured if their vehicle crashes or is destroyed. This assumes the proper use of safety features and other mitigating factors. If the characters are not wearing seatbelts and/or have disabled the airbag systems, gamemasters should feel free to inflict Physical damage on characters during vehicle crashes equal to the damage taken by the vehicle, resisted with Body and half Impact armor (round down).

TAKEOFF AND LANDING

Aircraft require a certain amount of space to take off or land, as shown on the Takeoff/Landing Table. The improved takeoff and landing modification (p. 138) can reduce this to *short* (Level 1) or *VTOL* (vertical takeoff and landing, Level 2). The distances given are for craft carrying a standard amount of passengers and cargo; for aircraft that are overloaded, double the distance. VTOL aircraft do not require runways and may take off or land as long as the space above/below them is clear. VTOL aircraft can also hover for short periods of time, though this reduces the craft's operation time (p. 103) by one-third.

Both takeoffs and landings require Vehicle Tests, as noted on p. 168, *SR4A*.

TAKEOFF/LANDING TABLE

Aircraft Profile	Takeoff Distance (in meters)	Landing Distance (in meters)
Normal	1,000	2,000
Short (Level 1)	200	400
VTOL (Level 2)	—	—

TRANSPORTATION COSTS

The *Common Costs* sidebar on pp. 314, *SR4A*, lists a number of standard expenses associated with public transportation, parking, and other vehicle costs. Gamemasters are encouraged to adjust these costs as appropriate to the situation. The more special a vehicle is, the more difficult is to find a rental service that offers it, and many cannot be rented at all, but have to be *chartered*, meaning that you also have to pay the pilot and/or crew and cannot hitch the ride that easily—this is very often the case with large aircraft, boats, or submarines. Restricted and forbidden vehicles are only available via black market resources—get in contact with your local fixer.



USED VEHICLES

The vehicle prices given in this chapter and in the *SR4A* rulebook are for brand-new vehicles. Runners who are low on cash, or who simply prefer to pay certified cred in a hard-to-trace transaction, can go shopping for used vehicles instead. Though many sprawls are flooded with used and abused cheap subcompacts, as a general rule buying used takes more time simply because it's not as easy as slotting cred to a Matrix vehicle catalogue. Apply a +4 Availability modifier and a cost reduction between 20% and 50%, depending on how "used" the vehicle is. "Used" is of course a term not only measured in terms of years but also mileage and care. A 10-year old vehicle that never left the garage and was kept in good shape might be worth more than a 1-year old vehicle that spent most of its time on the roads and survived a few run-ins with go-gangers. The gamemaster determines the shape the vehicle is in, and is encouraged to be creative. (Perhaps the vehicle has damage that cannot be repaired, or is a lemon that suffers the equivalent of the Gremlins quality, p. 94, *SR4A*, applied to all Vehicle Tests.) Second-hand car dealers can be sleazy folks, so runners are encouraged to bring their mechanic pal when inspecting the ride. At the gamemaster's discretion, non-functioning vehicles can be purchased at an even cheaper cost, but would require appropriate parts and an appropriate Logic + Automotive Mechanic Extended Test to return to working order.

VEHICLE ANONYMITY

Most jurisdictions restrict vehicle nodes from operating in hidden mode (see p. 223, *SR4A*) and additionally require vehicles to broadcast their access ID, license plate, and sometimes their registration and insurance information as well as the SIN and license data of the driver. Additionally, GridGuide systems interface with each vehicle node, recording the access ID (see *Access IDs*, p. 223, *SR4A*) and other broadcast information, and storing this data for security purposes (as well as using it to apply traffic violations and collect payment). GridGuide cameras and sensors also record physical license plates and other data. This can make it very hard for shadowrunners to hide their activities, not to mention for illegal drivers to avoid the law.

Luckily, the shadow rigger and hacking communities have devised a number of tricks and tools for just those reasons. Most riggers spoof their vehicle's access ID on a regular basis (see *Access IDs*, p. 223, *SR4A*) and keep a number of fake licenses (p. 332, *SR4A*)—including registration and insurance papers—on hand. To make it even easier, most also take advantage of spoof chips (p. 105), morphing license plates (p. 105), and chameleon coating (p. 134) to alter their vehicles' looks as necessary.

VEHICLE REPAIR

Inevitably, a shadowrunner's ride or drones will get knocked up, shot up, dented, and scratched. To repair damage inflicted on a vehicle, a Build/Repair Extended Test is called for, using Logic + the appropriate vehicle mechanic skill (Aeronautics Mechanic for aircraft, Automotive Mechanic for groundcraft, Nautical Mechanic for watercraft, or even Industrial Mechanic for certain industrial drones/vehicles). The threshold is equal to the number of damage boxes the vehicle has taken, and the interval is 6 hours. Vehicle repairs typically require replacement parts that cost an amount equal to 1% of the vehicle's base cost per box of damage, with the same Availability as the vehicle. Minor repairs (1–3 boxes) can be handled with a vehicle kit, otherwise a vehicle shop is necessary.

OPTIONAL RULE: SEVERE VEHICLE DAMAGE

For gamemasters who like to get a bit more gritty when it comes to vehicle combat, the optional rules given for severe wounds on p. 120, *Augmentation*, can be mimicked when it comes to vehicles (or any device, for that matter). This severe damage option represents the fact that vehicles are complex mechanical and electrical systems, and a shot or jolt in the right place could puncture the radiator, break an axle, or cause the gas tank or fuel cell to explode.

In this case, whenever a glitch or critical glitch is rolled on a Damage Resistance or Build/Repair Test, or when a vehicle takes 7 or more boxes of damage at once, an appropriate complication takes place that can impair functioning, immobilize the vehicle, or create a severe malfunction, as determined by the gamemaster.

Urgent Message...

VEHICLE SECURITY

Auto-theft, carjacking, and drone-napping are still some of the fondest pastimes for sprawl low-lives, so it pays to have good vehicle security (or to know how to bypass it, depending on which side you're on). Few vehicles use old-fashioned physical keys in 2070, though some make use of transponder-embedded keys (see p. 263, *SR4A*). Instead, interior access and ignition are physically protected by maglocks equipped with RFID card readers, keypads, biometric systems, or some combination thereof (see pp. 263 and 335, *SR4A*). The standard rating for these devices is 3 (4 for security vehicles and 5 for military vehicles), but gamemasters should feel free to adjust this as appropriate to the vehicle make and model. Characters can add or modify the security systems of their own vehicles with any of the systems above, or those noted on p. 132. These security systems do not take up vehicle mod slots (at the gamemaster's discretion), but adding or modifying systems requires a Logic + Hardware (8, 1 hour) Extended Test. Characters who are serious about protecting their vehicles can also use the anti-theft system described on p. 132.

On top of this, many vehicles also employ wireless security by encrypting the vehicle's Matrix node (typically with a Rating 3 Encrypt program; see p. 233, *SR4A*). Until the node is decrypted by an authorized user, the vehicle is locked down. Hackers can circumvent this by hacking (see p. 235, *SR4A*) and decrypting (see p. 229, *SR4A*) the node, or by somehow obtaining the account's passcode and decryption key (such as by intercepting wireless signals or good old-fashioned torture). Alternately, the hacker can attempt to spoof commands from the owner (see p. 236, *SR4A*), which is typically how drones are jacked.

Once a car is stolen, the party isn't over yet. As active Matrix nodes that are also loaded with RFID tags, vehicles are easy to trace and possibly even remotely shut down. To circumvent these difficulties, car thieves typically employ tag erasers (p. 330, *SR4A*), put the vehicle node in hidden mode or spoof its access ID (see *Spoofing the Datatrail*, p. 224, *SR4A*), replace the physical license plates, and employ the other tricks described under *Vehicle Anonymity*.

Tinted Windows

As a standard feature, passenger vehicle sin 2070 feature windows that can be polarized, both for privacy and also to defeat line of sight for magic-based attacks. This means that for a magician to target a line-of-sight spell against a character inside a vehicle with a polarized window, the window needs to be down or broken.

VEHICLE SENSORS

All vehicles (including drones) come readily equipped with a sensor package, whose size depends on the size of the vehicle (see the Sensor Packages table, p. 334, *SR4A*). Each sensor package has a Capacity that determines the amount of sensors that can fit into the system.

In general, a standard vehicle sensor package (Capacity 12), will contain the following sensors:

- Atmosphere Sensor (taking up 1 Capacity)
- 2 Cameras (front and back, taking up 2 Capacity)
- 2 Laser Range Finders (front and back, taking up 2 Capacity)
- 2 Motion Sensors (front and back, taking up 2 Capacity)
- Radar (taking up 5 Capacity)

These sensors are described on p. 59 and pp. 333–335, *SR4A*. Drones feature smaller capacities and so will have fewer sensors; small drones and smaller typically drop the radar in favor of other sensors.

At the gamemaster's discretion, any particular vehicle may come fitted with a different combination of sensors, as long as they don't exceed the package's Capacity. Likewise, cameras and microphones may come equipped with addition vision or audio enhancements (see pp. 333, *SR4A*). Characters may of course modify the sensors on vehicles they own, removing some sensors to free up Capacity and adding others. This requires a Logic + Hardware (8, 1 hour) Extended Test (see p. 138, *SR4A*).

Individual Sensors and Sensor Tests

Each vehicle and drone has a Sensor rating that acts as an abstract composite of all of the sensors in the vehicle combined. This Sensor rating should be used for most situations.

Under certain circumstances, a gamemaster may decide that certain vehicle sensors may not apply, or that only one specific type of sensor is relevant to the situation at hand. Some sensors might just not be suitable for the given task, may be pointing in the wrong direction, and so on. In this case, consider the applicable sensor to have the same rating as the vehicle's Sensor rating. If the character has previously modified the sensor package, individual sensors may have their own ratings, as appropriate. Likewise, a gamemaster can always rule that certain individual sensor components have a lesser or higher rating than the overall sensor package.

If a character improves the ratings of all of the individual components in a sensor package, the overall Sensor rating of the vehicle should also be improved accordingly.

Sensors and Jamming

Vehicle sensors are subject to ECM/jamming (see *ECM*, p. 135, and also pp. 246 and 329, *SR4A*). If a vehicle's Sensor rating does not exceed the rating of the ECM/jammer, the sensors are effectively useless. This can be an important factor in sensor targeting (p. 171, *SR4A*). ECCM software (p. 246, *SR4A*) may

be used to enhance sensors that are contesting against jamming. Apply the ECCM rating to the Sensor rating when determining if the ECM/jammer rating equals or exceeds it.

As an optional rule, the gamemaster can rule that jamming impedes sensors, and apply the ECM/jammer rating as a negative dice pool modifier to all Sensor Tests and Sensor Targeting Tests.

VEHICLE WEAPONS AND RECOIL

Theoretically, vehicle weapons mounted in a weapon mount (p. 146) do not suffer negative recoil modifiers, but this can lead to strange results when a very large gun is mounted on a very small vehicle. For example it is possible to install a weapon mount with an LMG onto a small drone with a body rating of 2 (cat-sized) and suffering no recoil effects from full auto fire, where a normal human would have trouble holding the weapon let alone successfully hitting anything. In instances like this, it is perfectly all right for the gamemaster to apply negative modifiers equal to those a person shooting the weapon would suffer from recoil, counting in the vehicle's mass (as a rule of thumb: its Body rating) as recoil compensation.

VEHICLE EQUIPMENT

The following equipment can be purchased for any vehicle noted in this book or on pp. 348–350, *SR4A*, unless otherwise noted. This equipment does not count as a modification (see *Gear and Vehicle Modifications*, p. 126), and so does not take up any slots. For a more expansive list of vehicle add-ons, see *Vehicle Modifications*, p. 131.

Morphing License Plate: Morphing license plates are composed of smart materials that end and conform according to set patterns when charged with electricity. This allows the plate to be programmed to depict images, embossed characters and numbers, and otherwise mimic legal license plates. They come equipped with a built-in library of license plate styles from around the world.

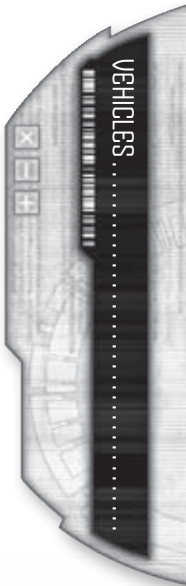
Morphing license plates are usually wirelessly controlled, and can be instructed to change appearance with a Complex Action. They are typically meshed with spoof chips to automatically update according to whatever license information the vehicle node is currently broadcasting.

Pilot Upgrade: Though most consumer vehicles only comes with Pilot programs that range in rating from 1 to 3, as noted on p. 232, *SR4A*, Pilot programs are available in ratings from 1 to 6. Exchanging a vehicle's old Pilot program with a new version requires a Logic + Software (10, 10 minutes) Extended Test. Note that each Pilot program is designed for a particular vehicle (see *Pilot Capabilities*, p. 103).

Spoof Chips: Spoof chips are small firmware add-ons that automatically generate a new access ID for a vehicle node (or any device) on a regular basis, or as instructed (see *Access IDs*, p. 223, *SR4A*). Integrating a spoof chip into a device requires a Logic +

Vehicle Gear	Avail.	Cost
Morphing License Plate	8F	1,000¥
Pilot Program		
Rating 1–3	Rating x 3	Rating x 1,000¥
Rating 4–6	Rating x 3	Rating x 2,500¥
Spoof Chip	8F	500¥

Hardware (2) Test.



Road Strips

Road strips use myomeric rope to stretch out over a length of 15 meters (about 4 lanes of traffic), and are placed in the hopes of disabling a vehicle that travels over it.

Spike Strip: This strip consists of sharp, penetrating spikes that damage the tires of groundcraft passing over it. Unless equipped with smart or run flat tires (see below), the vehicle's tires immediately blow out and flatten, forcing the driver or Pilot to make an immediate Vehicle Test to avoid a crash (see p. 168, *SR4A*). Flat tires inflict a -2 dice pool modifier per tire on Vehicle Tests.

Zapper Strip: The zapper strip features tiny "feelers" that extend upward to brush against the chassis of any vehicle passing overhead, sending a strong electromagnetic pulse through the chassis and frying its electronics and passengers. The vehicle suffers 10(e) damage and each person within it suffers 5S(c) damage.

Special Tires

These tires are available for wheeled groundcraft. Changing the tires of your vehicle is as simple as a Logic + Automotive Mechanic (4, 5 minutes) Extended Test.

Off-Road Tires: These tires reduce on-road Handling by -1 (it cannot drop below 0), while the off-road Handling is increased +1. Off-road tires have the same capabilities as run flat tires below.

Racing Tires: These tires improve the vehicle's performance on the road, raising its Acceleration and Speed by 10%; however, the vehicle's Handling is reduced by -2 on slippery surfaces (such as rain-slick roads) and goes out of control when entering off-road terrain (the driver has to make a Vehicle Test to prevent a crash, and afterward the vehicle comes to a sliding halt—controlled movement is impossible).

Run Flat Tires: The most common upgrade for shadowrunners, these are designed to continue operating even when their air pressure is released due to damage.

Smart Tires: Made up of thousands of moveable myomeric rods that extend and contract by wireless commands based on the vehicle's sensory data, these tires provide a customized tire surface that perfectly mimics the ground, allowing it to pass over virtually any obstacle with a height of up to 15 centimeters, including rocks, curb edges, and even the edges of stairs, without noticing the obstacle. The vehicle becomes much easier to control, raising its Handling by +2. Smart tires can only be used with vehicles that have a Pilot rating of at least 3. Also, due to their design, they are heavier than normal tires, reducing the vehicle's Acceleration and Speed by 20%.

Road Strips	Avail	Cost
Spike Strip	8R	200¥
Zapper Strip	12R	2,500¥

Special Tires	Avail	Cost
Off-Road Tires	6	400¥ (per tire)
Racing Tires	6	250¥ (per tire)
Run Flat Tires	4	250¥ (per tire)
Smart Tires	12	2,500¥ (per tire)

CORE RULEBOOK VEHICLE STANDARD UPGRADES

The vehicles in the core rulebook (pp. 341–342, *SR4A*) are assumed to have the following standard upgrades (autosofts and other software are also listed):

Dodge Scoot: Improved Economy

Yamaha Growler: Off-Road Suspension

Mitsubishi Nightsky: Armor (Concealed), Personal Armor 2, Life Support 2

Eurocar Westwind 3000: Turbocharger, Passenger Protection 6, Anti-Theft System

GMC Bulldog Step-Van: Four additional modification slots

GMC Everglades and GMC Beachcraft: Hovercraft

Ares Citymaster: Life Support 2, Personal Armor 8, Weapon Mount (external remote control turret)

Vulkan Electronaut: Ballast Tanks 1, Life Support 2

Ares Dragon: Special Storage

Northrup Wasp: Weapon Mount (external, remote control, flexible), ECM 2, ECCM 2

GMC Banshee: Rigger Cocoon, ECM 2, ECCM 2

Federated Boeing Commuter: Improved Takeoff and Landing 2

Shiawase Kanmushi: Gecko Tips

Sikorsky-Bell Microskimmer: Hovercraft

Lone Star iBall: Limited Maneuverability, four additional modification slots

MCT Fly-Spy: Improved Takeoff and Landing 2, Maneuverability 2 autosoft

Aztechnology Crawler: Walker Mode

Lockheed Optic-X: Improved Takeoff and Landing 2

GM-Nissan Doberman: Walker Mode, Weapon Mount (external, fixed, remote control), Clearsight 3 and Targeting 3 autosofts

MCT-Nissan Roto-Drone: Improved Takeoff and Landing 2

Renraku Stormcloud: Lighter than Air, Clearsight 3 autosoft

Cyberspace Designs Dalmatian: Improved Takeoff and Landing 2

Crash Cart AutoDoc: Walker Mode, Valkyrie Module

Steel Lynx Combat Drone: Weapon Mount (external, fixed, remote control), Defense 3 and Targeting 3 autosofts

VEHICLE LISTING

The following vehicles supplement the vehicles listed on pp. 348–350, *SR4A*.

Similar Models: Each vehicle presented in this listing represents a certain type of craft. On the global market there are virtually hundreds of competitors in each and every field, and this is more than true on the vehicle market, so you can expect almost every megacorporation (or their relevant subsidiaries) to have at least one model of their own on offer for all the vehicle types mentioned here. While these differ in name, design, and composition,

their range of application and game stats remain the same. At the end of each vehicle description we provide you with a couple of names from similar models made by other manufacturers. At the gamemaster's discretion, you may also apply slight changes in the game stats. This shouldn't exceed more than 1 point up- or downwards (or up to 20% in case of Acceleration and Speed), and for every advantage there should be an appropriate disadvantage.

Standard Upgrades: In this entry you will find a list of vehicle modifications (p. 131) that the vehicle automatically comes equipped with at no extra cost. These standard upgrades use the same rules as given for vehicle modifications, but they don't count toward the vehicle's slot limit and the vehicle itself still counts as unmodified. Other restrictions, like the maximum amount of weapon mounts, still apply. Removing a standard upgrade does not provide additional modification slots. The changes to a vehicle's stats due to its standard upgrades are already calculated into its stats list.

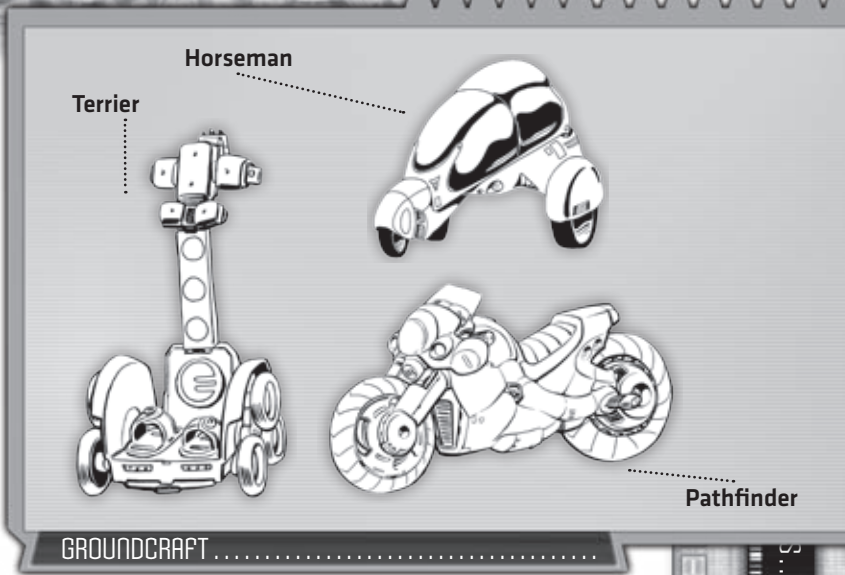
GROUND CRAFT

Daihatsu-Caterpillar Horseman (PMV)

One of the most radical new concepts on the market is personal mobility vehicles—vehicles intended for one person. The Horseman is one of those designs, and has been one of the most successful. It is a one-man vehicle powered by an electric motor and offering two travel modes: road and walk. In road mode, Horseman is barely taller than a motorcycle, with the driver enclosed in a bubble canopy. In walk mode, the wheels move closer together, bringing the driver into a sitting position and the whole PMV upright to slightly taller than an average human, allowing it to travel on sidewalks, enter cargo elevators, and park in a space a third of the size of a normal vehicle. In the dangerous world of 2070, some people have chosen to leave their homes and workplaces only in a Horseman, and almost never leave its safety. This trend is supported by several modules that expand the capabilities of the Horseman, along with a new crop of stores that have marketed themselves PMV-friendly.

The Horseman can also be equipped with modules: secondary vehicles that plug into the rear of the PMV and do not interfere with its ability to switch modes, though they do make it unwieldy. The *passenger module* allows the PMV to carry an additional passenger. The *cargo module* allows transportation of goods, offering the same space as a large trunk of a car. The *advanced cargo module* offers less cargo space, but comes with two mechanical arms that allow the driver to interact with the outside world without leaving the PMV. The *drone module* comes with a small landing drone rack. The game stats given are meant for a Horseman with the relevant module attached.

Similar Models: Entertainment Systems FunWalker, Shiawase Purosu-Supermodel



Std. Upgrades: Full Mechanical Arm (Horseman with Advanced Cargo Module only), Small Landing Drone Rack (Horseman with Drone Module only)

Ares-Segway Terrier (PMV)

A descendent of an older design, this is a two-wheeled vehicle where the wheels support a platform and a backrest, allowing a user to step on the platform, lean back against the backrest (a seatbelt is also included), and zip around by way of AR controls, a datajack, or a glove controller. A gyro-stabilization system keeps the PMV upright. While on the Terrier, people can more accurately shoot and move at the same time, or use it to act as a remote-controlled sensor platform to provide 360-degree awareness. Some riggers and hackers take the Terrier on runs so that it can carry their bodies and keep up with the rest of the team even if they are fully immersed in virtual reality.

Similar Models: IMFU Walkboard, Toyota Jareru

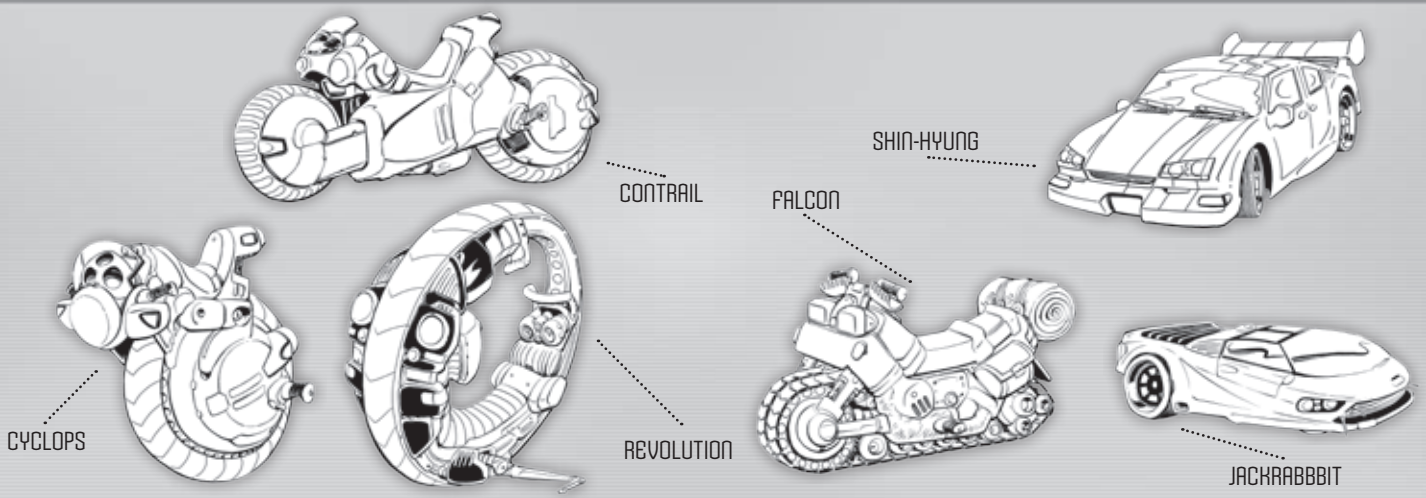
Std. Upgrades: Motorcycle Gyro Stabilization

Indian Pathfinder (Racing Bike)

Harley-Davidson had been previously focused on the high end of motorcycles, but in the aftermath of Crash 2.0 purchased several smaller manufacturers from cash-strapped conglomerates and entered the racing bike market under the Indian nameplate. They chose the name Indian deliberately to hearken back to the nostalgic days of bike racing in the last century. Unfortunately, to some of the more radical NAN policlubs, it identifies the company as being part of the anti-NAN camp, so riding a Pathfinder can get you in trouble in some areas of the NAN, or if meeting up with one of the wrong Native American go-gangs.

Similar Models: Hyundai Elvenstar, Norton Countess

Personal Mobility Vehicles	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Daihatsu-Caterpillar Horseman	+1	10/20	80	1	4	4	1	4	12,000¥
with passenger module	0	5/20	75	1	6	4	1	6	+6,000¥
with cargo module	-1	5/20	70	1	6	4	1	4	+3,000¥
with advanced cargo module	+1	10/20	75	1	6	4	2	8	+5,000¥
with drone module	0	10/20	75	1	6	4	2	8	+4,000¥
Ares-Segway Terrier	+2	5/15	40	2	2	1	2	—	4,500¥



GROUND CRAFT BIKES • CARS

Thundercloud Contrail (Racing Bike)

Rather than compete solely on performance (though admittedly the Contrail does not have shabby performance), Thundercloud decided to make the vehicle easier to tune and modify, hoping to attract people who are never happy with vehicles right off of the showroom floor and want to make them their own. Combat bikers and go-gangers with more money than sense have embraced it, and it is a popular model even if the bike ends up so heavily modified that no one recognizes it.

The Contrail has 4 additional modification slots for a slot maximum value of 10 (see p. 129).

Similar Models: Evo Pegasus, Yamaha Katana-11

Entertainment Systems Cyclops (Monocycle)

With the advent of advanced gyro stabilization, the motorized monocycle—a wheel on which the rider sits astride—finally became a feasible mass market product, though it is still in search of a market for the moment. Entertainment Systems had hoped that customers would graduate from their Papoose model to the Cyclops, but its appearance is still seen as off-putting. Some use it as a commuting vehicle (though it is a little too sporty to be practical for that purpose) and it can be easily disassembled to be stored in a locker room. Its electric drive doesn't smell or leave other traces that would upset others. It has excellent response, though for go-gangers there just isn't enough protection for the inevitable fights they get into. Lately, a few security forces have begun to employ the Cyclops for light patrol and urban use.

Similar Models: Wuxing Quing Ri, BMW 5050 Monobike

Std. Upgrades: Assembly Time Improvement, Motorcycle Gyro Stabilization

Horizon-Doble Revolution (Enclosed Monocycle)

When Horizon expanded into vehicle manufacturing as part of its rise to AAA status, the megacorp's entertainment focus carried over in their Doble subsidiary, building vehicles that were unique and visually interesting. The Revolution was one of the first commercial successes, being an enclosed monocycle where the passenger actually rides inside the wheel, relying on AR to give the rider a view of the road that is blocked by the wheel. While considered a monocycle, the wheel is actually a single giant smart tire, with the adjustable spokes allowing wheel movements to effect turns and other maneuvers.

Despite its odd appearance, some go-gangers have embraced it, for with the single smart wheel they can always win a game of chicken—the Revolution will roll right over most vehicles. A common upgrade is to add sidecars and armor the wheel, so they can do head-on attacks, being protected by the heavily armored wheel and firing weapons mounted on the sidecar.

Similar Models: Entertainment Systems Odyssey, Yamaha Maru
Std. Upgrades: Motorcycle Gyro Stabilization, Smart Tires

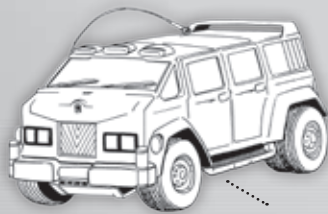
Evo Falcon (Off-Road Bike)

A specialized off-road bike for extreme environments, the Falcon is often found in the northern wilderness areas all around the globe and intended as the replacement for the horse and sled dogs, since those animals require more care and attention than a multi-fuel motorbike. Its set of flexible rubber threads that spans the bike's entire underside allows it to get everywhere, not matter how rough the terrain. Not intended for racing, even across country, the Falcon has slow acceleration and a low top speed, but can run for as long as it takes for its rider to do the rounds on their property, no matter how large.

Similar Models: Gaz-Niki Wolverine

Std. Upgrades: Tracked Vehicle, Multi-fuel Engine, Improved Economy

Bikes	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Indian Pathfinder	+2	25/40	160	1	6	6	1	—	6,000¥
Thundercloud Contrail	+1	20/40	180	1	6	4	1	—	5,000¥
Entertainment Systems Cyclops	+3	15/25	100	1	4	2	1	—	6,500¥
Horizon Doble Revolution	+3	15/25	120	1	6	6	2	4	8,000¥
Evo Falcon	0	10/30	80	1	7	7	1	—	10,000¥



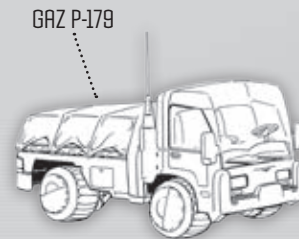
ROVER MODEL 2068



MORGAN



CITYMASTER



GAZ P-179

GROUND CRAFT VANS • OFF-ROAD

Chrysler-Nissan Jackrabbit (Subcompact)

The Jackrabbit is no longer being made in North America, but generic rip-offs (that almost always have a variation of Rabbit in their name) are produced by contract manufacturers throughout the third world despite Chrysler-Nissan's legal challenges and the occasional mysterious plant explosion. There are just too many of them on the road for support not to continue, despite Chrysler-Nissan's best efforts to convince Jackrabbit owners to upgrade to the Edge, its replacement.

Similar Models: Peugeot 112, Opel Luna

Hyundai Shin-Hyung (Sedan)

The Shin is a toy for corp youth, a car made to be modified so its owner can show off his individuality in corp-approved methods. Owners often form street racing gangs to show off just how much money they can jam into their cars. Because of its fairly impressive handling, it is often recruited by the various criminal factions as well, and several Matrix and pirate reality shows about illegal street races feature the Shin heavily.

The Shin has 4 additional modification slots for a slot maximum value of 14 (see p. 129).

Similar Models: BMW 400GT, GMC Commodore

Rover Model 2068 (SUV)

This is the high end of the Rover line. Though Rover has previously made its reputation as the ultimate wilderness vehicle, this model has performance and luxuries more in line with what one would find in an urban vehicle intended to impress the owner's friends. It has all the accessories for a trip in the wilderness, even though few of its owners ever take it there. Being far tougher than a normal vehicle with the added benefit of nobody raising an eyebrow even in the most exclusive neighborhoods, it is a shadowrunner's dream. However, they will need to get together some serious cash—this vehicle doesn't come cheap.

Similar Models: Ares Humvee Civic, Toyota Coaster

Std. Upgrades: Amenities (High), Off-Road Suspension, Passenger Protection 2, Anti-Theft System 2

Thundercloud Morgan (ATV)

The Thundercloud Morgan is intended for border patrol and other wilderness light duties. As a four-wheel all-terrain vehicle, it is a stable platform and has good off-road capabilities. The Morgan can carry two people, the second standing up behind the driver

and using an open mount weapon—this allows the vehicle to move and shoot, giving the wilderness patrols a little more punch while waiting for heavier support if they run into trouble.

Similar Models: BMW Biber, Suzuki Quad

Std. Upgrades: Off-Road Suspension, Weapon Mount (external, fixed, manual)

Ares Roadmaster (Transport)

Roadmasters are used for goods that need secure transportation, though the tradeoff is that a Roadmaster is anything but low-key. Very well armored for a vehicle that drives on public streets, Roadmasters often have firing ports so security personnel inside can shoot without exposing themselves. In addition, Roadmasters have basic life support to filter out gases that may be used to try to drive the security personnel out of the vehicle. The main problem is that, considering their armor, the hard use they are put to, and the fact that they are often overloaded in the interest of transporting high-risk goods, these vehicles have a high rate of engine burnout, slowing the vehicle even further until it manages to get into a facility and have an engine rebuild.

Similar Models: Esprit Industries Sororita, Renraku Kamekichi

Std. Upgrades: Life Support 1, Personal Armor 6, 2 Gun Ports

GAZ P-179 (Pickup Truck)

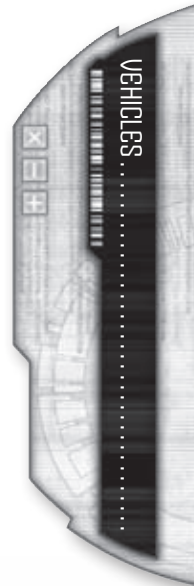
Much more a working vehicle, this is a standby for people in rural areas. It features a large flatbed to lug items around, or some models have folding seats pulled out to allow them to lug people instead. Ever since it showed up on a Matrix program featuring a hick coming to the big city and charming its tough inhabitants with his naiveté, the term "gaz" has been used to describe hicks or new fish in the city (as the opposite of "wiz," or cool).

Similar Models: Conestoga Dust Devil, Wuxing Peng You 4x4

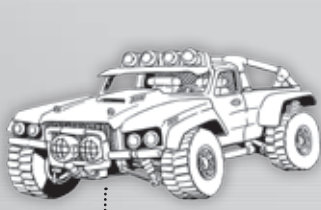
Std. Upgrades: Multi-Fuel Engine

Tata Hotspur (Off-Road Racing Truck)

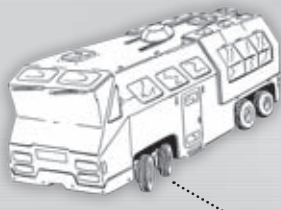
Even before the deserts Awakened, off-road racing was the most punishing kind imaginable, with less than half the trucks that started the race crossing the finish line. Nowadays, it's even worse when racing through Awakened lands of shifting geography and very hungry critters—guaranteeing high viewership and encouraging race organizers to get even more inventive of their routes. Fortunately, vehicle design has tried to keep up, since speed now counts not just toward your time but also your survival. With fully



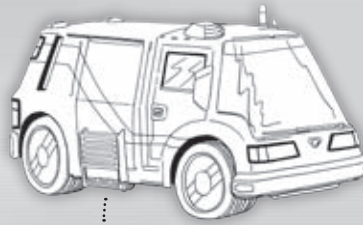
Cars	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Chrysler-Nissan Jackrabbit	0	15/35	120	1	8	2	1	—	10,500¥
Hyundai Shin-Hyung	+2	20/45	160	1	10	5	1	—	17,000¥
Rover 2068	+1	20/35	140	2	13	10	2	6	25,000¥
Thundercloud Morgan	0	15/30	120	1	8	4	1	—	7,500¥



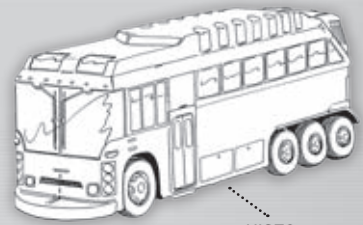
HOTSPUR



BUFFALO



HERMES VAN



VISTA

GROUND CRAFT OFF ROAD • LARGE

independent wheels mounted on individual sponsons and super heavy duty shocks so that the wheels can flex up to four feet in all directions, Hotspurs can achieve highway speeds over the worst terrain, and on the merely terrible can reach race car speeds.

Similar Models: Land Rover Impulse, SAMAG Vinnig

Std. Upgrades: Extreme Environment (Desert), Personal Armor 3, Off-Road Suspension, Engine Customization, Smart Tires

Ford-Canada Buffalo (RV)

While an RV is too conspicuous in most cities, in the wilderness it is the perfect mobile headquarters for both shadowrunners and corp security teams. With off-road capabilities and sleeping arrangements for six, it may not be able to go cross country, but it can easily manage the network of old abandoned roads that crisscross all but the most remote of areas. Because there are enough others out on the road (or off it, as the case may be), it doesn't raise too much suspicion unless it is somewhere it clearly does not belong.

Similar Models: Chrysler-Nissan Packer, EMC Prometheus

Std. Upgrades: Amenities (Middle), Off-Road Suspension

GMC Hermes Van (Delivery Van)

Numerous delivery services exist throughout the world, in many cases the only difference between them being the color schemes on the side of their vans. This is mostly because GMC has aggressively promoted the Hermes van for the turnkey delivery service business. GMC has cut down the number of employees necessary to run a delivery service by marketing a delivery van/drone combination, where each delivery van has two drone racks: the drones are dropped off at an intersection to travel the entire area dropping off and picking up packages, and then the delivery

van picks up each one after its rounds. Usually the driver is a rigger, though if this is not the case, a drone that runs into problems connects to a rigger back at an outsourced service center (owned by a corporate ally of GMC) to handle it.

Similar Models: Saeder-Krupp LT-21, Aztechnology Governor

Std. Upgrades: 2 Small Landing Drone Racks

Conestoga Vista (Bus)

Public transportation is no longer characterized by town planning or ecological considerations (if it ever was), but by the size of one's purse, as those who can afford it would never set foot into a bus. Despite security measures like planting armed guards amongst the passengers, bus-napping remains a major sport of gangs everywhere in the world. Still, when cheap workers have to be transported to their sweat-shops and back, there is nothing more suitable than a bus, so they are a very common mass product with almost unchanged design over the decades.

Similar Models: Renraku i90, VW Stadtbus

Std. Upgrades: Amenities (Squatter)

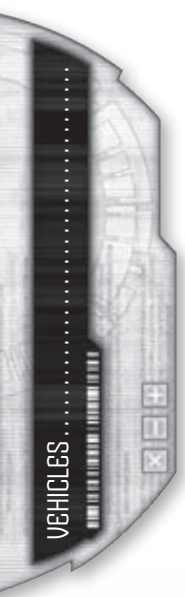
Nordkapp Zugmaschine (Tractor Trailer)

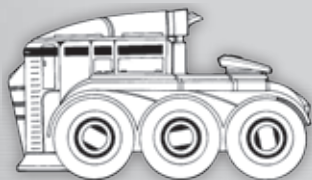
This is a large tractor trailer intended to convey low-value goods across highway systems all over the globe. Despite the lack of security, there is still a need for tractor trailer combinations since many places are not conveniently located near railroads. Many Nordkapps have been upgraded with the capability to defend themselves more aggressively, and a single driver/rigger may end up controlling a convoy of 3 tractors and 9 trailers to reduce costs. Still, no matter how little something may be worth to some, to others any cargo is worth trying to hijack.

Similar Models: Shiawase Jaianto, GMC Hauler

Trucks	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Ares Roadmaster	-1	10/30	120	2	16	16	2	4	48,000¥
GAZ P-179	-1	15/30	90	1	14	6	1	—	12,000¥
Tata Hotspur	+1	20/50	200	1	16	10	2	8	60,000¥
Ford-Canada Buffalo	-2	10/20	80	2	16	10	2	—	55,000¥
GMC Hermes Van	-1	5/10	100	2	17	6	2	8	45,000¥
Conestoga Vista	-3	15/25	90	1	20	4	1	—	25,000¥
Nordkapp Zugmaschine	-1	15/30	110	2	18	8	1	—	90,000¥
with Trailer	-3	5/20	90	2	24	8	1	—	+20,000¥

Hovercraft	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Mostran KVP-27T	+2	10/15	90	1	8	8	1	4	40,000¥





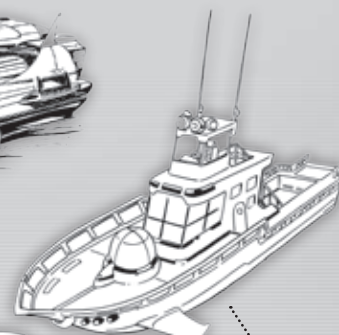
ZUGMASCHINE



BOLT



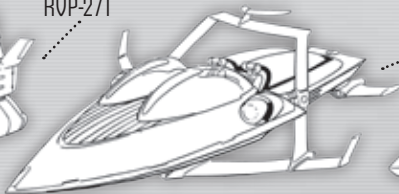
CLASSIQUE III



SPITZENREITER



KVP-27T



SYLPH



VISTA

GROUND CRAFT • WATERCRAFT

Mostran KVP-27T (Hovercraft)

Mostran has worked hard to make their vehicles the workhorses of choice, and this hover-van is their latest product. Intended to be part delivery van, part mobile store for the outbacks of the world, the hover-van uses wheels where there are roads, but when problems exist with the road it can switch to hover mode to continue on its route.

Similar Models: Mitsubishi Hebiza

Std. Upgrades: Hovercraft Upgrade (Add-on)

WATERCRAFT

SeaDoo Bolt (Water Scooter)

A one-passenger water scooter, the Bolt is mostly intended for recreational use. However, some are used as raiders, usually with a small weapon mounted on the front and riders using grappling weapons to board ships. Bolt-using pirates have to rely on numbers and weak defenses, since the small open nature of the craft leaves them highly vulnerable.

Similar Models: Kalmaar Wellenreiter, Messerschmidt-Kawasaki Aqualisk

Blohm & Voss Spitzenreiter (Utility Watercraft)

This design is very popular with independent fisherman, braving the toxicity of coastal waters and the smaller corporate fishery wardens who try to prevent others from catching the fish that they have raised in their streams. With a higher fuel reserve than other watercraft of its size, the Spitzenreiter is perfect if one wants to loiter offshore for a while or just go on a very long fishing trip.

Similar Models: GMC Outrider, Celebrian Nymph

Std. Upgrades: Additional Fuel Tank, Special Machinery (fishing nets)

Zemlya-Poltava Crest (Speedboat)

A smuggler's craft, the Crest is often built on the spot using prepared components and a hull kit and assembled with the smuggled goods built into the structure of the speedboat. The Crest is taken apart when it reaches its destination, the profit of smuggled goods more than compensating for the fact it was only used once.

Similar Models: Yongkang Gala Trinity

Std. Upgrades: Assembly Time Improvement, Smuggling Compartment

Colorado Craft Sylph (Hydrofoil)

Primarily used for racing, Sylphs are among the few craft that can catch up to speedboats. Thus, many people who want to catch smugglers—along with a few who want to avoid the law themselves—use them to intercept smugglers and seize their goods (most for legal reasons, some as a lower-cost version of “one-stop shopping”).

Similar Models: Suzuki Tsunami, Aztechnology Panther

Std. Upgrades: Hydrofoil Capability

Harland and Wolff Classique III (Yacht)

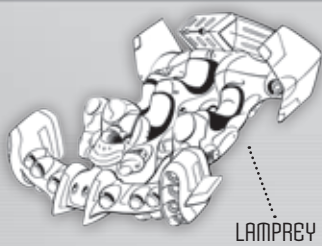
The ultimate in high-end yachts, the Classique III is mostly used for show, to serve as proof of how powerful and important the owners are to a corp. Classiques often have their own security, partially because this is one of the perks of having so much money, partially because the yachts are worth a lot on the open market (even if the owner is not on board to be ransomed).

Similar Models: Surfstar Freedom, Entertainment Systems Sunnysale

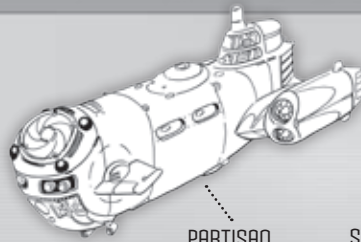
Std. Upgrades: Improved Amenities (Luxury)

Watercraft	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
SeaDoo Bolt	+2	15/25	45	2	5	4	1	—	6,000¥
Blohm &Voss Spitzenreiter	-1	10/20	40	1	16	2	2	—	22,000¥
Zemlya-Poltava Crest	+2	10/30	80	1	12	6	1	8	35,000¥
Colorado Craft Sylph	+3	15/40	100	2	8	4	1	4	40,000¥
Harland and Wolff Classique III	-1	10/25	35	2	24	8	2	12	235,000¥
Proteus Lamprey	0	10/15	35	1	6	4	1	—	14,000¥
Krasnay Sormova Partisan	-1	5/15	40	2	20	15	2	16F	650,000¥





LAMPREY



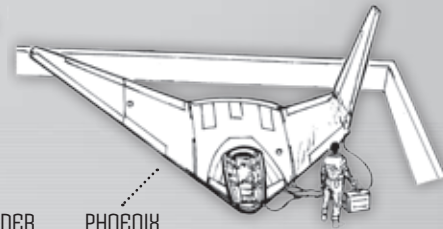
PARTISAN



SPARROW



DAWNGLIDER



PHOENIX

GROUND CRAFT OFF ROAD • LARGE

Proteus Lamprey (Sea Sled)

Intended for underwater inspection and transportation, the Lamprey has riding positions for up to four sciuba-equipped passengers. It also includes a drone rack for a single inspection drone that can easily dive deeper than the passengers to observe or recover items.

Similar Models: Kalmaar Seefuchs, Toyota TLM-2

Std. Upgrades: Ballast Tanks 1, Small Landing Drone Rack

Krasnay Sormova Partisan (Sentry Submarine)

A small submarine that comes out of the Russian shipyards, the Partisan is easily available, for they were designed to be a popular export. Partisans have a breaching airlock: an airlock that includes an adjustable docking collar to make a seal against any surface of a submerged base or even another submersible, allowing the user to employ a short-burst plasma torch to burn a new opening. The Partisan also includes temporary patch materials if the Partisan's crew wants to seal the hole as they leave, so flooding does not occur.

Similar Models: GMC Protector, Proteus Defender

Std. Upgrades: Ballast Tanks 2, Life Support 2, Special Machinery (breaching airlock)

AIRCRAFT

Lockheed Sparrow (FPMV)

While classic jetpacks are still far from mass production, the size of hoverjets has shrunk considerably. This flying personal mobility vehicle (FPMV) is considered by many to be a rich man's toy, but with the advent of AR controls and wireless transponders, flying a Sparrow around the city is not as dangerous as it once was and the price is continually dropping. Basically a human-sized frame with two vector thrust engines mounted, the Sparrow is useful for avoiding traffic and other dangers on the ground.

Similar Models: Entertainment Systems JetMan, Saeder-Krupp CV-11 Vogel

Artemis Industries Dawnglider (Glider)

The Dawnglider is used in many urban special operations. In city environments, many heat drafts exist for a glider to use, and, considering the security of many facilities, the best way to beat it is to go over it. As a result, several black ops agencies contracted with Artemis for the Dawnglider, whose design was promptly leaked onto the Matrix and thus built by several minor corps in off-book production runs for sale on the black market. It is designed to break down to fit into a large case so it can be brought into a nearby building, assembled on the roof, and from there flown to the target. The glider has a multi-part quick-release passenger sheath to help cover the passenger with its RAM (radar absorbent materials) and chameleon coating, and there are gecko grip pods so that the glider can land literally on the side of the building where there are the fewest sensors to detect intrusions.

Similar Models: Shiawase Furaisu

Std. Upgrades: Signature Masking 3, Chameleon Coating, Special Machinery (gecko grip pods)

Moonlight Aerospace Phoenix (Glider)

Used for sports in the Native American Nations, this powered glider has rapidly found a secondary market among shadowrunners. The Phoenix has a small auxiliary motor to help it find updrafts and an easy set of controls so that one can fly it with minimal skills. Shadowrunners like them for these reasons (along with their easy availability), but they are not intended for black ops, and so new owners may want to replace the brightly colored wing fabrics with more muted ones.

Similar Models: IFMU Spatz, Suzuki Wingman

MiG-67 (LAV)

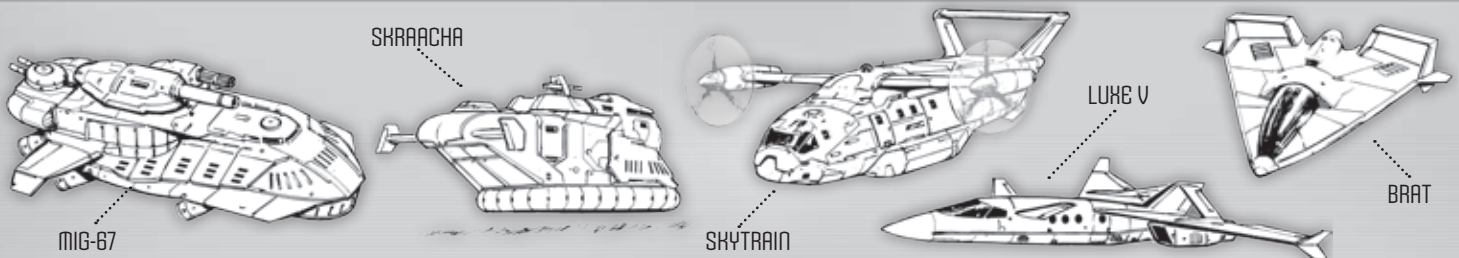
MiG was known for fighter aircraft, but they have since moved into providing reliable and robust jet aircraft through a co-production deal with Evo. They have recently entered the low-altitude vehicle (LAV) market with a design that follows in that tradition, though intended to be a transport rather than a front-line combat aircraft. MiG's open-door selling policy has made this one of the fastest growing vehicles among t-birders.

Similar Models: Esprit Industries D'Artagnan, Dornier X

Gliders and FPMV	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Lockheed Sparrow	+1	15/40	90	3	4	2	1	12R	19,500¥
Artemis Industries Dawnglider	0	10/20	60	2	6	2	1	16R	55,000¥
Moonlight Aerospace Phoenix	+1	15/30	80	1	6	1	1	6	16,000¥

LAVs	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
MiG-67	+2	50/200	800	1	18	10	2	20F	950,000¥
Cascade Skraacha	0	40/160	600	1	16	14	2	12F	475,000¥





AIRCRAFT

Cascade Skraacha (LAV)

The Cascade Orks have been trying to continue working in their traditional smuggling business while under the closer watch of the Salish-Shidhe Council, and have managed to find a good compromise. They have opened up several environmentally friendly plants to assemble small cheap LAVs for smugglers from off-the-shelf parts, as well as supplying a wide array of replacement parts. The Skraacha is intended for multipurpose use, some being pure transports while others are much more heavily armored and armed.

The Skraacha has 4 additional modification slots for a slot maximum value of 20 (see p. 129).

Similar Models: Zhejiang Shenying Industries Raptor

Hawker-Ridley HS- 950 Skytrain (Tilt-Wing Aircraft)

Considered a standard mid-range transport, most Skytrains are used for either regional passenger or transport work, though the Skytrain was originally intended for military use. As a result, switching out passenger seats for a utility floor to tie down cargo and vice versa is relatively easy, allowing owners to quickly switch modes to respond to demand. This flexibility, plus a large rear exit door, has made this the standard transport for small mercenary groups, thanks especially to its ability to carry light transports and armored personal carriers (APCs).

Similar Models: Ares TransSky, Renraku Titan

Std. Upgrades: Extra Entry/Exit Points, Improved Takeoff and Landing 2

Piper Brat (Very Light Jet)

There have always been people who wanted to own their own aircraft for perfectly reasonable and legal reasons. Shadowrunners know very few of those people, but with the advent of micro-turbines, the upper rungs of the shrinking middle class could afford a Brat, and with skill/autosofts, you no longer have to spend hundreds of hours training in order to get your flight license. However,

there are now far fewer of the small regional airports, with most of them under some form of government or corporate control. For mid- to low-level managers, those without the authority or pull to get a private jet rent a Brat to have the illusion of being important. Despite their small size and need to be heavily modified for shadow work, some smugglers swear by them because their ubiquity in the skies allows them to work in plain sight.

Similar Models: Hawker Bairn, Messerschmidt Kinder

Gulfstream Luxe V (Executive Jet)

After several corporate jets were forced down when international travel became one of the favorite times to target executives, a new generation of Gulfstreams was designed—speedier, equipped with stronger countermeasures and VTOL capacity so they can land directly at corporate sites. This way, executives do not have to entrust their security to airports or other third-party security providers.

Similar Models: Honda HA 520, Saeder-Krupp Excelsior

Std. Upgrades: Improved Takeoff and Landing 2, LockOn Countermeasure

Renault-Fiat Fokker Tundra-9 (Amphibious Jet)

Some nations have tried to control smuggling by limiting the number of airfields that can take traffic. However, there are always hidden corporate facilities and out-of-the-way military bases that need to be supplied, and VTOL aircraft lack the fuel efficiency to carry heavy supplies to these locations. But facilities also always need fresh water, and with a body of water nearby, the amphibious Renault-Fiat Fokker Tundra 9 can land. The occasional Awakened-game hunter also needs to get to the remotest parts of the world to hunt their most dangerous game and take their trophies and any survivors out.

Similar Models: Airbus JPFB-03, Toyota TX13

Std. Upgrades: Flotation

Winged Planes

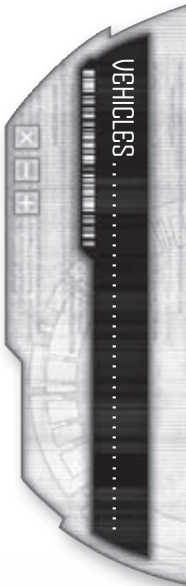
	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Hawker-Ridley Skytrain	0	30/120	550	2	30	4	2	16	1,500,000¥
Piper Brat	+1	30/150	650	3	18	6	2	16	1,000,000¥
Gulfstream Luxe V	+1	40/150	800	3	14	10	3	18	1,200,000¥
Renault-Fiat Fokker Tundra-9	-1	30/120	500	2	18	8	2	12	325,000¥

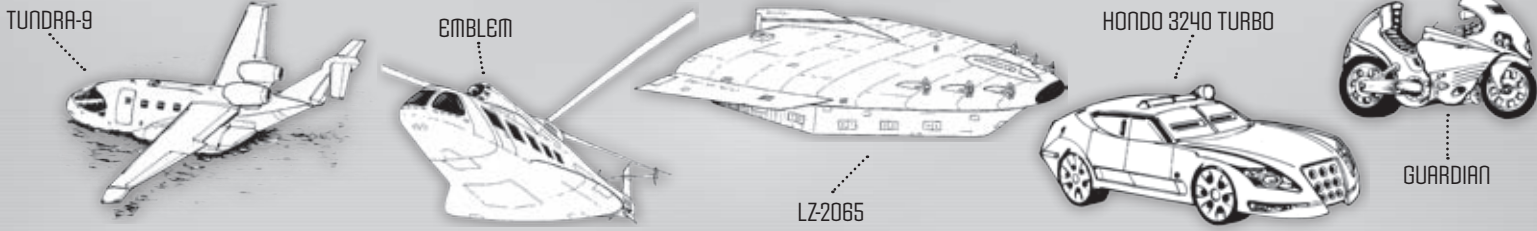
Rotorcraft

	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Mitsubishi Karura	0	10/30	100	2	12	6	2	14	200,000¥
Hughes Aerospace Emblem	-1	15/50	300	2	18	6	2	14	640,000¥

Zeppelin

	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Luftschiffbau LZ-2065	-3	5/10	30	1	36	2	2	16	800,000¥





AIRCRAFT • SECURITY CRAFT

Mitsubishi Karura (Autogyro)

An autogyro is driven by an engine-powered propeller similar to that of a fixed-wing aircraft, while being held in the air by a free-spinning rotor that turns due to passage of air upwards through the rotor (an effect called “autorotation,” that is also applied in emergency landing helicopters with engine failure). This allows for a very lightweight construction, with the only drawback that the autogyro has to maintain forward thrust in order to stay in the air. The Karura is a two-seater, driven by an electric motor hooked to a state-of-the-art SunCell system that allows it to stay in the air almost indefinitely.

Similar Models: Messerschmidt-Kawasaki Lancer, Espirit Industries Hercules

Std. Upgrades: SunCell, Improved Takeoff and Landing 1

Hughes Aerospace Emblem (Shuttle Helicopter)

One of the most recently released aircraft is the shuttle ‘copter Emblem, intended mostly for corporate use though several have been bought by short-range passenger airlines. Unlike many other chopper designs, the Emblem has been optimized for passenger use. It uses smart materials and ducted props to minimize noise even while on the ground. It includes several different internal configurations, such as the executive special, which is more luxurious and intended for a small number of passengers such as an executive and his assistants, and a strictly passenger model that is still comfortable and has a full Matrix connection so that white collar workers aboard can work even while in transit.

Similar Models: Aztechnology AZ-100, Westland Helicopters Mk. 3 Prometheus

Std. Upgrades: Amenities (Squatter, Low, Middle, or High); Amenities (Luxury) available for an extra cost of 20,000¥

Luftschiffbau Zeppelin LZ-2065 (Zeppelin)

The advantage of zeppelins is their heavy transport capacity. First seen in North America bearing MCT colors in Tsimshian, the LZ-2065 was used as a mobile mill, plucking trees from the ground to be brought up to the zeppelin and processed. They are still used in resource extraction, but they also ship very large objects and supplies across difficult terrain. A high altitude combat version was also deployed in Tsimshian, mounting laser weaponry and carrying aerial combat drones.

Similar Models: Ares InterCon, Mitsuhamma HD23i

Std. Upgrades: Lighter Than Air

MILITARY, SECURITY, AND MEDICAL CRAFT

Dodge Guardian (Police Motorcycle)

The Guardian is Dodge’s sole heavy motorcycle, intended strictly for law enforcement work. It does not have the speed and acceleration of the typical go-ganger bike, but can take more punishment. To keep track of pursued vehicles, law enforcement

usually relies on drones and aerial surveillance rather than ground assets. In many situations, go-gangers have the advantage of numbers, so the motorcycle police tend to target leaders and take them down a peg, so even if they escape arrest, they will lose face and face challenges from within the gang.

Similar Models: Suzuki Bushiken, BMW Bluthund

Std. Upgrades: Weapon Mount (internal, fixed, remote control)

General Products COP (Police SUV)

In rural areas, the COP is the standard law enforcement vehicle. It is more multipurpose than the Patrol-1, half van and half SUV, so with a little work it can be modified to carry search and rescue equipment, transport prisoners, carry gear, and with off-road capabilities it can go into the bush to track down those pesky shadowrunners who are in the area to do a smash-and-grab on some corporate property. While certainly not as tough as other vehicles that shadowrunners may face, the fact that it carries police who know the local ground better than they do is the true threat.

Similar Models: Espirit Industries Watcher, Hyundai SUV-21

Std. Upgrades: Off-Road Suspension

Lone Star Modified Honda 3240 Turbo (Pursuit Car)

No matter how logical it may be to rely on aerial pursuit and drones for high-speed chases, the sight of go-gangers and corp brat hot-rodders racing around on the streets without any challenge makes for bad news footage. To deal with this, most law enforcement agencies have at least a few high-speed interceptors to make the chase. When shadowrunners start making mincemeat of normal pursuit and no one can touch a good rigger in his own vehicle, a high-speed interceptor driven by a cop rigger may be the law’s last resort. Only minimally armed, the 3240 is intended to keep track of the opposition no matter how twisted or convoluted their escape route.

Similar Models: Eurocar Persecutor SE

Std. Upgrades: Turbocharger, Rigger Cocoon (Enhanced)

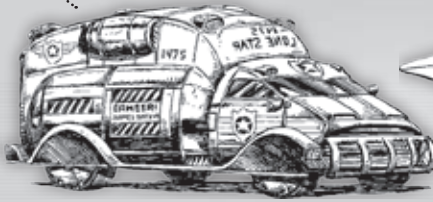
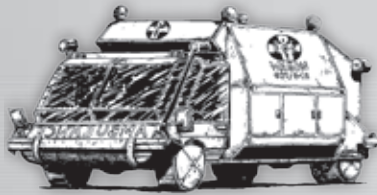
DocWagon SRT (Ambulance)

DocWagon is likely the only support that a shadowrunner can ever expect to have on a run, and even then it is the kind of support they usually don’t want to use. The standard DocWagon ambulance has the latest Valkyrie medical package installed, and sometimes the DocWagon’s version of the AutoDoc drone (see p. 350, *SR4A*). Thanks to tele-doctors and drones, the average DocWagon crew does not have to be as heavily trained as they once were. They just have to get the patient into a Valkyrie module, either in the AutoDoc or in the unit inside the ambulance, and let the doctors back at the clinic begin remote procedures to treat the patient. This leaves the medic team to handle the other part of their mission: the extraction and transportation of the patient. In the worst-case scenario, more heavily armed rescue and resuscitation teams may be called in, which then meet the ambulance crew

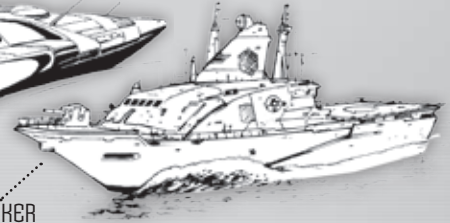


GUARDIAN

BLACK MARIAH USPTV



SEACOP



STRIKER

MILITARY, SECURITY, AND MEDICAL CRAFT

just outside the extraction area. Their first priority is to protect DocWagon property, their second priority the patient.

Similar Models: BuMoNa Rettungswagen, Aztechnology Patecat
Std. Upgrades: Large Drone Rack, Valkyrie Module

Lone Star Black Mariah USPTV (Prisoner Transport)

The standard prisoner transport has been upgraded over the years after a rash of attacks by gangs to rescue arrested members. When stolen, these vehicles make some of the best clandestine transports available. For high-value prisoners, or prisoners that have high likelihood of rescue attempts (such as go-gangers), most police forces rely on escort vehicles to provide protection rather than armoring and arming the Black Mariah.

Similar Models: Wuxing SecV Transport, Dodge APT890
Std. Upgrades: Personal Armor 5, Closed Circuit System, Life Support 2, Amenities (Middle, representing the secure lock-down of prisoners)

Surfstar Marine Seacop (Harbor Patrol)

Considering that most warehouses are owned by or rented from corps that enjoy extraterritoriality, the only way to inspect what flows into a port is to inspect ships before they dock. Though Shore Patrol once made bids to take over this duty from the Federal Coast Guard, the ability of one corp to regulate another corp on behalf of a government always has its dangers, so federal and/or local officers use Seacops to board and inspect ships. However, considering the tonnage that goes through most modern ports, only a small fraction of the ships and their cargos get inspected.

Similar Models: Fiat-Renault Gillette, Messerschmidt-Kawasaki HaborSentry
Std. Upgrades: Heavy Weapon Turret, ECCM 3

Celebrian Striker (Patrol Corvette)

Rather than harbor patrol, the Striker is intended to be more of a threat and capable of independent action. The craft has a moderate amount of firepower, but is well armored so that it can survive long enough to bring in air support for larger threats. Though they do not normally carry choppers, Strikers can recover and launch them, and they frequently carry a selection of drones—usually a pair of aerials, one VTOL for close work and one longer-range version to keep an eye further out and examine ships before they close. In addition, Strikers usually carry at least one submersible drone, so those who think they can pass the border security underwater are disappointed.

Similar Models: Shiawase Shirohana Class, Ares LC-100
Std. Upgrades: Improved Sensory Array, 2 Large Landing Drone Racks (one on deck and one underwater), 3 Weapon Mounts (two heavy turrets and one depth charge dispenser), LockOn Countermeasure, ECM 5, ECCM 5

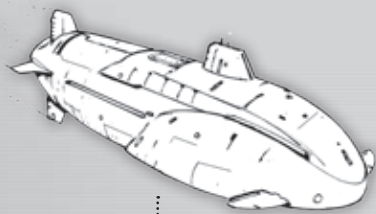
USS Boston Class (Patrol Submarine)

Recent advances in pressure hull metallurgy and bubble fusion power plants have allowed the production of the Boston Class, with submarines of the class all named after a UCAS state capital. It is a small patrol sub, rather than the larger multipurpose attack subs that were the previous norm, used to patrol submerged sea lanes and for corporate surveillance. The Boston Class is used primarily by governments, and while it is a small submarine with a crew of just 15, it is still a large threat, armed with torpedoes, sea drones, a deep diving capacity, and a wide array of surveillance abilities.

Similar Models: Imperial Kongogawa Class Submarine, Saeder-Krupp 321-C
Std. Upgrades: Ballast Tanks 2, Life Support 2, 2 Large Landing Drone Racks, 2 Large Weapon Mounts (torpedo launchers), Signature Masking 2

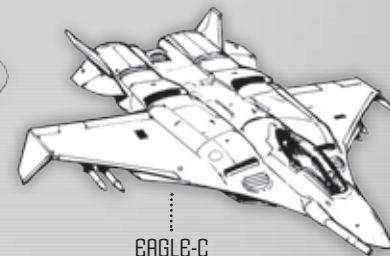
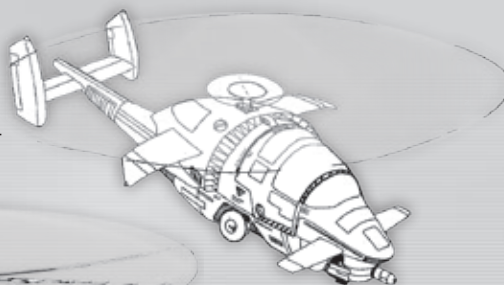
VEHICLES

Military, Security, and Medical Craft	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Dodge Guardian	+2	20/35	100	2	8	10	2	8R	14,000¥
General Product COP	+1	10/35	120	1	12	12	3	6R	18,000¥
Lone Star Mod. Honda 3240	+2	20/50	220	2	9	6	1	14R	107,500¥
DocWagon SRT Ambulance	+1	20/40	150	2	14	10	2	12R	65,000¥
Lone Star Black Mariah	-1	5/25	100	1	15	15	1	18R	55,000¥
Surfstar Marine Seacop	0	10/20	60	1	14	14	2	12R	24,000¥
Celebrian Striker	-2	10/20	50	1	30	20	3	26F	2,200,000¥
USS Boston Class Patrol Sub	-2	5/15	70	2	30	20	3	30F	29,000,000¥
DocWagon CRT Helicopter	0	25/60	340	3	20	10	2	20R	1,310,000¥
Northup Yellowjacket	0	15/30	130	2	10	8	2	12F	122,000¥
Aztechnology Aguilar-GX	+1	15/60	400	2	16	16	2	20F	1,800,000¥
Federated-Boeing Eagle-C	+2	60/240	1200	3	20	12	3	26F	10,000,000¥

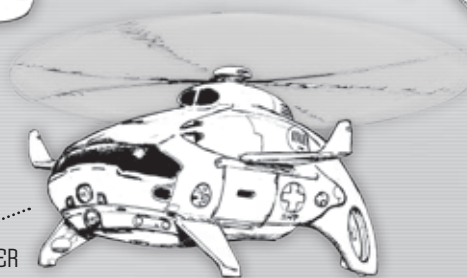


BOSTON CLASS

YELLOWJACKET PRC-44T

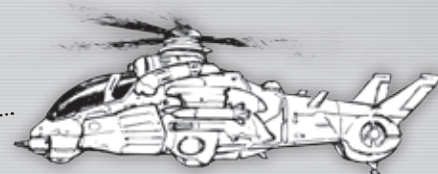


EAGLE-C



CRT HELICOPTER

AGUILAR-GX



AIRCRAFT • SECURITY CRAFT

DocWagon CRT Helicopter (Medical Helicopter)

DocWagon promises medical assistance in all but extraterrestrial zones, so they have to move out to areas both remote and difficult to reach every once in a while. For this occasion Hughes manufactures, exclusively for DocWagon, a specialized medevac helicopter carrying two Valkyrie modules and air drones in order to secure the area. As those units are faster and more heavily armed than the on-the-ground ambulances, they are also often the first to appear in HTR (high threat response) situations

Similar Models: Shiawase Kyuukyuu Mk.2

Std. Upgrades: 2 Large Drone Racks, 2 Valkyrie Modules, Weapon Mount (internal, fixed, remote control)

Northup Yellowjacket PRC-44T (Military Helicopter)

The military version of the Wasp, the Yellowjacket is a small chopper designed for area denial rather than high-intensity combat. It lacks the heavy protection or weapons to take out armored vehicles, but used in pairs can it easily take out drones and light armor used to support infantry units, leaving the infantry easy marks for follow-up attacks from others. If shadowrunners are the types to use multiple and/or military drones, and are near a military base or a remote corporate facility, the most common response is a Yellowjacket, usually with its wireless network sealed so hackers won't be able to stop it.

Similar Models: Toyota-Singarms Kaitou, Dornier XU12

Std. Upgrades: Weapon Mount (internal, fixed, remote control)

Aztechnology Aguilar-GX (Attack Helicopter)

Aztechnology is moving toward their next-generation attack helicopter, and thus Aguilars are finding their way into many state and urban agencies, especially along the Rockies where the game of choice is t-birds. As military craft don't expect to spot one in urban areas, but it has become the bane of smugglers and runners who managed to anger a government or corp with large military assets.

Similar Models: Messerschmidt-Kawasaki Gargoyle, Eurocopter Tiger

Std. Upgrades: Personal Armor 3, 3 Weapon Mounts (external, remote-controlled; one turret under the helicopter's nose and two wing-mounted, fixed hail barrage rocket launchers), ECM 4, ECCM 4

Federated-Boeing Eagle-C (VSTOL Fighter-Bomber)

This VSTOL fighter-bomber is the standard militia aircraft used for interception of airborne threats, or when a military unit has run into trouble that they can't handle themselves. With its VSTOL capacity, many Eagles operate from dispersed airfields, which can essentially be any flat area with a trailer of supplies, so that the aircraft are not clustered together at one location. That means one can be only five minutes away, waiting for an alert. Still, these are considered overkill against shadowrunners and are more appropriate for mass smuggler breakouts or for delivering a pointed message across the border to another country.

Similar Models: Lockheed A-3100, Saeder-Krupp Augentöter

Std. Upgrades: Improved Vertical Takeoff and Landing 1, Personal Armor 5, Weapon Mount (internal, fixed, remote control), Ejection Seats, ECM 4, ECCM 4

DRONES

Stonebrooke Smokecloud (Wheeled Distraction Microdrone)

Despite its name, the Smokecloud does not actually carry a smoke dispenser—still, its mission is that of a real smoke cloud, to discourage and delay pursuit. Its speed is rather low, but a high gear ratio and large wheels make sure that it will get where it needs to be eventually. Once it has moved or being placed into its intended position, it can be activated to use its distraction equipment: a firing mechanism with high velocity rounds capable of mimicking any firearm currently on the market, from small holdouts to large assault cannons, and a speaker system to create the impression of a large body of soldiers. Due to its small size, its duration is only about 10 minutes, but within this time window it can create

Microdrones	Handl	Accel	Speed	Pilot	Body	Arm	Sens	Avail	Cost
Stonebrooke Smokecloud	+1	2/10	10	3	0	0	2	14R	1,500¥
Toyota MK-Centipede S&R	+1	2/10	10	3	0	1	1	4	1,000¥



DRONES

enough noise to masquerade as a whole combat platoon, belligerent and armed to the teeth.

Similar Models: Esprit Industries Smartie, Shiawase Kagemusha
Std. Upgrades: Special Equipment (distraction equipment)

Toyota MK-Centipede (Search and Rescue Walker Drone)

Centipedes are the current standard for search and rescue drones. Each drone is less than a foot long, working in large networks of tens or hundreds to scurry through wreckage looking for survivors or evidence of the cause of a disaster. To protect them from fire or caustic liquids, they are heavily armored, though they are virtually useless in combat situations because of their slow movement. Once a drone has found something, it will call the rest of the drones of its network. Once there, adaptors at both ends of each Centipede allow them to dock and lock into each other, greatly enhancing their strength in lifting wreckage, bracing walls, and freeing those buried.

The basic STR of a single Centipede is 0. When physically joined, the network's overall STR is equal to the number of Centipedes locked together (max. STR 10) for lifting, bracing and rescue purposes only.

Similar Models: NeoNet MRS-1000
Std. Upgrades: Special Armor Modification (Chemical Protection 4, Fire Resistance 4, Insulation 4), Walker Mode

Ares Helmdall (Drone Missile)

The Heimdall is thought to be the ultimate choice in guided missile technology, replacing a missile's complicated guidance system with a rigger module. The system is centered around an air breathing missile that can be fired from a standard rocket launcher. Once launched, a small airfoil unfurls to extend the range, with the drone gliding, then turning its engine on to gain altitude then gliding again. This allows for an operation time of up to 18 seconds—enough time to get the lay of the land and determine the tactical positions of the opposition, before crashing into a target chosen by the rigger.

The Heimdall's main advantage as an attack weapon is that the metahuman mind is not as easily spoofed by countermeasures as an electronic brain, while the main drawback is the high speed that overtaxes everyone but the fastest riggers, so its main field of application remains short-term reconnaissance in combat situations where a slower-moving drone would be shot down.

The Heimdall has a very limited maneuverability. Once fired, it moves with a speed of anywhere between 2000 and 3000 meters per Combat Turn (about 200 to 300 km/h) and can turn

up to 30 degree per Combat Turn. Its maximum operation time is 6 Combat Turns. It can be equipped with an Anti-Vehicle (+1,000¥), Fragmentation (+500¥), or High Explosion (+750¥) missile warhead (p. 325, *SR4A*).

Similar Models: Saeder-Krupp KSR-6, Evo Nightbird

Bust-A-Move (Toy Walker Drone)

MCT's Bust-A-Move is a typical toy drone. A singing and dancing little plush doll, it was first being hyped as the hottest toy of last Christmas, only to be pulled from the stores at the height of the shopping season. The reason behind this was not to raise demand as everyone thought, but because several mall-gangs discovered you could hack the dolls through the wireless connections that allow them to download new dance routines, and turned them around to conduct robbery sprees inside the stores, later meeting their accomplices outside a ventilation opening to hand over the goods.

Other very common toy drones are *Best Friend Puppets* with limited movement capabilities designed for little children. They can talk with them, tell them bedtime stories, and keep them company while mommy and daddy are busy working for the corporation. They also monitor the behavior of the child and are equipped with a panicbutton that opens a direct wireless connection to the parent.

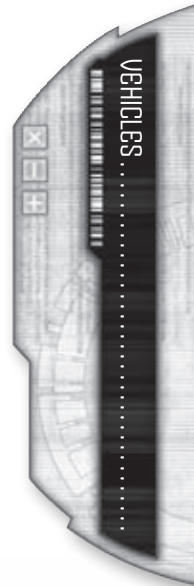
Similar Models: Captain Nova, Transmorphing Space Ninjas
Std. Upgrades: Walker Mode, Special Equipment (cute looks)

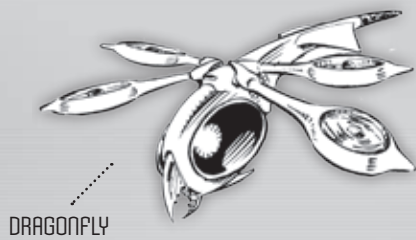
Cyberspace Designs Dragonfly (Aerial Hunter-Killer Minidrone)

As the number of drones has proliferated, so have the solutions to deal with them. Today there is a growing number of mini- and microdrones used in surveillance and reconnaissance, so there needs to be appropriate countermeasures. This is where hunter-killer drones come into play. Where normal sized combat drones are too large and cumbersome to follow the smaller drones into the nooks and crannies they travel through and would cause too much collateral damage using standard weapons, a hunter-killer drone is small enough and perfectly equipped to hunt down and destroy other drones of its size.

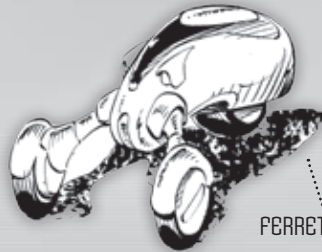
The Dragonfly is about as large and looks very similar to its natural counterpart, though true insect flight is still not technically possible, so instead of wings it is equipped with vector trust propellers. It relies mainly on its ultrasound sensor to spot its prey,

Minidrones	Handl	Accel	Speed	Pilot	Body	Arm	Sens	Avail	Cost
Ares Heimdall	+1	special	3000	3	1	1	2	14F	1,500¥
Bust-A-Move	0	3/10	10	2	1	0	1	—	350¥
Cyberspace Designs Dragonfly	+1	3/15	30	3	1	1	2	12R	2,500¥
Ferret RPD-1X	0	10/20	60	3	1	2	3	8	3,000¥

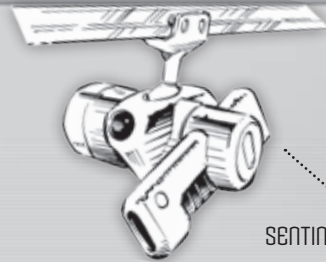




DRAGONFLY



FERRET RPD-1X



SENTINEL "R" SERIES

DRONES

though other sensor setups are possible. Once an enemy drone is in its sight, it closes in to pluck it from a wall or out of the air with its claws and shreds it to pieces with its set of vibro-blade pincers.

Lately, hunter-killer drones are also being used in defeating drones and other vehicles larger than themselves by attacking in swarms. In order to do so, they need specialized *anti-vehicle weaponry*, usually comprised of micro-welders to slowly work their way into the vulnerable inside. Another strategy has been to pack them with C-12, latch onto vulnerable parts of an enemy vehicle and go *bang!*

Hunter-killer drones are also suitable in fighting metahumans, though relatively expensive when compared to their damage output. However, they have successfully been used as assassin drones, sneaking into their enemy's sleeping quarters to inject poisons or cut their target's throats.

The Dragonfly is equipped with Targeting (Close Combat) 4 autosoft. The standard version has a DV of 5 (AP 0) against mini- and microdrones and a DV of 1 (AP +1) against other targets. The anti-vehicle version has a DV of 3 (AP -1) against vehicles (including mini- and microdrones) and a DV of 1 (AP+1) against other targets. The C-12 version uses the stats of a High Explosive grenade (one use only).

Similar Models: Mesametric Tekkei-050, Renraku Yokujin

Std. Upgrades: Improved Takeoff and Landing 2, Special Machinery (minidrone weaponry, see description)

Ferret RPD-1X (Wheeled Perimeter Drone)

Different models of Ferrets have now been used as perimeter drones for over a decade. Designed as a low-profile observation drone, some versions come equipped with small weaponry, usually consisting of non-lethal weapons like a pain inducer or taser. Ferrets are intended to supplement or replace random guard patrols on the exterior and interior of light or medium security facilities, so they are built around a decent sensor package. If they ever attack by themselves, the idea is usually to delay intruders long enough to allow a more forceful response or to swarm them with multiple Ferrets, and while a prepared intruder can laugh off a stun gun hit, being hit by a dozen at once can take down even a troll.

Ferrets also have the advantage that they have been around for many years. Dozens of variations have been produced for military, security, and even home markets. So while the most updated models may not be available, older ones are, often at bargain prices. With most of the changes to the Ferret being internal, a favorite tactic has been using it as a trojan horse. Shadowrunners interested in learning more about a target send in a Ferret whose exterior has been modified to match the target facility's style and colors, so that security personnel and employees consider it one of the facility's own Ferrets and ignore it, which allows it to penetrate all but the most secure areas.

The Ferret has 4 additional modification slots for a slot maximum value of 10 (see p. 129).

Similar Models: NeoNet Janus, Aztechnology IDS

Std. Upgrades: Improved Sensory Array

Ares Sentinel "R" Series (Rail Sentry Drone)

The new "R" series is a special security and defense system hardened against wireless intruders due to the fact that the rail drones are controlled via contacts in the rail system. In order to seize control over the drones, a potential hacker has to first get into physical contact with the rail and then hack into its heavily encrypted control system. Other advantages of rail drones are their unlimited operation time and the fact that they can fire even the heaviest weapons without suffering from any recoil, while their huge drawback is of course that they are fixed to their rail system, so they are mostly used as last lines of defense in combination with other means of security.

Similar Models: Saab-Thyssen Vollautomatisches Abwehrsystem Mk.2, Renraku Toubentsukai

Std. Upgrades: Track Propulsion, Weapon Mount

Aztechnology Armadillo (Aerial EW Drone)

An EW (electronic warfare) drone has the single purpose of disrupting enemy lines of communication. In order to do so, the Armadillo is equipped with two high-performance jammers: one directional jammer for offensive purposes and one area jammer for a more defensive approach. As it has to move into or past the enemy lines, it is equipped with all kinds of defensive systems, including heavy armor, a coating of radar-absorbent materials and state-of-the-art ECM. The original design used by the Aztlan government is a highly priced item that hardly ever gets into the hands of shadowrunners, but there is an affordable, down-powered version available on the black market, based on plans that were "found" by CAS intelligence services and leaked to various pirate engineering sites.

Similar Models: Gaz-Niki JammStar, MCT Shinobi

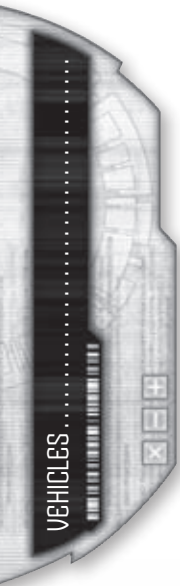
Std. Upgrades: ECM 3, Signature Masking 3, Special Machinery (Area Jammer 4, Directional Jammer 3)

Entertainment Systems Falcon (Aerial Pet Drone)

Pet drones are a special version of toy drones, designed to look and feel exactly like real pets—including needs like walking, feeding, and excretion (which can thankfully be turned off if necessary). Though they have received some heavy competition from virtual pets, they are still highly sought after by customers who want something "real."

Most common versions of pet drones are aquarium fish, parrots, guinea pigs, cats, and small dogs, but there are also many exotic versions around, as there are no limits to their appearance. The only limitation so far has been the movement capabilities—while walking animals show an almost perfectly real movement pattern, one of the greatest challenges so far has been to create a pet drone capable of flight (though parrot drones with amazing speech capabilities have been around for a long time, they all lacked the ability to fly).

Entertainment Systems has picked up the gauntlet and recently announced the release of its new line of Falcon drones, which not only look and behave like falcons but also move through the air like





DRONES

real birds. Due to their complex make-up, they are hand crafted, very expensive, and promoted as a status symbol of the rich for use in their falconry sports. Like gene art (genetically modified pets), they are highly prized objects fated to provoke shadowruns. The basic technology of their flight may finally make ornithopters a reality—a dream of aerial technologists who are more romantic than sensible.

The Falcon's stats and cost are meant for aerial pet drones. For walking pet drones, use the toy drone stats and modify the Acceleration and Speed values to fit those of the relevant pets, and increase the cost accordingly. Modifying a pet drone is very difficult without harming its realistic appearance and their unique form of movement—the gamemaster has a last say in what goes and what doesn't.

Std. Upgrades: Improved Takeoff and Landing 2

GMC Sandal (Wheeled Delivery Drone)

A common delivery drone, the Sandal is often partnered up with the GMC Hermes delivery van (p. 110). It is basically a moving box with wheels, capable of carrying up to ten standard delivery packages. Once the drone is dropped off by the van at a location, it follows the directions on the tagged packages, and then asks for biometric data from the personnel authorized to receive them. Once the identity is confirmed, the Sandal opens the compartment for the package, so it can be taken out. At this time it can also accept new packages by reading the tags of any packages placed inside it. There is an internal hopper to keep the packages out of the dispensing compartment until the Sandal is at the address. The packages are safe from being casually removed, though the drone is not heavily armored, so anyone determined and equipped with proper tools can crack it open. If that happens, or if it is delayed, the Sandal contacts first the van driver then the delivery company's on-call riggers to handle the situation. The fact that the drone is relatively weak means that it is intended for secure areas, so Sandals are not seen in Z-zones and do not usually carry anything really valuable, though because no one actually expects a Sandal to carry valuables sometimes people use it exactly for that reason.

Similar Models: Saeder-Krupp Lieferdrone-4, Aztechnology Mule
Std. Upgrades: Special Machinery (package delivery/retrieval system)

Knight Errant P4 (Wheeled Pursuit Drone)

A fast-moving wheeled drone, the Knight Errant Pursuit drone is intended to shadow criminals and other targets of Knight Errant. Another common use is in high-speed chases, where it releases from a pursuit vehicle's drone rack, accelerates ahead of the target, and dispenses a road strip to stop the fugitive. One variation has the P4 get underneath the target vehicle and latch a signal feed onto it. The feed taps into the vehicle's network (and possibly the passenger's PANs), so that KE hackers can find out about them and their employers before taking measures that may leave the targets without the ability to talk afterwards.

Similar Models: Cyberspace Designs Hornet F21, Suzuki HP-2000
Std. Upgrades: Road Strip Ejector

Modified GMC Chariot (Disguised Combat Drone)

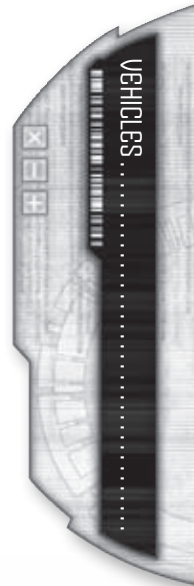
The Chariot was GMC's standard delivery drone before it was replaced by the GMC Sandal. As they were replaced, some ingenious shadow mechanics devised plans on how to rebuild parts of the now plentiful drone to turn it into a combat drone that still looks like the harmless, everyday delivery drone, and distributed those plans via various shadow networks. While not as effective as a real combat drone, the modified Chariot has the element of surprise on its side, which is the preferred choice on most shadowruns.

Various other plans on how to turn harmless service drones into fierce weapons can be found in the Matrix, so with a little bit of searching on the black market you should be able to find exactly what you need for any given infiltration job, or do the modifications yourself (see *Visibility*, p. 147).

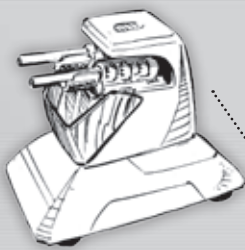
Std. Upgrades: Weapon Mount (concealed, fixed, remote control)

Transys Steed (Wheeled Personal Mobility Drone)

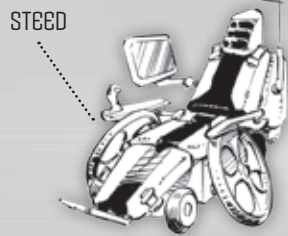
The Steed is the drone version of a powered wheelchair. It includes a joystick on the armrest for manual control, but is usually controlled by a drone autopilot to transport handicapped persons. Its lightweight construction allows it to be folded away and stored in a small compartment, and it is equipped with smart tires (p. 106), allowing it to move up and down stairways.



Small Drones	Handl	Accel	Speed	Pilot	Body	Arm	Sens	Avail	Cost
Ares Sentinel "R" Series	0	5/10	40	3	2	6	2	4R	2,000¥
Atztechnology Armadillo	0	5/15	50	3	2	6	3	12F	20,000¥
Entertainment Systems Falcon	+2	5/30	70	3	2	2	1	16	59,000¥
GMC Sandal	0	10/25	60	2	2	4	2	4	3,500¥
Knight Errant P4	+1	20/50	180	3	2	2	3	10R	8,000¥
Modified GMC Chariot	0	10/25	40	3	2	2	2	8F	4,800¥
Transys Steed	+1	10/20	40	3	2	2	3	—	4,000¥



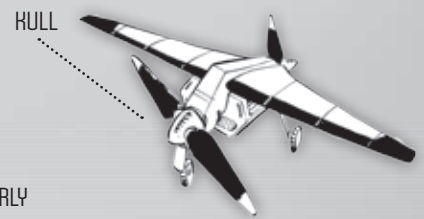
CHARIOT



STEED



ORDERLY



HULL

DRONES

While mostly in use for patients who are unable to walk or unable to manually control a standard wheelchair, the Steed has also become popular with shadowrunners—namely astral projecting magicians and VR-using hackers—who would otherwise be unable to keep up with their team. Another application seen in the field has been the transportation of wounded runners or tranquilized prisoners. When not being used as a wheelchair, the drone can fold its seat away and be used as a basic recon drone or to carry items.

Similar Models: Shiawase MX-2, MCT Wheelchair-PMD

Std. Upgrades: Assembly Time Improvement

Evo Orderly (Med-Assistant Humanoid Walker Drone)

During the early years of the twenty-first century, civil unrest, catastrophes, and diseases took a severe death toll around the globe. As elderly people were among the most frequent victims, the population went back to a somewhat pyramid shape, even in western civilized countries. The only country that remained almost unharmed because of social unity and a high security standard was Imperial Japan, where as a direct result the population pyramid turned almost upside down. The Japanacorps, build on strong family bonds where one lives and works for the corp for a lifetime, had to find a way of providing solid yet inexpensive elderly care that would not turn their employees against them.

Yamatetsu was one of the leading Japanese megacorps at the time, perfecting a solution using drone med-assistants. The Orderly has sensitive touch feedback systems to assist fragile elderly, and a built-in medkit to dispense medications as needed. If problems arise, a rigger switches control of the drone to an offsite doctor so that a single doctor can be on-call for hundreds of patients simultaneously. The rigger himself does not need any medical knowledge, instead relying on the drone's medical database until an ambulance can take the elderly to a hospital.

Similar Models: MCT PersoAid, Shiawase MedBot

Std. Upgrades: 2 Mechanical Arms, Special Machinery (Medkit 6), Walker Mode

Federated-Boeing Kull (Aerial Recon & Supply Drone)

The Kull is a mid-sized aerial drone equipped with sensors to scan the surroundings as well as exterior cargo mounts that allow it to airdrop small supply containers. While its transport capacity is

not sufficient for an efficient re-supply of remote facilities, it is large enough to carry out the supply role for wilderness expeditions or long running recon missions. This allows the personnel on the ground to move fast and unhindered while receiving the supplies and equipment needed at the exact time when they are needed. Instead of heavy armor, the Kull relies on speed and stealth to cover its comings and goings, and can drop its supplies from any height necessary.

Similar Models: Saeder-Krupp Bussard, Esprit Industries Recon-TF1

Std. Upgrades: Special Cargo (2 exterior airdrop cargo mounts), Signature Masking 1

Ford LEBD-1 (Aerial Law Enforcement Backup Drone)

In an ever-increasing effort to stretch law enforcement resources, there has been a surge in the use of police drones, typically coupled with car patrol units, usually mounted in a drone rack in the back of the car. The Ford LEBD-1 is equipped with a weapon mount intended for a stun weapon or—when used by riot control units—a grenade launcher loaded with gas grenades.

The main purpose of the LEBD is to act as an additional set of eyes and ears for the police. With a video camera and facial identification software (see p. 61), it can scan crowds and match faces to any outstanding warrants, or look for the SINless where they don't belong. Equipped with two handcuffs, it can also serve to escort prisoners, capable of conduct a stunning electrical discharge through the cuffs if the prisoner decides to be a problem. It also helps the LEOs fill out the routine paperwork so that they can spend more time on the streets being a presence to deter crime and respond to calls. When the assistance of a crime scene specialist is required, he can jump into the drone to gives an on the spot appraisal of the situation, along with evidence recovery.

Similar Models: Shiawase Keisatsu 33v, Cyberspace Designs Owl

Std. Upgrades: Mechanical Arm, Weapon Mount (external, fixed, remote controlled), Improved Takeoff and Landing 2, Special Machinery (2 handcuffs)

Mitsuhama Akiyama (Cyborg Walker Assassination Drone)

Developed as an ideal form for cyborg assassins (see Cyborgs, p. 158, *Augmentation*), the Akiyamas lightweight humanoid frame is designed for infiltration. To a casual observer, they are proportioned to appear as a small child, though closer observation will

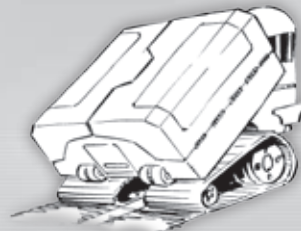
Medium Drones	Handl	Accel	Speed	Pilot	Body	Arm	Sens	Avail	Cost
Evo Orderly	0	5/20	40	3	3	3	2	4	2,000¥
Federated-Boeing Kull	+1	30/150	300	3	3	0	2	4	10,000¥
Ford LEBD-1	0	5/20	80	3	3	6	3	6R	4,500¥
Mitsuhama Akiyama	+3	5/15	40	—	4	4	4	24R	250,000¥
Mitsuhama Otomo	+1	5/15	30	—	6	0	3	24R	150,000¥
Renraku Manservant-3	0	5/15	15	3	3	0	2	—	2,500¥



LEBD-1



MANSERVANT-3



AUXILIA MK3

TOWER



DRONES

quickly reveal that their appearance is decidedly inhuman. These drones possess no facial features and their limbs are designed for ease of motion, not for a metahuman appearance. Akiyungs rely heavily on their chameleon coating to blend into the background, and travel lightly armored with a minimum of weapons.

Std. Upgrades: Chameleon Coating, Cyborg Adaptation, Gecko Tips, Walker

Mitsuhama Otomo (Cyborg Anthroform Walker Drone)

First appearing in 2065, the Otomo remains the most common model for full-body cyborgs (see p. 158, *Augmentation*). Each Otomo is custom built with a unique appearance and designed to replicate the look of a specific metatype and sex. They are most commonly used as high-profile bodyguards, personal assistants, and pleasure drones by those with extensive resources. These drones are capable of wearing and using most gear designed for a metahuman of their model type.

Similar Models: Evo Consort, Monobe Mimic

Std. Upgrades: Cyborg Adaptation, Mimic, Touch Sensors, Walker

Renraku Manservant-3 (Humanoid Walker Household Drone)

It seems that Renraku learned from the mistakes that led to their Arcology disaster. Most of their household drone lines took a dive after reports about what really happened inside the arcology leaked out, so they reinvented their whole household drone line, now relying on weaknesses and limitations instead of strengths and capabilities. The Manservant is a humanoid walker drone made to look slightly smaller than the average human and showing a humble posture. It is limited to a slow walking speed by the design of its leg joints, so that any ambulatory person can outrace it. Its hand and arm strength is on the lower end of human average, but it can lock its arms and lift with its legs to obtain a higher lifting capability as a human, while still being unable to strongly strike. It also cannot use its leg strength offensively, with hip joints designed to prevent it from kicking. To suit even higher needs of security, the Manservant-3 sold in Seattle and other parts of North America is also equipped with a shut down button built whose location is adjusted to fit the owner's desires. By hitting it, the drone shuts down. With another press, the standard panicbutton function kicks in and calls the local law enforcement with the code for a possible rogue drone.

This way of "putting a human face onto drones" and reassuring the owners of their safety has proven quite successful around the world, especially in Japan, the country with the highest household drone ownership in the world. Another advantage of the Manservant is its capability of working around the clock doing domestic tasks, such as laundry, cleaning, food prep, and so on, without ever getting tired or worked up. Manservants are also quite quiet, so they can continue to work even while the owners sleep.

Similar Models: MCT Housekeeper, Saeder-Krupp Heimdrone

Std. Upgrades: 2 Mechanical Arms, Walker Mode

Ares Auxilia Mk3 (Tracked Military Backup Drone)

Military backup drones like the Auxilia have become a common sight in modern combat units. They are large, heavily armored, and intended to perform backup duties for combat platoons. Not armed themselves, they leave the battle to be fought by the soldiers, while being capable of transporting heavy weapons, ammunition, and equipment in armored bins, to reduce the weight carried by each individual soldier, thus enhancing the mobility of the whole platoon.

Similar Models: GM-Nissan Morlock, Shiawase Kei

Std. Upgrades: Special Storage (armored bins), Tracked Vehicle

GTS Tower (LTA Carrier Drone)

The GTS Tower runs double duty as a retrans unit to extend the reach of drone/wireless networks and a carrier for micro- and minidrones. Large, slow, and only lightly armed, the lighter-than-air Tower depends on escort drones for its protection, while carrying a large body of minidrones (usually hunter-killer drones) into combat.

Similar Models: FMC-Stonebrook Recon Zeppelin, Cyberspace Designs Nexus

Std. Upgrades: Multilaunch Drone Rack, Weapon Mount (external, flexible, remote control), Lighter Than Air, Retrans Unit (Signal Rating 6)

Lockheed Vulcan (Wheeled Maintenance Drone)

The Vulcan is a typical maintenance drone that can be used for all kinds of upkeep work while the flesh-and-blood mechanics focus their experience on more difficult tasks. Intended for the dangerous work environment of an airfield, it is more robust than a typical maintenance drone, which makes it perfectly suited for the types of dangerous situations shadow mechanics often find themselves in. Its Aeronautics Mechanic 3 autosoftware can easily be replaced with other autosoftware to perform any maintenance work imaginable.

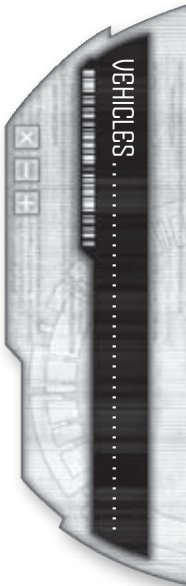
The Vulcan is optimized to work on Lockheed's own products and receives daily product updates as part of an off-site maintenance contract that Lockheed often sells with its aircraft and drones. In case of complicated or unusual repairs, Lockheed can arrange for one of their experienced engineers to jump into the drone via Matrix.

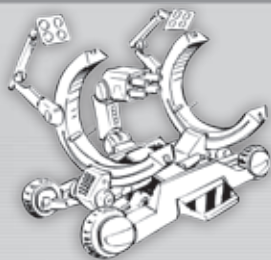
Similar Models: NeoNet Paddy, Saeder-Krupp Wartungseinheit

Std. Upgrades: Mechanical Arm, Fuzzy Logic, Special Machinery (Aeronautics Mechanic Toolkit)

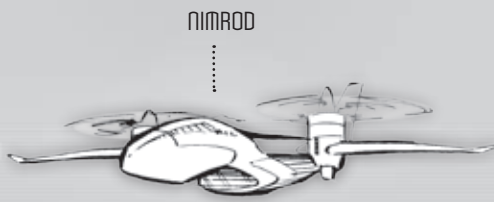
McDonnell-Douglas Nimrod (Aerial Combat Drone)

The McDonnell-Douglas Nimrod is the latest in a long line of aerial combat drones. While the first aerial drones were fairly small, a rapid increase of size meant that the average aerial combat drone was too large for individual use. The Nimrod returns to the smaller size philosophy, and has tilt-wing VTOL capacity so it can be utilized from any location. Designed as on-demand air support for forward operating troops, the usual payload is a single internal LMG loaded with armor piercing rounds intended to kill enemy drones, along





VULCAN



NIMROD



BEAVER

DRONES

with a multi rocket launcher to take out reinforced positions and other lightly armored opposition that ground units may face.

The Nimrod's setup also allows it to be used in dog fighting, and several smugglers' LAVs have added Nimrods to their drone repertoire to deal with their vulnerability to other flying craft. By launching a Nimrod, the LAV evens the odds and if nothing else gives it time to lose pursuers. Another use has been to prevent aerial piracy by having an aircraft carry Nimrods inside portable drone racks disguised as faux long range fuel tanks, deploying it to surprise attackers.

Similar Models: MCT-Nissan Hellcat, Aztechnology Silent Serpent
Std. Upgrades: Improved Takeoff and Landing 2, 2 Weapon Mounts (internal, fixed, remote control)

Mesametric Beaver (Walker Construction Drone)

The Beaver is a construction drone capable of working 24-7, without needing rest or complaining about hard or dangerous tasks. As agile and sturdier than the average metahuman construction worker, it has become a common sight at construction sites that need work to be finished as soon as possible. The downside is that despite being of tough design, the Beaver needs constant maintenance and replenishment of its energy resources and is not as adaptable as a flesh-and-blood worker. The best solution would be to pair the both of them, but having the drones "working like beavers" tends to provoke a lot of anger from the rest of the workers, so "accidents" happen more frequently in mixed construction work than on a drones-only construction site. On the other hand, a site run by drones only is a hacker's dream, because given enough time and resources, he can turn the whole working squad around to blow the whole site sky-high.

Similar Models: GTE-Ford Hercules, Saeder-Krupp Ameise
Std. Upgrades: Mechanical Arm, Special Equipment (Construction tools), Walker Mode

Mitsuhama Tomino (Cyborg Walker Combat Drone)

The Tomino drone is built for the sole purpose of high-threat combat. It is specifically designed to enter extremely dangerous

situations where metahuman discretion is also required. While still humanoid, a Tomino cannot pass for metahuman. They are much bulkier than even a troll in full military grade armor. When traversing unstable surfaces, these models must take care to allow for the fact that they weigh in excess of 250 kilograms. While capable of melee combat, they are not well suited for it. Instead, they prefer to rely on their firearms whenever possible. Tominos follow all of the rules given for full-body cyborgs (see p. 158, *Augmentation*).

Similar Model: Ares Madcat

Std. Upgrades: Body Stabilizer (2), Cyborg Adaptation, Nanomaintenance System (2), Touch Sensors, Walker

Saeder-Krupp Mk-17D Neptune (Submersible Recon Drone)

The size of a normal combat torpedo, the Neptune is intended for use with submarines that cannot go into shallow waters. Originally intended for deep-water nuclear submarines, which needed to avoid coastlines for fear of losing their stealth, the submersible drone would close in to either observe or drop off sensor packages to maintain surveillance. Several models have been used in minesweeper missions, but the level of control needed for those operations becomes a problem. While older models have ended up in private hands, the demand for them is simply not there because the ability to control a drone underwater is limited, for emanating a signal to control it, or any signal at all, is verboten in submarine operations. Some corporations use Neptunes as security for araquacologies and floating bases, where broadcasting a signal is not dangerous because the underwater facilities themselves are not hidden.

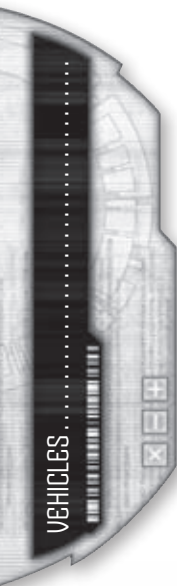
Similar Models: Proteus Tieftaucher, Shiawase Suredo

Std. Upgrades: Ballast Tanks 2, LockOn Countermeasures

Saeder-Krupp Schildkröte (Hazmat Drone)

With rising pollution of the environment around the globe, the demand for effective cleanup tools is high, and hazmat (hazardous material) drones have proven to be the best choice. The

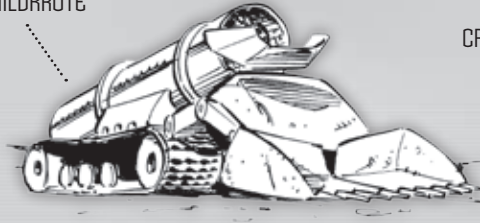
Large Drones	Handl	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost
Ares Auxilia Mk3	-1	10/30	50	3	4	12	2	10F	8,000¥
GTS Tower	0	10/30	120	3	4	2	3	12	25,000¥
Lockheed Vulcan	-1	5/15	30	3	4	4	2	4	6,000¥
McDonnell-Douglas Nimrod	+2	40/200	800	3	4	8	3	18F	75,000¥
Mesametric Beaver	-1	5/15	15	3	4	8	1	—	4,000¥
Mitsuhama Tomino	+2	5/15	35	—	10	10	3	24R	350,000¥
Saeder-Krupp Mk-17D Neptune	-1	5/20	30	3	4	12	3	10	22,000¥
Saeder-Krupp Schildkröte	-1	5/20	40	3	4	6	2	10	8,000¥
Wuxing Crimson Samurai	+1	15/30	100	3	4	12	3	10R	9,500¥



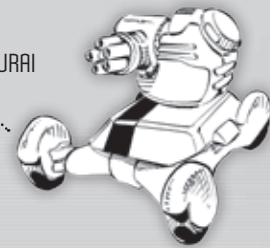


NEPTUNE

SCHILDKRÖTE



CRIMSON SAMURAI



DRONES

Schildkröte (“turtle”) is the pinnacle in a long ancestor line of Saeder-Krupp hazmat drones that has proven itself in various tasks like the reclamation of the SOX radioactive zone, the drowned and heavily polluted areas of the United Netherlands, and so on. Much of the equipment used in cleaning up hazardous material is also used in explosive ordnance disposal, so these drones are often used for both these tasks.

Schildkröte drones are among the largest drones being built, but considering the amount of earth that needs to be removed for these jobs that is no surprise. These drones also have chemical protection to ensure contaminants do not remain in their bodies. The standard model has a pair of fully articulated arms so it can use any tool without requiring further modifications. Many tools will have to be disposed of after use since they are so contaminated that using normal tools keeps costs down.

There is a smaller, less common version often used in urban areas when the contaminated area is smaller, such as a single building. In those cases a hose, tank, and siphon are added, with the hose used to direct chemical solutions to neutralize contaminants, and the tank used to store the residues that the siphon recovers for further treatment and possibly recycling.

Similar Models: Wuxing CleanBot, Ares CVC-1

Std. Upgrades: 2 Full Mechanical Arms, Special Armor Modification (Chemical Protection 4), Special Machinery/Storage (hazardous material handling)

Wuxing Crimson Samurai (Wheeled Centauroid Combat Drone)

Wuxing’s line of Samurai security drones is marked by a very distinctive look: a four-wheeled framework with a turret design that vaguely looks like a samurai’s armored torso with one arm made up by a weapon system. This half-humanoid setup is called “Centauroid” because it looks remotely like that of a centaur.

The Samurai look is intended both as a psychological intimidator and as a direct challenge from Wuxing to the Japanacops—and Renraku specifically. The most successful model in the line is the surely not ironically named “Crimson Samurai” and intended for combat rather than patrol purposes. When these appear at a facility, a fight is going to break out soon.

The Crimson Samurai is equipped with a weapon turret that usually holds a light machine gun with underbarrel grenade launcher, with the grenade launcher having the option to select from different feeds ranging from tear gas to anti-vehicular high explosive. The weapon system can be swapped with various other setups—favorite replacements include a Panther XXL, intended to deal with intruders in full tactical armor, or a sniper rifle to allow extremely distant shots.

Similar Models: Ares Centaur, FMC-Stonebrooke Warrior

Std. Upgrades: Weapon Mount (external, remote-controlled turret)

VEHICLE WEAPONS

Unlike the other weapons listed in *Arsenal* and in *SR4A*, the weapons listed here are not intended for use by even the strongest metahuman, either because of their size, bulky support equipment, or massive recoil. Instead these weapons are meant for installation aboard vehicles only. For details on how to install weapons on vehicles, see the Weapon Mount entry of the Gear and Vehicle Modification chapter (p. 126).

MAIN GUNS

Unless otherwise noted, all of the following weapons can be installed into Fixed Weapon Mounts or Heavy Turrets (p. 144).

Ares Firelance Vehicle Laser: The latest incarnation of the vehicle-borne laser, the Firelance guzzles power while offering the ultimate in silent vehicle killing, as the laser is tuned to the non-visible spectrums of light so that there is no flash to determine where it is fired from. Use the rules for laser weapons (p. 41). The Firelance uses sniper rifle ranges, with an extended Extreme range limit of 10,000 meters, and draws 10 power points per shot. A standard vehicle can recharge one power point every six seconds, presuming that it is recharging no other equipment at the same time. This weapon can be installed into flexible weapon mounts (see *Flexibility*, p. 147) if the vehicle setup allows for it.

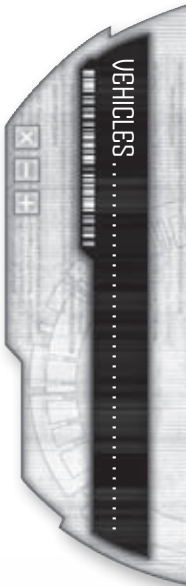
Ares Fogger Glop Cannon: When the goal is to not merely drive protestors away, but contain them for later questioning, a glop cannon is used. It fires large globs of freeze foam (p. 82) that harden within seconds to hold the targets in place. This cannon uses submachine gun ranges.

Aztechnology Itzcóatl Gauss Cannon: This large gauss cannon is used almost exclusively onboard ships where firing it takes a substantial percentage of the ship’s power. Considering the range of the projectile, the round has a guiding mechanism in the form of fins that adjust its trajectory. The cannon uses assault cannon ranges, but extend the Extreme range limit to 50,000 meters. All armor but smart armor is reduced by half against the gauss cannon (before applying the AP modifier).

Fleche Hail Barrage Rocket Launcher: The military application of this rocket launcher is the saturation of an area in order to destroy everything within. In order to do so, the launcher is capable of firing its whole magazine within a few seconds, if necessary.

Use the range and rules of rockets (p. 325, *SR4A*). Firing the hail barrage requires a Complex Action. Roll a separate to hit roll for each rocket fired. All targets must be within 50 meters of each other. For every rocket after the first that is fired in the same Complex Action, a cumulative dice pool modifier of -2 is added to the to-hit roll. This weapon can be installed into flexible weapon mounts (see *Flexibility*, p. 147) if the vehicle setup allows for it.

GE Vigilant Light Autocannon: Similar in concept to the GE Vindicator, this weapon is designed to shred light vehicles and



aircraft and is often used as the primary weapon on infantry fighting vehicles, LAVs, and attack helicopters. Use the ranges for heavy machine guns and rules for miniguns (p. 30). In full burst mode (see p. 154, *SR4A*), multiple targets can be hit if they are within two meters of each other. This weapon can be installed into flexible weapon mounts (see *Flexibility*, p. 147) if the vehicle setup allows for it.

GE Vanquisher Heavy Autocannon: This large autocannon is primarily used as a secondary weapon on ships or as a main weapon on tankbusters and is built out of advanced ceramics to handle the massive amount of heat that the weapon generates. Use the ranges for heavy machine guns, but double the Extreme range limit to 2,400 meters. Use the rules for miniguns (p. 30). In full burst mode (see p. 154, *SR4A*), multiple targets can be hit if they are within two meters of each other.

GM Light Cannon: A light cannon is the traditional armored fighting vehicle weapon, using a high-density round with a large amount of propellant behind it to do its damage. Not an exotic weapon by any stretch of the imagination, its simplicity means that it is employed in many military vehicles around the globe. Use the assault cannon range table.

GM Heavy Cannon: The weapon of choice for main battle tanks, this heavy cannon doesn't have to rely on a power array or be limited to just a few missiles, yet it is capable of wrecking even a heavily armored vehicle with just one shot. Use the assault cannon range table, but double the Extreme range limit to 3,000 meters.

Lone Star FlashFlood Water Cannon: Intended to break up riots and demonstrations, a vehicle with a water cannon needs to carry a large water tank, but it is the traditional weapon to break up protests. While it is low tech, injuries resulting from it do not even rate a mention on Matrix news updates. The water cannon uses SMG ranges. Treat as a full auto weapon that can only fire long bursts.

Shiawase Microwave Cannon: These devices are used as crowd control weapons when water cannons have been drained, haven't been effective, or there are no news agencies to worry about. Use the rules for the Fichetti Pain Inducer (pp. 319, *SR4A*), but with a Power of 12, full auto capacity (narrow bursts raise the Power), and SMG ranges. The power use for a standard shot is 2 power points, modify that as necessary dependant on the mode it is being used at. For instance, a long burst normally consists of 6

bullets, so in this case firing the microwave cannon on long burst would consume 12 power points. A standard vehicle can recharge one power point every 6 seconds, presuming that it is recharging no other equipment at the same time.

Microwave cannons have been known to detonate some types of explosives, causing permanent collateral damage. If a target glitches on the Damage Resistance Test, any explosives he carries may detonate.

S-K Taurus Light Gauss Cannon: This vehicle-mounted gauss cannon uses a magnetic pulse to propel a ferrous projectile at multiple times the speed of sound, making it the ultimate armor-penetrating weapon. Use assault cannon ranges, but extend the Extreme range limit to 5,000 meters. Halve all but smart armor, then apply the AP modifier.

Winter Systems Mercury Ship Laser: The ultimate in shipborne weaponry, the Mercury allows a ship to hit anything it can see without warning (assume a distance to the horizon of about 15 kilometers in naval warfare). While having enough power to dazzle or even damage satellites, its main weakness is that many ships are required to engage over the horizon, as lasers lack the ballistic ability to follow the curve of the earth.

Use the rules for laser weapons (p. 41). The Ship Laser has Sniper Rifle range with an extended Extreme range limit of 200,000 meters (reduce its Damage Value by an additional 1 for every full 20,000 meters of extreme range) and draws 25 power points per shot.

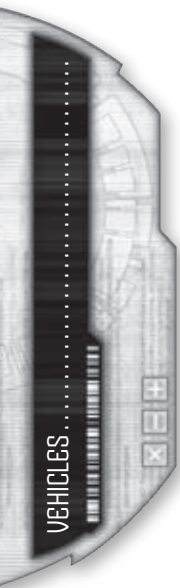
LAUNCH WEAPONS

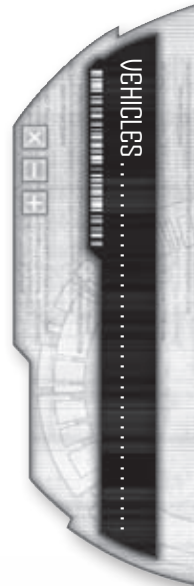
The following weapons are large, self-propelled projectiles that can be fired from specialized launch platforms or released from the wings of aircraft. The maximum Sensor rating for all guided weapons is 6.

Aztechnology Series 5 Iron Bomb: This unguided gravity bomb seems like a relic from the previous millennium, but still has its value for small-budget warlords and mercenaries around the globe. The bomb itself is made up of explosives wrapped in a thin metal shell with gliding fins, but without any other electronic equipment or guidance system. The advantage is that once released from the wing or body of an aircraft, it can only be stopped by brute force.

Weapon Name	Damage	AP	Mode	Blast	Ammo	Avail.	Cost
Ares Firelance Vehicle Laser	12P	-half	SS	—	100*	25F	400,000¥
Ares Fogger Glop Cannon	Special	—	SA	—	50(belt)	15R	10,000¥
Aztechnology Itzcóatl Gauss Cannon	18P	-10	SS	-2/m	50(belt)	30F	600,000¥
Fleche Hail Barrage Rocket Launcher	Rocket	Rocket	Special	Rocket	20	25F	20,000¥
GE Vigilant Light Autocannon	8P	-4	FA	—	200(belt)	15F	5,000¥
GE Vanquisher Heavy Autocannon	11P	-6	FA	—	200(belt)	20F	20,000¥
GM Light Cannon	13P	-6	SA	-1/m	50(belt)	18F	50,000¥
GM Heavy Cannon	17P	-8	SS	-1/m	50(belt)	22F	100,000¥
Lone Star FlashFlood Water Cannon	8S	-half	FA	—	200(belt)	10R	5,000¥
Shiawase Microwave Cannon	Special	-half	SS	—	100*	20R	25,000¥
SK Taurus Light Gauss Cannon	14P	-8	SS	-2/m	50(belt)	25F	200,000¥
Winter Systems Mercury Ship Laser	16P	-half	SS	—	1000*	30F	1,000,000¥

* This is the amount of power points the weapon has available if not supported by an external power source. If supported by such a source, its ammo capacity is limited only by the power output of that source.





The bomb is aimed with the Exotic Ranged Weapon (Bombing) skill and has a scatter value of 8D6 meters – 5 per net hit. A parachute version for low-altitude bombing (so the aircraft has time to steer away from the blast) is also available for the same price.

Cardeon Mark 78 Torpedo: This is the military standard torpedo of the 70s with a range in the tens of kilometers. It requires a large torpedo launcher (see p. 145). Use the missile launcher range table, with the Extreme range limit extended to 25,000 meters.

Espirit Corail Depth Charge: The oldest and most primitive method of dealing with submersibles, this weapon is also very effective against frogmen due to the percussive effect of underwater explosions. On the other hand, it is also difficult to aim at deeper targets. It can only be used by surface marine vessels and air vehicles. The depth charge is aimed with the Exotic Ranged Weapon (Depth Charge) skill and has a scatter value of 8D6 meters – 5 per net hit.

Mitsubishi-GM Outlaw: The warheads (blocks) of this multi-purpose missile can be easily swapped depending on the mission. It has been upgraded over the years to remain both on the cutting edge of technology as well as easy to maintain. Use the missile launcher range table, with the Extreme range limit extended to 5,000 meters. Exchanging a warhead requires a Logic + Armorer (5, 1 minute) Extended Test.

Block I is an area-effect weapon that releases a series of bomb-lets which explode simultaneously, bathing the area of effect with a continuous blast. Similar to the flash-bang grenade (pp. 324, *SR4A*), the Damage Value remains the same within the whole area of effect.

Block II is a variation of Block I. Instead of dropping bomb-lets, it spreads camouflaged mines to create a minefield with a radius of 20 meters.

Block III is a smart anti-tank weapon that relies on a target library to aim at the weakest spot of a vehicle. Each remaining hit after reducing scatter to zero (p. 155, *SR4A*) raises the DV as usual and also improves the missile's AP by 1 point per remaining hit.

Block IV is a variation of Block III with the additional effect of seeking out enemy sensor emissions, forcing its targets to turn

off their sensors or risk being destroyed. Use all the rules of Block III. Additionally, if the target is using active targeting (p. 171, *SR4A*), its Sensor rating is added to the missile's Sensor rating for the attack.

Block V is a dual-purpose missile with the ability to choose which effect will be maximized when launched. The explosive core is surrounded by layers of memory metal, whose bonds can be weakened in midflight to achieve a fragmentation effect or strengthened to achieve a high explosive result.

Block VI is an air-to-sea version that flies up to 5,000 meters close to the waterline before releasing a torpedo with a maximum undersea range of another 5,000 meters.

Mærsk Fiske Supercavitating Torpedo: On the cutting edge of torpedo technology, this short range torpedo is very fast. It is essentially a rocket engine exuding gases from the tip to form an air pocket that allows the rocket propulsion to function underwater. While next to impossible to miss it on the sensors, the speed of the torpedo makes it difficult to avoid. Use the missile launcher range table.

Proteus AG Piranha Mini-Torpedo: Mini-torpedoes are the weapon of choice for patrol boats and other small craft that have to rely on their own armament to stop underwater intruders. It requires a small torpedo launcher (p. 145). Use the missile launcher range table.

Saab-Saaker AIM-27 Sparrow Hawk: Designed to intercept and destroy both high-speed aircraft and other missiles, the AIM-27 (Aerial Intercept Missile) is often used as a long-range option to protect valuable targets or property from air raids. It is also the weapon of choice among the nations of the Rocky Mountains to stop t-birds from violating their borders. A variant of the Sparrow Hawk can be launched from submarines that are close to the surface, with the Sparrow Hawk packed in a buoyant container that, once fired from a torpedo tube, rises to the surface and launches. Use the missile launcher range table, with the Extreme range limit extended to 10,000 meters. Against ground targets the missile is far less effective, reducing its DV to 16.

Missile Type	Damage	AP	Blast	Avail	Cost
Aztechnology Series 5 Iron Bomb	22P(f)	0	-2/m	12F	400¥
Cardeon Mark 78 Torpedo	16P	-4**	-2/m**	25F	4000 + (400 x Sensor Rating)¥
Espirit Corail Depth Charge	12P	-4**	-1/m**	10F	800¥
Mitsubishi-GM Outlaw	As Block	As Block	As Block	15F	1,000¥
Block I	16P	-2	20m Radius	25F	2,000 + (500 x Sensor Rating)¥
Block II	16P	-2	20m Radius	25F	8,000 + (500 x Sensor Rating)¥
Block III	18P	-2/-6*	-4/m	25F	4,000 + (600 x Sensor Rating)¥
Block IV	18P	-2/-6*	-4/m	28F	4,000 + (800 x Sensor Rating)¥
Block V (Fragmentation)	16P(f)	+3	-1/m	25F	4,000 + (500 x Sensor Rating)¥
Block V (HE)	16P	-2/-6*	-2/m	25F	4,000 + (500 x Sensor Rating)¥
Block VI	16P	-4**	-2/m**	25F	6,000 + (500 x Sensor Rating)¥
Mærsk Fiske Supercavitating Torpedo	12P	-4**	-2/m**	24F	10,000 + (500 x Sensor Rating)¥
Proteus AG Piranha Mini-Torpedo	8P	-4**	-2/m**	12F	1,000 + (400 x Sensor Rating)¥
Saab-Saaker AIM-27 Sparrow Hawk	22P	-2/-6*	-4/m	30F	8,000 + (500 x Sensor Rating)¥

* vs. people/vs. vehicles

** The AP and Blast values given are meant for airborne explosions. The shockwave of undersea explosions travel much farther and have a much more dramatic effect on armor (see *Underwater Combat*, p. 171).

... GEAR & VEHICLE MODS ...

A hard push on her back sent Turbo Bunny stumbling to the floor. Her head was still covered, her commlink disconnected, and she had no idea where she'd been taken since they grabbed her outside her garage while she was distracted by the calming feedback of her med-chip.

She remained there briefly, then was lifted up. Even though she braced herself for the inevitable brightness when her hood was removed, she still squinted. Her eyes immediately tracked to the equipment that surrounded her, most of which she could identify even in the dimness of the unlit warehouse. There was the tracking emitter from an F-B Eagle, cargo pods from a Kull, cans of RAM paint with Japanese labels, Lone Star drone launchers, boxes of turbine parts with coarse finishes that marked them as pirate manufacturer knockoffs, and in the back, something she had only seen online: an Ares Firelance.

Then her eyes stumbled on Stanley, and her forming thoughts fled.

Stanley was a pudgy ork with an affection for retro suits and an ever-present smile on his face. Especially, she remembered, when she used to get her BTL fix from him directly, after her cred got so bad she had to pay in person.

"Bunny, Bunny! You never call, you never message ..."

She tried to give him a smile, though she knew it came out sickly—and not just because she hadn't finished her full med-chip ride. "You know Stan, I've, uh—"

"Plus, you are now using really inferior product." He held up her med-chip. Her eyes tracked it instantly. It was too much like one of her old BTLs.

"Stannnnlleyyy ..." she whined, hating herself for doing it, knowing that she would hate herself more if she slotted anything else.

"You know," Stanley sauntered into the dimness of the warehouse, threading between the scattered items. Bunny let herself be distracted for a moment as he passed a Gaz truck with a real NeoNET shop forge on the back. "I don't really care what you use. I mean, new chipheads are slotting every day."

She almost recoiled when he stepped into her face. "What I do care about, is when people owe me cred."

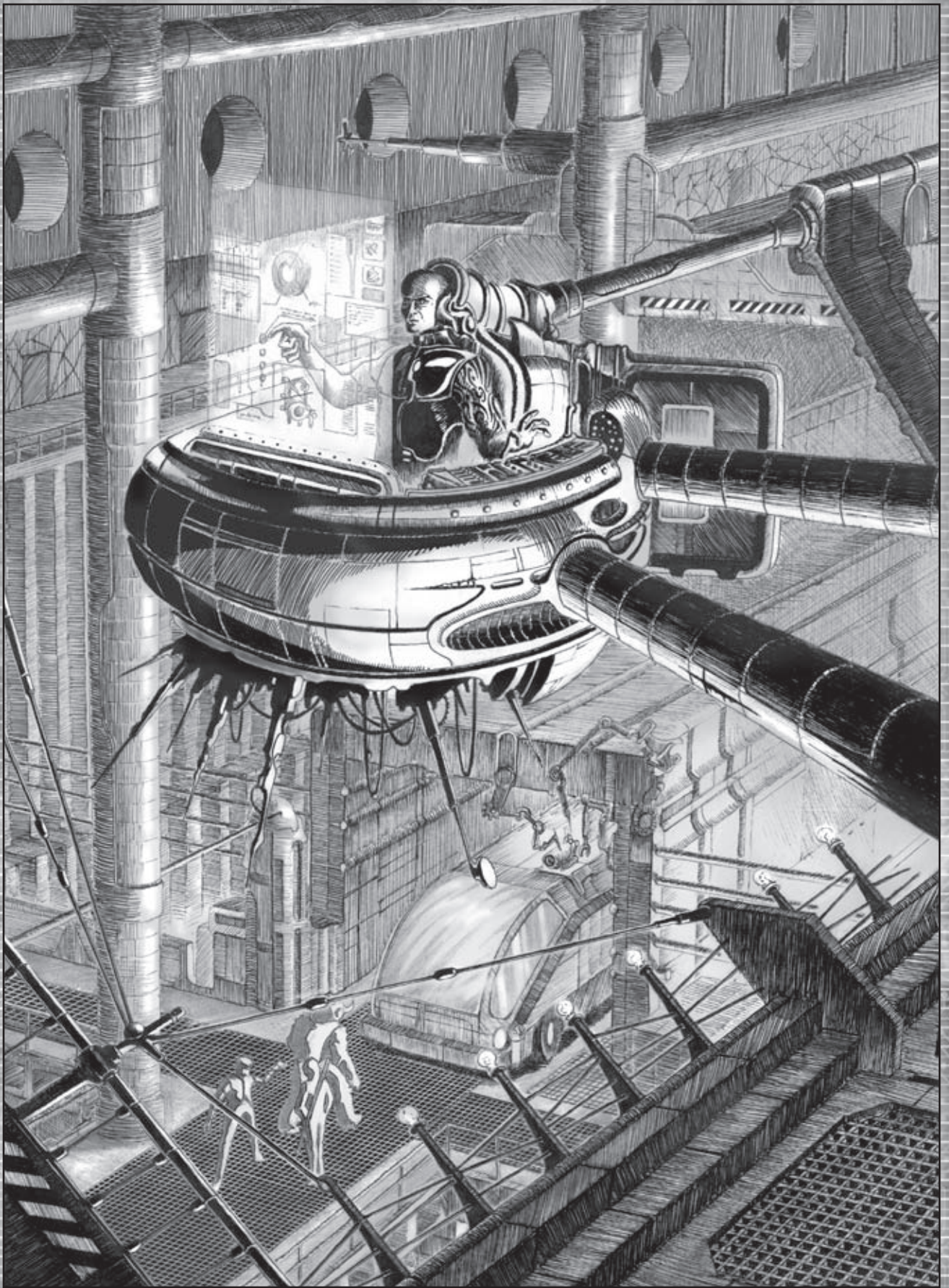
Bunny's mind blanked. "Stan, I don't remember. I was pretty far gone toward the end. I, I don't have much ..."

The hard derm of his skin scratched her cheek, in a caress. "Bunny girl, you still have something, something even the chips didn't take away."

The lights stabbed on in the warehouse, almost forcing her to turn away. Almost. But she had finally seen it.

"A MiG-67, marked down as 'defective,' then accidentally shipped here." Stanley kept on talking, describing how he wanted her to turn that thing of beauty into something even more. Bunny was already looking into the future, how to make it happen, and was unconsciously straining against her bonds to begin.

It wasn't until a few days later she realized she hadn't felt the need for any chip, therapeutic or otherwise, since she began.



BASIC MODIFICATION RULES

The street distinguishes those who are satisfied with what they can get via mail-order from those who are never satisfied with standard design—the latter being those who always have their gear in the shop, trying to squeeze out that last bit of efficiency before the whole thing blows up in their faces. As they work their way up the food chain, sooner or later the player characters will find themselves a part of this second group. Using the rules in this chapter, they'll be able to get the special, tailor-made equipment they're longing for. In the era of ultra-enhanced materials and ARAD (Augmented Reality Aided Design), virtually any combination of modifications is theoretically possible, but as always there are limitations on what is actually affordable and possible with the skill level of the person doing the job.

All modification rules given in this book are based on the same basic principles. In order to modify a piece of equipment, a character needs the object itself as well as the plans, materials, and tools necessary to perform the modifications. Then he needs to roll an Extended Build/Repair Test using an attribute + skill appropriate to the type of equipment he is modifying. If he rolls a critical glitch on the Extended Test, the modification fails. Otherwise, the modification is successful once he has accumulated the specified number of hits. For an explanation of the Build/Repair Test, see p. 138, *SR4A*.

While the modification rules always work the same way, the modification process itself can be very diverse, ranging from re-chambering a pistol to take a different caliber to making a custom ram for your truck out of an old snowplough. Some modifications are available as kits, with all the materials and instructions coming in one pack, while others are completely custom jobs (like the paint job on your pimp-mobile). In fact, not one modification is the same as any other modification, and the gamemaster and his group can go to any level of complexity when it comes to describing the acquisition of parts and implementation of one's ideas. When it comes down to the rules, however, we suggest you use what is presented here and modify the dice rolls as you see fit.

The rules presented below are specifically designed for weapon and vehicle modifications, but they can also be applied to any sort of gear modifications (such as armor or commlinks) if the gamemaster so desires.

THE PLAN

In order to begin a modification, the character needs a building plan—a document (usually digital) with step-by-step instructions—to get an idea of what needs to be done. Characters can obtain plans from the Matrix using a Browse + Data Search Extended Test with an interval of 1 minute and a threshold equal to the threshold of the modification test (see below). The cost of the plans is up to the gamemaster, but certain open source or pirated plans might be found for free if the character looks in the right place. A character can also try to get a plan with good old-fashioned legwork (see *Swag*, p. 287, *SR4A*). Characters can throw some money around to speed up the plan acquisition, using the same rules as given under the Availability Test (p. 312, *SR4A*).

Characters can also specifically search for an AR-based plan that makes use of the augmented reality environment. When using an AR plan, instead of having to deal with large paper blueprints, the mechanic simply inserts the data directly into his commlink and displays three-dimensional images that can be superimposed over the piece of work. AR-based plans also include audio commentaries by other mechanics who have done similar modifications. This helps to speed up the modification process and make it less hazardous, because the mechanic can spot difficult obstacles well ahead of time and find solutions to certain problems by simulating them before the work on the real piece even begins. A character using an AR plan receives a bonus on the modification roll (see below). Looking for an AR plan adds +4 to the threshold of the search.

For some obscure or highly illegal modifications, plans may simply not be available. In this case, or if the character fails to turn any plans up or simply wants this to be a DIY job, he can attempt to create his own plan. This requires an Extended Test using Logic + an appropriate Knowledge skill with a threshold equal to the threshold of the modification test (see below). The interval for this plan design test is up to the gamemaster, based on the complexity of the modification. It could be hours (test threshold 4), days (threshold 8), or even weeks (threshold 12). If the character is breaking ground with a never-before-seen design of immense complexity, it could even take months. Plans created on one's own cannot be AR plans (but once applied in practice, the character can record his efforts and construct an AR plan for future use).

If a character does not have the time or the means to obtain or create a plan before starting the modification, he can go ahead without the plan, relying solely on his basic knowledge and experience. In that case, he doesn't receive the dice pool bonus for plans (see the Build/Repair Table, p. 138, *SR4A*), but apart from that he should be fine in most cases. The exception is if the modification consists of special or difficult work, in which case the gamemaster can rule that it cannot be done without a plan.

MATERIALS AND TOOLS

The materials necessary to do the job are represented by the cost and availability values of the modification, as outlined in the modification description. To acquire the materials, the character has to buy them as he would buy any other item, following all the necessary steps (pp. 312, *SR4A*).

In order to perform the modification, a character also needs the relevant tools (pp. 332, *SR4A*). Depending on the type and overall difficulty of the job, the character will need a kit, shop, or facility of the relevant skill. Each modification

MODIFICATION BY THE NUMBERS

1. Look up the modification description (pp. 131–148).
2. Get a plan (p. 128).
3. Obtain the necessary tools and materials (p. 128).
4. Roll the Extended Modification Test (p. 129).

description specifies which of these is required. If the necessary tool is not available, the modification suffers an Inadequate or Unavailable tools modifier (see the Build/Repair Table, p. 138, *SR4A*), which may mean that the modification cannot be done.

THE MODIFICATION TEST

All modification tests are Extended Tests based on the Logic attribute + the relevant skill. The relevant skill for firearms and weapon modifications is Armorer, while for vehicles it depends on the vehicle type (Aeronautics Mechanic, Automotive Mechanic, or Nautical Mechanic). The threshold for the modification is listed in the modification description, or determined by the gamemaster (see the Extended Test Difficulties Table, p. 64, *SR4A*). The interval is also determined by the gamemaster, using the same table. We recommend a fixed interval of 2 hours for weapons/firearm modifications and 6 hours for vehicle modifications.

Apply all appropriate modifiers from the Build/Repair Table, p. 138, *SR4A*. Once the modification process has started, it can be interrupted at any time and picked up again at a later time, unless special circumstances prohibit such action. Likewise, the object being modified might not be usable until the modification is finished.

With any given gear item, you can only do one modification at a time. If a character wants to apply more than one modification to the same object, he has to make the modifications one after the other. He is allowed to choose the order in which he wants to apply the modifications, unless the modification description says otherwise.

As soon as a character has accumulated the required number of hits, the modification is successful. If, however, one of the rolls comes up as a critical glitch, the modification fails and needs to be restarted with a new set of materials. In extreme cases, depending largely on the type and extensiveness of the modification, the gamemaster may decide that not only was the modification a failure, but that the object itself and maybe even some of the tools have been damaged in the accident and need repair before they can be used again.

If the gamemaster wants to raise the challenge of successfully finishing the modification, he can enforce the rule that the character can only make a number of Extended Test rolls equal to his dice pool (see p. 64, *SR4A*)—if the test remains incomplete, he has failed. Alternately, the gamemaster can rule that the character has to roll a minimum of 1 hit on each individual roll of the Extended Test lest the modification fail.

A character may also choose to “rush the job,” as explained on p. 65, *SR4A*.

Special Skill

Some modifications require a character to possess an additional skill in order to be successful. When this is the case, the modification is handled with two Extended Tests, one based on the usual modification skill (see above) and the other based on the special skill. The character can freely choose the order in which the tests are rolled—he may even choose an alternat-

ing order. In order to successfully conclude the modification, he has to achieve a number of hits equal to half of the original threshold in both tests.

SLOTS, SLOT MAXIMUM, AND OVERMODIFICATION

Every modification of a vehicle or firearm uses up one or more *slots*, and each such gear item can only hold a limited number of modifications, represented by a *slot maximum*. Vehicles have a slot maximum value of 4 or their Body Attribute, whichever is higher. Firearms have a slot maximum value of 6. At the gamemaster’s discretion, other gear may have slot maximums as well, though he will need to decide these values on his own.

Overmodification

Once an item’s slot maximum is reached, any further modification to that item requires the gamemaster’s approval. Also, in order to perform the modification, the mechanic must use tools one step higher than usual (unless the tool is already at facility level) and a multiplier of at least x2 must be applied to both the cost and the threshold. Note that most of these overmodifications reduce the object’s effectiveness in other ways—for example, adding additional weapons and armor to a vehicle beyond its slot limit may result in reduced Speed or Handling. Once again, the gamemaster has the last word on this. Note that the number of used slots usually has impact on the general bulkiness of an object.

Unless specifically noted, each modification can only be performed once per object.

Removing a Modification

A modification can be removed to get back the slots it took up and slim down the item’s appearance. This takes the usual modification test and requires the tools mentioned in the modification description. However, the threshold is halved and there are no further materials required.

Example 1: *Reiko wants to add a weapon mount to her GMC Bulldog. In order to do so, she first looks up the weapon mount description in the list of vehicle modifications, getting the following stats:*

Slots: 1; Threshold: 8; Tools: Kit; Cost: 2500, Availability: 8F, Special Skill: Armorer.

First she needs a plan. To be on the safe side later, she decides to spend the extra amount of time and effort to look for an AR plan, so she rolls an Browse + Data Search (12, 1 minute) Extended Test—the threshold is raised from 8 to 12 because she’s searching for an AR plan. After five minutes, she has found a usable plan and gets the necessary materials from her dealer (spending the required 2,500¥ as well as a “special fee” of 500¥ that the dealer asks of her).

Now, in order for the work to begin, Reiko needs an automotive kit: a kit because the modification description specifies it, and the kit must be for the Automotive skill, because the GMC Bulldog is a van.



For the test, Reiko rolls a Logic + Automotive Mechanic Extended Test. She rolls the test using Automotive skill because the GMC Bulldog is a van, and the Interval is 6 hours because it's a vehicle modification. Additionally, because the weapon mount requires knowledge of how to insert a firearm, Reiko also needs to make a Logic + Armorer Extended Test, also with an interval of 6 hours. The threshold for each test is 4 (the original 8, divided in half between the two skills). The dice pool modifier on the test is +2 because she has an AR plan available. No other modifiers apply.

Reiko rolls the Automotive Test first and achieves 3 hits, which takes her 6 hours. She has to attend a meeting with her team, so she interrupts her work. Later she comes back to finish the job, this time making the Armorer Test. She's tired, which gives her a -2 dice pool modifier for poor working conditions. She rolls again, achieving another 4 hits, which again takes her 6 hours. The Armorer half of the work is done, and with only 1 hit needed to complete the Automotive side, she's optimistic that she will finish the task with her next roll, which will take her another 6 hours. Only if she suffers a critical glitch on that roll will the test fail, requiring a fresh start with new materials.

Example 2: Critical George wants to upgrade "Charleen," his beloved Ares Alpha, with an auto-adjusting weight. Charleen is already equipped with a gas-vent-3 system, personalized grip, and a heavy barrel, occupying a total of 6 slots. Together with the 4 slots from the auto-adjusting weight this would lead to a total of 10 slots, which is beyond the slot maximum of 6, so the upgrade requires a facility (one step higher than the shop that is usually required for the auto-adjusting weight), the threshold is raised to 20, and the cost to 300¥. Also the gamemaster's approval is required. Looking at the whole design of the firearm and the heavy and bulky parts that are meant to reduce recoil, the GM decides to allow the modification, but only under the condition that the weapon's grenade launcher is removed. He could also decide to not allow the modification, or rule that the weapon will be LMG size because of all the stuff attached to it, or any other possible solution that makes sense to him.

DESKTOP MANUFACTURING

In the chaos of Crash 2.0, a large number of patents and other technical plans were released into the public domain, sold off, or otherwise made available. While most of them were decades old and of no great use, one turned out to hold some great potential: *desktop manufacturing*, a generic term for a new technology that was becoming popular at the turn of the century, before it was bought and buried by the rising megacorporations in order to preserve their own preeminence in manufacturing.

Desktop manufacturing uses an assortment of techniques to create and shape metal and plastic items, autonomously fol-

lowing preprogrammed plans, in a unit ranging in size from a twentieth-century desktop printer to a twentieth-century photocopier. The process is also capable of embedding plastic electronics, usually small multipurpose chips that have specific programming burned into them by the forge, theoretically allowing its user to build any general household item with relative ease. However, while the megacorps were unable to put the genie back into the bottle, they did manage to stifle any further growth in this technology, so the current forges made by contract manufacturers (usually just one step ahead of the megacorps) are rather primitive, allowing only the production of very simple parts that are useful in modifying or repairing items, but lack the complexity necessary to make anything but the most basic of whole finished items.

A *desktop forge* is a special item that can be used in combination with the modification rules presented in this chapter. It is available in two sizes: small (toolbox-size) and large (truck-size), and enhances the capabilities of the regular tools found on pp. 332, *SR4A*. A small desktop forge provides a kit with the capabilities of a shop, while a large desktop forge provides a shop with the capabilities of a facility, thus allowing modifications on a much higher level than usually available to shadowrunners. The problem with desktop forge-supported work is the absence of large tools like hydraulic lifts, so a negative dice pool modifier of -2 for inadequate tools must be applied. Desktop forges are jacks of all trades, which means they do not have to be bought separately for each mechanical skill, but provide their special capabilities to tools of all skill types.

On the downside, a desktop forge requires some time to churn out the parts, so it cannot be combined with the rules for rushing a job (p. 65, *SR4A*). Further, it requires feedstock in the form of a special plastic powder with metal fibers and microchips/tags mixed in. When hit by low-powered lasers tuned to specific frequencies, the powder congeals into forms outlined in three dimensions by the forge, based on a database with thousands of common parts that can be easily modified for the user's specific requirements. All characteristics of the parts, like tensile strength, density, and so on, are controlled by the laser's frequency. The costs for feedstock are about the same as for the relevant parts that would be used in a modification without desktop forge support—however, they are acquired through different channels than the standard materials. This can prove more or less difficult, depending on the kind of job and the mechanic's connections. For rules purposes, assume an Availability rating of 10R for desktop forge feedstock. Also note that with most modifications, there are always parts that are so special that they cannot be desktop-manufactured, but have to be bought separately. This depends largely on the type of modification, but as a general rule, modifications with an Availability rating of 6 to 10 require one-quarter, and those with an Availability rating of 11+ require one-half, of their materials to be bought separately.

Desktop Forges	Availability	Cost
Small Desktop Forge	10R	15,000
Large Desktop Forge	16R	150,000



Another problem for shadowrunners is that the megacorp's attempts to control the flow of desktop manufacturing have led to many laws requiring feedstock to be tagged with stealth RFID tags for identification purposes. As long as just a few parts of an item are made from feedstock, the chances of a critical mass of stealth tags being included in the final product so that it can be identified is fairly low. Making a full item entirely using a desktop forge, on the other hand, will almost invariably mean that it includes enough stealth tags to allow its owner to be tracked down. You can reduce the danger with a tag eraser (p. 330, *SR4A*), but even this cannot give you 100% certainty, especially when it comes to electronic equipment, where the eraser can only be used to a limited extent. The likelihood that an item can be tracked is up to the gamemaster's discretion.

Characters can obtain "clean" feedstock that does not contain RFID tags, but of course it is heavily restricted and ostensibly forbidden to all but the megacorps. As a general rule, assume an Availability of 20F and a cost modifier of two to five times the standard feedstock price.

VEHICLE MODIFICATIONS

This section covers modifications specifically meant for drones and vehicles.

VEHICLE MOD NOTES

The following rules apply to vehicle modifications.

Core Rules Vehicle Modifications

The rigger adaptation and weapon mount vehicle modifications from the core rules (p. 348, *SR4A*) are replaced by the modifications of the same name described in this list.

Drones

In the *SR4* rules, drones are a subgroup of vehicles, so every time the term "vehicle" is used, this includes drones. There are five specific drone vehicle types, based on their Body value: microdrones (Body 0), minidrones (Body 1), small drones (Body 2), medium drones (Body 3), and heavy drones (Body 4).

When the threshold or modification costs are based on a vehicle's Body value, note that the modification costs and thresholds for microdrones (Body 0) are based on a Body of 2 (their smaller parts are more expensive).

Off-the-Rack Vehicles with Upgrades

Most off-the-rack vehicles come with certain upgrades mentioned in their description (see *Vehicle Listing*, p. 106). While those upgrades use the normal rules of the modifications of their name, they don't count toward the slot limit and the vehicles themselves still count as unmodified.

Percentages

Some modifications raise or lower the Acceleration and Speed of vehicles by a specified percentage value. This percentage is always based on the vehicle's basic value. For example a vehicle with a Speed value of 120 that receives a speed increase of +20% has a new Speed value of 144. If, at a later time, it gets

another modification that reduces Speed by 10%, this would result in a new Speed value of 132 (144 - 12).

Terminology

Size and Type: Each modification is either a *microdrone*, *minidrone*, *standard*, or *all* modification. Microdrones can only be equipped with microdrone modifications; minidrones can only be equipped with microdrone and minidrone modifications; all other drones and vehicles can only be equipped with standard modifications. *All* means that the modification is available for all vehicle sizes. Additionally, some modifications are only available to certain types of vehicles, such as groundcraft, aircraft, or watercraft, as noted.

Slots: The number of slots filled by a modification.

Threshold: The threshold of the Extended Tests for the modification and for locating the relevant building plans.

Tool: The tools necessary to perform the modification: kit, shop, or facility.

Cost: The cost for acquiring the necessary materials.

Availability: The availability of the necessary materials.

Special Skill: Additional skills (if any) necessary to perform the modification.

VEHICLE MODIFICATIONS LIST

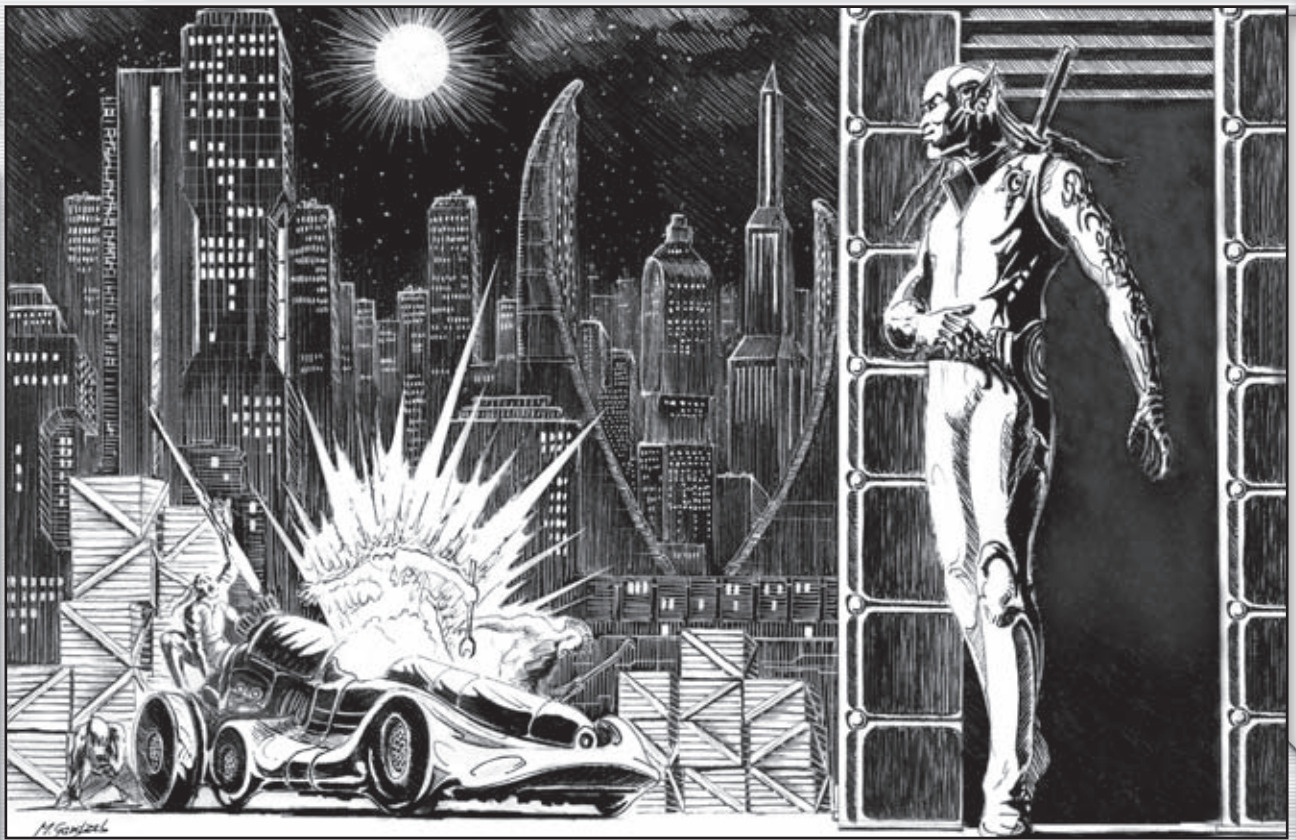
Additional Fuel Tank (All): The fuel tanks, battery packs, or whatever else the vehicle uses to power itself can be increased in capacity to allow it to last longer. Each additional fuel tank gives the vehicle an additional 6 hours of operation time (see *Operation Time*, p. 103). A vehicle can have up to its Body rating in additional fuel tanks (1 in the case of microdrones and minidrones). When more than one additional fuel tank is included in a vehicle, whenever there is a Vehicle Body Test where failure means that something could compromise the fuel tanks (crash, damage, etc.), apply an additional negative dice pool modifier equal to the number of additional fuel tanks after the first.

Amenities (Standard): The typical vehicle has passenger amenities equivalent to a Low Lifestyle. If the passengers expect better treatment (such as cushier seats or a wet bar), then the vehicle has to be upgraded in order to provide it. In most cases, the entire vehicle shares the same amenities for all the passengers, but the gamemaster may modify it for lesser cost in cases where it does not. In addition, the Lifestyle of the vehicle can be lowered by one down to Squatter (the level usually seen in mass transit vehicles such as buses or cargo planes) in order to double the passenger capacity.

Ammo Bins (Standard): Sometimes when you're expecting a lot of opposition, it's good to have lots of ammunition to deal with it. Each ammo bin is attached to a single weapon mount, and each additional ammo bin attached adds another 250 rounds of ammunition, belt feed, or doubles the weapon's normal ammunition capacity in the case of weapons with larger ammunition (such as rocket launchers).

Amphibious Operation Upgrade (All, Groundcraft Only): There are two levels of amphibious packages. Level 1 is a basic upgrade, intended for brief uses, using the vehicle's normal system of propulsion for a short journey in the water with Speed





INCOMING FEED.....

and Acceleration reduced to ratings appropriate to the environment and vehicle. Level 2 uses the same engine but adds a full secondary means of propulsion, usually a small waterjet so that the vehicle handles better in the water, with Acceleration and Speed equal to half of its normal characteristics and Handling reduced by -2 . The amphibious operation upgrade includes basic seals so that the vehicle can continue to operate in the water (albeit at a level that will not protect it from being turned over) or even if a small amount of water gets inside.

Anti-Theft System (Standard): For those who want a little extra vehicle security, nothing works quite like zapping potential thieves with electricity. This anti-theft system employs the vehicle sensors to detect anyone who comes within close proximity (1 meter) of the vehicle and audibly warns them to back off if they are not identified as an authorized user (alternately, this verbal warning can be disabled). If the system detects an intruder attempting to access the car, receives an alert from the vehicle's node or security system (i.e., if someone fails to bypass the maglock or a window is broken), or receives an instruction from the owner, it sends an electric shock coursing through the outside surface of the vehicle, zapping anyone in contact with it. This zap inflicts 10S Electricity damage.

Some taxi services and prisoner transports employ an interior version of this system, covering the backseat or holding area, in order to handle robbers or unruly prisoners. Interior systems use the same stats, but only cover a specified passenger section.

Armor (All): No matter how quiet shadowrunners try to be, eventually someone is going to shoot at them, if for no other reason than that they just stole someone else's parking space. What helps them to survive this is good old-fashioned armor, rated from 1 to 20. Vehicle armor is easily seen and will certainly raise some questions in some parts of the metroplex.

For runners who still wish to have protection but are hoping to make less of a statement about it, there is *concealed armor*. The Concealability rating for concealed armor is -4 , possibly higher depending on the circumstances.

Smart armor cannot be concealed, but is superior to normal armor in that it has armor-piercing defeating properties. Small explosives spaced throughout the exterior of the vehicle prematurely detonate/deflect incoming fire, reducing the AP value of attacks by the smart armor's rating. Individuals near the exterior of the vehicle while smart armor is being used may be hit by shrapnel or other detritus from the explosions. If the vehicle is rigged and has the proper sensors, the controlling players may be able to detonate exterior charges in order to deal physical damage to opponents, using the smart armor's current rating as the Damage Value. Every time a heavy ballistic weapon or explosive (usually any weapon that does more than 10 DV) hits a vehicle with smart armor, roll a test using the smart armor's rating as the dice pool. Every hit is added to the firing weapon's AP value (thus rendering the smart armor less effective). A glitch on this test reduces the value of the smart armor by one. You may use

the smart armor as many times as its rating. Once the smart armor has been exhausted, it must be replenished with a Logic + Armorer (rating, 1 hour) Extended Test in order to be effective again, at a cost of 500¥ per rating point.

A vehicle can either have normal armor or concealed armor. A vehicle with normal armor can be further equipped with smart armor. The maximum armor rating of each armor type a vehicle can have is twice its Body rating (or three times its Body rating for drones of the micro, mini, small, medium, and large size), up to a maximum of 20 with normal armor or 10 with concealed or smart armor. For example, a Steel Lynx drone (Body 4) could be equipped with a maximum of Rating 10 concealed armor or Rating 12 normal armor + Rating 10 smart armor. Note that the rating of the armor upgrade is *not* cumulative with the basic armor value that most off-the-rack vehicles are already equipped with. Instead, the modification assumes that the original armor is being stripped and replaced with the new armor.

Assembly Time Improvement (All): Some light vehicles are designed to break down easily into smaller components to aid in their transport over long distances. Other small vehicles can be altered to allow partial disassembly—for example, an off-road motorbike can be broken down into smaller components so that it can be easily transported in a car, but then reassembled when needed to follow someone in dangerous rural areas. As a rule of thumb, assume a basic disassembly/reassembly time of (Body x 5) minutes each.

The assembly time improvement modification either shortens the time necessary to assemble/disassemble a vehicle that has already been designed to do so to (Body) minutes (such as having wireless locking mechanisms rather than the normal screw-on type), or ensures that a vehicle that was not originally intended to be assembled/disassembled now can be (for example, a drone that can be broken down into smaller parts to be smuggled into corp territory, then quickly reassembled in order to accomplish its mission) with the standard assembly time.

Ballast Tanks (All, Watercraft Only): Ballast tanks are necessary to turn any watercraft into a submersible, allowing the vehicle to submerge and, more importantly, rise to the surface afterward. Submerging is one of the quickest methods to lose pursuit, since the vast majority of vehicles do not have the capacity to track or attack vehicles underwater. If the vehicle is manned, it must also have the Level 2 Life Support modification (p. 138) in order for the passengers to survive, unless they have brought their own scuba gear. Level 1 Ballast tanks are sufficient for the vehicle to submerge approximately 100 meters, while Level 2 is a full pressure hull that allows the submersible to travel to all but the deepest or most hostile environments. The operation time (see p. 103) of Level 1 vehicles is reduced by half at that depth. The operation time of Level 2 vehicles is reduced by one-quarter at depth Level 1 and one half at depth Level 2.

Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Additional Fuel Tank	1	8	Shop	1,000¥	4	—
Amenities						
Squatter	0	6	Shop	100¥	—	—
Middle	1	6	Shop	100¥	2	—
High	2	10	Shop	1,000¥	8	—
Luxury	4	20	Shop	10,000¥	16	—
Ammo Bins	1	4	Shop	200¥	6R	Armorer
Amphibious Operation						
Level 1	2	10	Shop	Body x 250¥	6	Nautical Mechanics
Level 2	4	20	Shop	Body x 1,000¥	12	Nautical Mechanics
Anti-Theft	2	20	Shop	Body x 200¥	6R	—
Armor						
Normal (Rating 1–20)	1	Rating	Shop	Rating x 200¥	6R	Armorer
Concealed (Rating 1–20)	2	Rating x 2	Shop	Rating x 1,000¥	12R	Armorer
Smart (Rating 1–20)	2	Rating x 2	Shop	Rating x 2,000¥	16R	Armorer
Assembly Time Imprvmnt.	1	Body x 4	Facility	1,000¥		
Ballast Tanks						
Level 1	1	16	Facility	Body x 2,000¥	8	—
Level 2	4	24	Facility	Body x 10,000¥	16	—
Body Stabilizer (Rating 1–3)	3	10	Facility	Rating x 3,000¥	Rating x 3	—
Chameleon Coating	2	10	Facility	Body x 1,000¥	12R	—
Complete Skinlink	1	8	Shop	5,000¥	8	Hardware



Body Stabilizer (Standard): This system of counterweights and gyroscopes improves a walker drone's balance. It adds a dice pool modifier equal to its rating to all Climbing and Gymnastics Tests. The body stabilizer also provides recoil compensation equal to its rating, and increases the drone's Body by +3 for purposes of determining knockdown.

Chameleon Coating (All): This modification completely coats the surface of the vehicle with ruthenium polymers, allowing the colors of the vehicle's exterior to be altered at will. The vehicle can, for example, have moving billboards on the exterior to earn a little extra nuyen, or elaborate color and art schemes which can be changed when something new has been downloaded from the Matrix. The vehicle can quickly change exterior colors in order to impersonate a delivery vehicle/drone, or it can be altered in order to blend into the environment in an attempt to throw off pursuit or identification. When a vehicle is displaying proper "protective coloring" for an area, apply a -4 dice pool modifier to all Perception Tests involving spotting the vehicle by visual means.

Chameleon coating is not compatible with smart armor (see *Armor modification*, p. 132), SunCell (p. 145), or reflective hull (p. 142).

Complete Skinlink (All): While a vehicle's standard control interface (i.e., the steering wheel and/or dashboard) can be modified to work with a skinlink system (see p. 328, *SR4A*) without taking up slots, this modification expands the surface area of the skinlink interface to include the entire interior and even exterior of the vehicle if so desired. Alternately, the vehicle can be equipped with skinlink interface spots at key points around the vehicle, as desired.

Cyborg Adaptation (Standard): A cranial containment unit (CCU) is a necessary component for full-body cyborgs (see *Cyborgs*, p. 158, *Augmentation*)—it is the "box" that the jarhead's brain. Equipping a drone or vehicle to accommodate a CCU requires renovations more extensive than the bare bones rigger adaptation.

The CCU includes a control rig, a commlink with Firewall 4, Response 4, Signal 4, and System 4 (all upgradeable as normal), and a hot-sim modified sim module. A cybernetic skillwire

system is also installed (see p. 160, *Augmentation*). If additional cyberware is required/desired, the CCU has a Capacity of 12 (bioware is not compatible). The CCU also includes all of the necessary support equipment to keep the brain it contains alive, and easily accessible ports are also installed so that the nutrients and medications can be changed. As it is isolated from the exterior environment, the brain contained within the CCU is immune to both contact and inhaled toxins. Installing a meta-human brain inside a CCU requires a delta clinic and a Logic + Medicine (Implant Surgery) (20, 1 hour) Extended Test.

Drone Rack (Standard): Drone racks are a convenient way of carrying your drones around so they'll be available when you need them. Standard racks allow fast drone disembarkation, while the special landing racks also allow a quick re-embarkation of the deployed drones. Being equipped with a number of drone racks turns a vehicle into a highly effective drone carrier.

A drone rack has the same space requirements as a weapon mount (p. 146), which means that each drone rack reduces a vehicle or drone's maximum number of weapon mounts. The small drone rack, small landing drone rack, and multilaunch drone rack count as normal weapon mounts, while the large drone rack and large landing drone rack count as reinforced weapon mounts. The large drone rack and large landing drone rack are only available for vehicles with a Body value of 15 or higher.

A *mini* drone rack can hold one micro- or minidrone. It can only be installed on vehicles with a Body of 4 or higher.

A *small* drone rack can hold one small or medium size drone. It can only be installed on vehicles with a Body of 10 or higher.

A *large* drone rack can hold one small, medium, or large size drone. It can only be installed on vehicles with a Body of 15 or higher.

Releasing the drone from any of the above racks takes one Complex Action. Reattaching it is a manual action that takes 1 minute.

The *small* and *large landing* drone racks work the same way as their non-landing counterparts, but also allow drones to be caught by a complex grapple mechanism to re-embark into the rack automatically. This takes one Complex Action.



Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Cyborg Adaptation	1	16	Facility	15,000¥ (+250,000¥ CCU Cost)	18	Cybertechnology
Drone Rack						
Mini	1	8	Kit	500¥	4	—
Small	2	10	Shop	1,000¥	4	—
Small Landing	3	20	Facility	5,000¥	10	—
Large	4	16	Shop	4,000¥	6	—
Large Landing	6	30	Facility	20,000¥	12	—
Multilaunch	5	20	Facility	10,000¥	16	—
Ducted Waterjet	2	10	Facility	Body x 200¥	6R	—
ECM (Rating 1–10)	1	20	Shop	Rating x 1,000¥	12F	Hardware
Ejection Seats	1	10	Facility	500¥	8R	—

The *multilaunch* drone rack can hold up to 20 micro- or 10 minidrones, launching any number of them or all at once with one Complex Action. The drones can also re-embark one at a time by the same means as with a landing drone rack, requiring a Complex Action for each drone. It can only be installed on vehicles with a Body of 10 or higher.

Ducted Waterjet (All, Watercraft Only): A ducted waterjet is a refinement of the open propeller typically used to propel watercraft. Water is sucked up into a tube and expelled out the rear of the craft using an underwater turbine. The result is that the craft is substantially quieter. All tests to detect it suffer a -4 dice pool modifier.

ECM (All): Electronic countermeasures (ECM) are various mechanisms to avoid being locked on or to prevent sensors from detecting more information about your vehicle. ECM is essentially a built-in area jammer (p. 329, *SR4A*), and functions according to the rules for *Sensors and Jamming* (p. 105). ECM is rated from 1–10.

Ejection Seats (Standard): Despite your best efforts to keep your ride in perfect condition, sometimes someone comes along and ruins everything—in which case, you need to leave the vehicle in a hurry. The basic ejection seat fires upward, and if the passenger is properly belted in, they will be able to parachute safely to the ground. You can use your imagination for what happens when they are not properly belted in. When the modification is performed, it also can be arranged that the ejection seat can fire in some other direction, either to fit the circumstance or to give the strapped-in passenger (or perhaps prisoner) a more memorable ride. With gamemaster approval and price increase, the parachute could be swapped out for something else, such as an aerial personal mobility vehicle (or a set of wheels in case of an ejection seat firing to the side).

Electromagnetic Shielding (All): By installing a faraday cage under a vehicle's armor, it can be protected from electromagnetic pulses and electrical attacks. In order to be effective, all electrically sensitive components must be completely contained within the faraday cage and insulated from it. This means that no sensors can extend beyond the cage. As a faraday cage stops all electrical signals, no wireless connectivity can be maintained when it is in use. When using the cage, all antennae must be retracted and the drone loses its ability to send or receive wireless signals.

Further, the cage loses its shielding ability if it is damaged. If the drone takes (rating) boxes of damage, the shielding loses all function until repaired. When the shielding is active, the drone receives bonus dice equal to (rating) to resist all electrical or electromagnetic attacks. This system is rated from 1 to 6.

Engine Customization (All): The engine can be heavily modified and in some cases rebuilt in order to squeeze more performance out of it. Using an evolution-based design system in which hundreds of possible alterations are tried, tested, then recombined, almost any engine can be improved. A vehicle can have up to two engine customization modifications, one for Speed and one for Acceleration, increasing the basic values of each by 20%.

Enhanced Image Screens (Standard): In 2070, almost all vehicles feature image displays on their interior windscreens in order to display traffic data or watch a trid while the car drives itself. This modification expands the image display to all interior and exterior windows. These screens can be used to display images and video/trideo with realism equal to that of a holo projector (p. 329, *SR4A*). Primarily used for entertainment and exterior decoration, these screens can also be used to display false scenes of the interior or to hide the exterior view from a passenger, to mislead them about where you're going.

Extra Entry/Exit Points (Standard): Regardless of the number of exits a vehicle has, there is always a time when you wish there were more, especially when you are taking fire from folks who have less than your best interests at heart. In the case of the extra entry/exit points upgrade, the basic assumption is that there is always an entry/exit point within a reasonable distance—for example, a door in the underbelly or windows that can pop out.

Extreme Environment Modification (All): This prepares a vehicle to work in extreme environments, where unprepared vehicles will cease to function after a while or wouldn't work at all (see *Hazardous Environments*, p. 163). The modification can be taken more often than once, each time for another environment (desert, polar, etc.). This adaptation is usually combined with an appropriate special armor modification (see p. 144). Note that adaptation for space or deep sea environments requires the life support modification (p. 138).



Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Electromagnetic Shielding	2	16	Facility	Rating x 2,000¥	Rating x 4	Hardware
Engine Customization						
Speed	2	24	Facility	Speed x Body x 5¥	6	—
Acceleration	2	24	Facility	Accel x Body x 25¥	6	—
Enhanced Image Screens	1	16	Shop	Body x 100¥	10R	—
Extra Entry/Exit Points	1	8	Shop	5,000¥	8	—
Extreme Environment Mod	1	16	Shop	2,000¥	6	—
Flotation	4	24	Facility	Body x 2,000¥	12	—
Flying Fox Gliding System	3	20	Facility	Body x 3,500¥	16R	—
Fuzzy Logic	1	4	Kit	2,500¥	12R	Hardware

Flotation (All, Aircraft Only): The flotation modification allows aircraft to land on and take off from the water. This is a major modification, attaching either permanent pontoons or memory metals that expand and shape themselves into pontoons, and does not affect the amount of space that the vehicle requires to lift off or land. This is a favorite modification of smugglers, who often meet watercraft or submersibles on the ocean, transfer the goods, and use the aircraft for the last leg in order to avoid security.

Flying Fox Gliding System (All, Groundcraft with Body 12 or Less Only): On command, the vehicle expels a large parachute that allows it to slowly glide down to the ground after driving from a cliff or building roof. Because of the special construction of the parachute, the driver even has a limited control over the traveling direction. The landing is quite rough (4P damage), unless the vehicle is also equipped with an off-road suspension. Once expelled, the parachute cannot be folded back into the vehicle's framework automatically, but needs to be severed via wireless control (or manually). Once it is recovered, folding the parachute back into the vehicle takes an Agility + Parachuting (4, 30 minutes) Extended Test. If it is damaged or lost, the price for a new parachute is vehicle Body x 2,000¥.

Fuzzy Logic (All, Pilot 3+ Only): Many Pilot programs are enhanced with autosofts in order to handle the unexpected, but there are limits to the kind of scenario trees that such programs have available. For those cases, there is the fuzzy logic package—a specialized hardware/software combination that fully considers the situation and helps the relevant programs select among their choices more efficiently. This does not take the place of Pilots/autosofts, but gives existing programs installed in

the vehicle better fidelity in their decisions. If the vehicle/drone takes a Complex Action, it can add +2 to its dice pool for a specific task. Outside of combat, it can take a full minute to consider its options to add +3 to its dice pool instead.

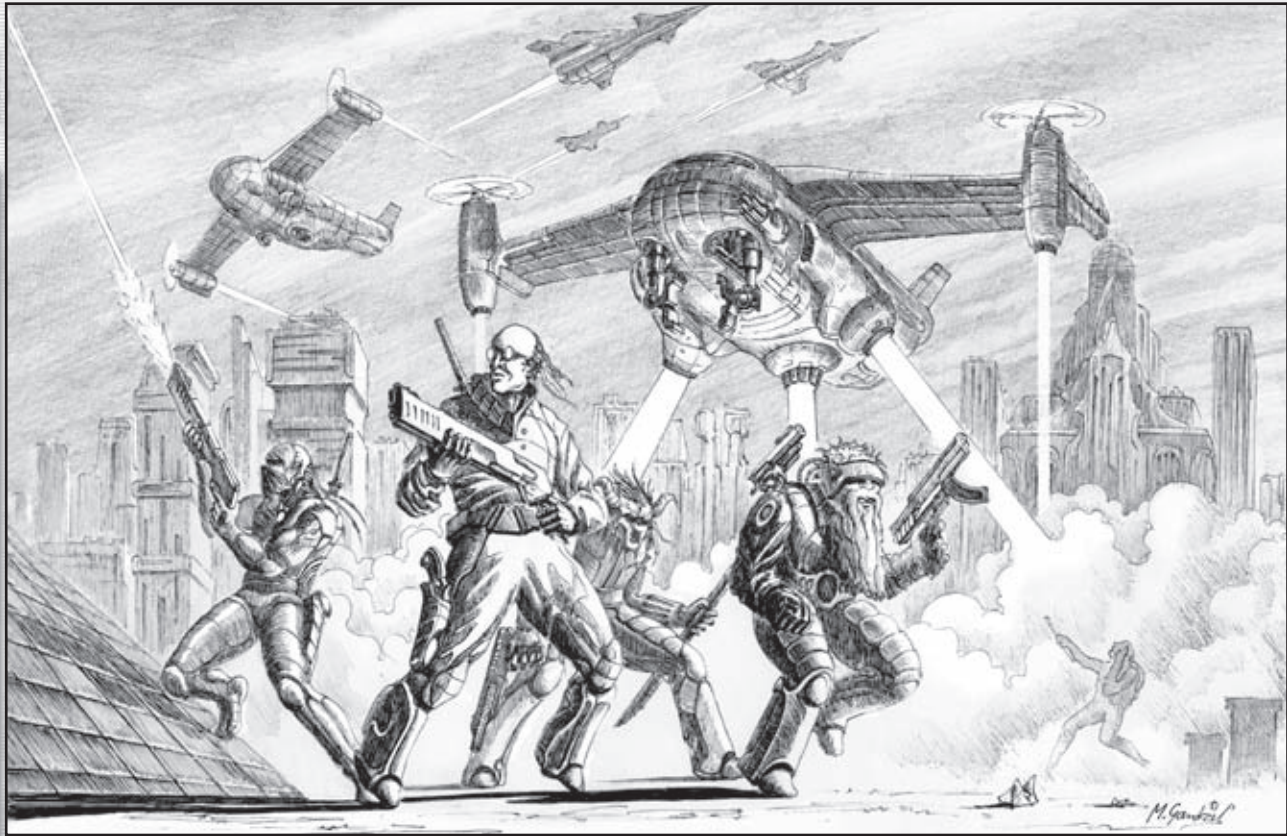
Gecko Tips (All, Medium and Smaller Drones Only): Gecko tips use the weak attractive forces that are found in nature, as geckos do, to adhere to any surface, allowing drones to literally climb up walls. Drones that have any form of ground propulsion can benefit from gecko tips, with gecko pads being attached to the wheels or tracks of ground-based drones, but walkers get the most use from the modification. As long as the material is strong enough to take the weight of the drone, the drone will be able to climb it. Water does not affect gecko tips' ability to stick to objects, though oil or grease does. In cases where gecko tips may be useful in Strength Tests, the gecko tips provide a +2 dice pool modifier. Drones without a Strength rating given in their description should use a Strength rating of Body ÷ 2.

At the gamemaster's discretion, large drones and vehicle may be equipped with gecko tips, but it is rare for them to find surfaces/materials that can hold their weight without ripping away chunks of it.

Gridlink (Standard, Groundcraft Only): The GridLink system is found in most inner city urban areas—the places where the sun always shines and the cops are everywhere. It provides a power supply via embedded lines in the pavement, so that as long as the vehicle is in GridLink-enabled areas, it does not use up any of its operation time (see p. 103). Its downsides are that you are tracked, and that you are limited to the legal speed limit of the area.



Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Gecko Tips	1	8	Shop	300¥	6	—
GridLink	1	4	Shop	750¥	4	Hardware
GridLink Override	1	10	Shop	2,000¥	8F	Hardware
Gun Port	1	4	Kit	500¥	6R	—
Gyro Link	1	8	Shop	5,000¥	12F	Hardware
Hovercraft Upgrade						
Rebuild	3	10	Shop	Body x 1,000¥	12	—
Add-on	4	16	Shop	Body x 2,000¥	12	—
Hydrofoil Capability	2	10	Facility	Body x 2,000¥	10	—
Improved Economy	1	24	Facility	Accel (Running) x Speed x 5¥	4	—
Improved Sensor Array	1	8	Shop	1,000¥	6	Hardware
Improved Suspension	1	8	Shop	Body x 5,000¥	4	—
Improved Takeoff and Landing						
Level 1	4	24	Facility	Body x 1,000¥	8	—
Level 2	6	36	Facility	Body x 5,000¥	16	—
Interior Cameras	1	8	Kit	Body x 100¥	6R	Hardware
Life Support						
Level 1	1	10	Shop	Body x 500¥	8	—
Level 2	3	24	Facility	Body x 2,000¥	12	—



INCOMING FEED.....



GEAR AND VEHICLE MODIFICATIONS

GridLink Override (Standard, GridLink-Equipped Groundcraft Only): The GridLink override is a hardware/software modification that fools the system and allows the vehicle to go at its top speed without being noticed. In addition, this system automatically spoofs Gridlink with a randomized fake access ID (see *Access IDs*, p. 223, *SR4A*), allowing the user to bypass the GridLink system's accounting and tracking capabilities.

Gun Port (Standard): Sometimes you want to be able to shoot out of a vehicle in order to help keep up the volume of fire. A gun port provides a stable firing position with a cone-shaped vertical and horizontal firing arc of 90 degrees for a hand-held weapon fired by a passenger while he is still fully protected by the vehicle's armor. It provides 4 points of recoil compensation. This modification can be taken more than once, each time for another passenger's seat. The resulting firing arc depends on the seat's position within the vehicle.

Gyro Link (Standard): This is a special upgrade for a vehicle's turret weapon mount. For the gyro link to fully work, the turret must already be equipped with the remote control option (see p. 148). The gyro link of the turret communicates with the vehicle's Pilot system, and helps keep the turret pointed in the same direction no matter how radically the vehicle maneuvers. Ignore any modifiers from the vehicle's movement. If the turret is not equipped with remote control, the gyro link will reduce

modifications for shooting due to vehicle maneuvers in half (round down).

Hovercraft Upgrade (All, Groundcraft Only): This modification turns the vehicle into a hovercraft, using forced air to float the craft an inch above the ground and allowing it to operate in all sorts of terrain. A vehicle *rebuilt* into a hover-vehicle has a rubber or Kevlar skirt that it rests on when not hovering, while a vehicle with a hovering *add-on* may use its other mode of transportation, such as wheels, when not hovering. The advantage of hovering is that a vehicle can avoid certain handling challenges since it is off the ground, and it can go over water. A hovercraft is not a vectored thrust vehicle, and thus it cannot rise farther than a few dozen centimeters off the ground/water. Handling suffers a -1 modifier while hovering.

Hydrofoil Capability (Standard, Watercraft Only): The vehicle's hull can be raised out of the water by hydrofoils, doubling the Acceleration and Speed. The downside of this modification is that it is very fuel intensive, cutting normal operation time (p. 103) by half. The watercraft is also so noisy that while using a hydrofoil, it cannot use its own sonar and gives opponents a +4 dice pool modifier to detect it.

Improved Economy (All): This mod tunes the vehicle's engine and other power consumption devices to use fuel more efficiently. The surface of the vehicle is coated with nanotubes to derive power from sunlight, galvanic sensors to derive power

from static electricity, and so on, with the modifications depending on the typical environment in which the vehicle is expected to operate. Vehicles with improved economy may double their normal operation time (see *Operation Time*, p. 103).

Improved Sensor Array (All): All vehicles come readily equipped with a basic sensor package for their size (see *Vehicle Sensors*, p. 105) that is limited in the amount of sensors it can hold. The improved sensory array modification allows a skilled mechanic to go beyond these limitations, improving the size of the sensor package by one step: microdrone size becomes minidrone size, minidrone size becomes small drone size, small drone size becomes medium drone size, medium drone size becomes large drone size, large drone size becomes vehicle size, and vehicle size becomes a new *extra-large vehicle size* with a Capacity of 30 and Signal rating of 6. Note that the sensors themselves must be bought and installed separately—installing or removing a sensor requires a Logic + Hardware (8, 1 hour) Extended Test.

The extra-large vehicle size sensory array can be further upgraded with a missile defense system (p. 139).

Improved Suspension (All, Wheeled Groundcraft Only): Improved suspension enhances the vehicle's maneuverability on open ground, while its off-road abilities are severely reduced. The on-road Handling value receives a +1 modifier, while the vehicle automatically goes out of control when entering off-road terrain (the driver or Pilot must make a Vehicle Test to prevent a crash, and afterwards the vehicle comes to a sliding halt—controlled movement is impossible). This mod is usually combined with racing tires (p. 106).

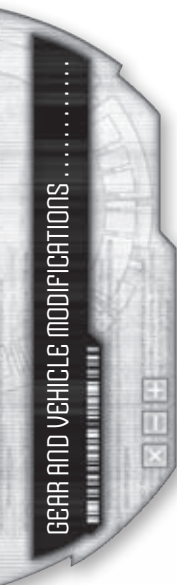
Improved Takeoff and Landing (Standard, Aircraft Only): This modification comes in two levels. *Level 1* merely shortens the takeoff and landing distance of an aircraft (see *Takeoff and Landing*, p. 103). With *Level 2*, the vehicle has gained true vertical takeoff and landing (VTOL) capacity.

Interior Cameras (Standard): A rigger is dependent on the vehicle's sensors to determine what is going on around him. Unfortunately, most vehicle's sensors have a blind spot—the area inside the vehicle. This system changes that by placing several minicams throughout the interior of the vehicle so that the rigger can keep it under surveillance.

Life Support (Standard): Life support is available in two levels. *Level 1* is better known under the EnviroSeal brand name; it filters the air entering the vehicle, cleansing it of chemical and biological impurities. It works only in environments with standard air pressure (ground level up to heights of 5,000 meters), adding +4 to dice pools to resist inhalation-based toxin attacks made from outside the vehicle. Life support *Level 2* is true life support, where there is no recirculation (though that option is possible) and the vehicle is completely sealed, so the passengers will survive even underwater or in space. Level 2 also counts as a full chemical seal (p. 327, *SR4A*).

If the vehicle is damaged in any way, the magnitude of the damage determines whether any of the seals in either version of life support have been compromised. If that occurs, the life support may either continue to function partially or not at all (gamemaster's decision).

Limited Maneuverability (Minidrones): All drones come equipped with basic maneuverability. A drone with limited ma-



Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Limited Maneuverability	+4	8	Shop	100¥	4	—
Lighter Than Air	1	Body x 6	Shop	Body x 400¥	6	—
Lock-On Countermeasures	1	20	Shop	5,000¥	10R	—
Manual Control Override						
Drive-by-Wire	1	4	Shop	500¥	2	—
Manual Controls	4	20	Facility	Body x 500¥	10	—
Secondary Controls	1	6	Shop	1,000¥	4	—
Mechanical Arm/Grapple						
Grapple	1	8	Shop	1,000¥	4	—
Full Arm	2	16	Facility	4,000¥	6	—
Metahuman Adjustment	— (1 for trolls)	4	Kit	500¥ per passenger	—	—
Missile Defense System	1	10	Shop	10,000¥	12R	Software
Motorcycle Gyro Stabilization	1	16	Facility	Body x 300¥	8	—
Multifuel Engine	1	20	Facility	Body x 1,000¥	12	—
Nanomaintenance System (Rating 1–4)	1	16	Shop	Rating x 5,000¥	(Rating x 5)R	—
Nitrous Injection	1	8	Kit	2,500¥	4	—
Nanomaintenance System (Rating 1–4)	1	16	Shop	Rating x 5,000¥	(Rating x 5)R	—
Nitrous Injection	1	8	Kit	2,500¥	4	—

neuverability does not move on its own—it has to be thrown, shot, or otherwise propelled to its assigned destination. While in the air, it has a minimal ability to slightly alter its course in order to land at a more desirable spot (for example, a spyball being rolled into a room or a reconnaissance drone being shot into the air and then floating down on a parachute.)

Lighter Than Air (All): The vehicle is mounted on a zeppelin or blimp frame, so that it can now loiter over an area for days. The gas bag is filled with non-flammable gas, and is compartmentalized so that no single puncture will deflate the whole bag. As a result, the fuel consumption of an LTA craft is radically reduced, so its operation time (p. 103) is multiplied by 10. Speed and Acceleration are cut in half, however, while Handling is reduced by 2, but the craft gains Level 2 improved takeoff and landing capacity (p. 103).

Lock-On Countermeasure (Standard): Lock-on countermeasures include several methods of fooling the enemy's sensors, like flares against heat seekers, chaff against radar, and noisemakers against sonar detection. The lock-on countermeasure can be activated with a Free Action and reduces the bonus dice for active targeting (p. 171, *SR4A*) by 3.

The lock-on countermeasure has 6 uses before it needs to be replenished. Replenishing materials cost 600¥ and have an Availability of 6R.

Manual Control Override (Standard): Thanks to wireless control, virtually anyone can control that vehicle, no matter where they are. Many corp kids use this to play a new version of “Chinese fire drills,” changing the driver of a car while speeding down the highways, with the occasional crash as a result. In the world of shadowrunners, however, where open wireless networks are invitations to be hacked, a modification like the manual control override can come in quite handy. It allows the driver to completely turn off all of the vehicle's wireless capabilities by manual means (pushing a button or releasing a lever) and control the vehicle with *drive-by-wire* (or *fly-by-wire*), as in the good old days. Other mechanics even go as far as to allow a further reduction to *manual controls* only (removing even the drive-by-wire systems and reducing Handling by -1); however, with large vehicles, this requires large hydraulic mechanisms to amplify the driver's strength. The *secondary controls* modification upgrades a passenger seat to a second driver's seat.

Note that all motorcycles come with manual controls.

Mechanical Arm/Grapple (All): The simplest form of mechanical arm is a *grapple* device intended for simple pickup and carry tasks that a vehicle would be expected to perform (alternately, this can be a dump-truck kind of mechanism that allows it to offload any cargo it is carrying). A *full arm* is articulated with a grasp similar enough to the metahuman hand to be able to use many of the same tools as a metahuman without any additional modifications. As a guideline, assume that the Strength of the grapple/arm is the vehicle's Body. The length of a mechanical arm/grapple is Body x 10 centimeters (5 centimeters for microdrones).

At the gamemaster's discretion, full arms can be tricked out with accessories just like a full cyberlimb (see p. 343, *SR4A*, and

pp. 44–48, *Augmentation*). The gamemaster has final say over what accessories a mechanical arm can take.

Metahuman Adjustment (Standard): Thanks to the efforts of many metahuman interest groups, and the attempts of the various megacorps to cash in on this interest, almost any vehicle can be altered to accommodate trolls or dwarfs. Considering the size differentials, there are some problems altering some vehicles for trolls. For instance, no amount of modification can make a troll comfortable in a subcompact car, but cases like those aside, in most instances it is possible to alter vehicle accommodations on a one-to-one basis for either a troll or a dwarf.

Mimic (Standard): This customization integrates a specialized expert system and dozens of micro-servos and pumps—similar to those used to make robotic dolls and pets more lifelike—under an outer layer of synthetic skin (see below) to allow an anthroform drone to simulate metahuman facial expressions and body language (or for animal drones to appear like real animals, with fur and so forth). The skin is living tissue, fed and supplied with respiratory gases by a nutrition pack installed within the drone. This nutrient pack needs to be replaced every (rating) days. As long as the drone is normally clothed, seams to allow access for routine maintenance are concealed. If the drone takes damage equal to rating x 2, the skin will be damaged and internal drone materials will become visible. The skin does not have fingerprints nor can it be configured to pass standard biometric tests. The mimic system adds its rating as bonus dice for Disguise Tests. A drone with synthetic skin is easily identified as unnatural by assensing. Mimic system are rated from 1 to 3.

Missile Defense System (Standard): A missile defense system (MDS) like the GE Phalanx is mainly used on large ships and fixed installations, but can also be added to any vehicle with an extra-large vehicle sensory array (see *Improved Sensor Array*, p. 138). An MDS consists of a sophisticated firmware package that connects the vehicle's sensors to its weapons in order to knock down incoming missiles and rockets. An MDS can be used in point- or area-defense modes. Point defense is when the MDS works solely to protect the vehicle it is mounted on; area defense means that it will engage all valid targets in its predetermined area of engagement.

Each of the vehicle's remote-controlled weapon mounts holding a laser or a weapon with full auto capacity can be assigned to the MDS. Once assigned, the weapon cannot be fired manually any more, but may still be fired via remote control. The MDS, however, has a priority access to take over the weapon for defensive purposes, if the situation calls for it.

Every time the vehicle is subject to a missile or rocket attack, the driver or Pilot receives a +2 dice pool modifier to his defensive roll (p. 170, *SR4A*) for every weapon assigned to the MDS. Laser weapons are highly effective in this task, so they add 4 dice instead of 2. Weapons in a flexible or fixed mount only add dice if the missile is coming from the direction they are facing. A full auto weapon used in missile defense uses up 10 bullets per use in a Combat Turn. The MDS dice pool bonus can be applied against a maximum of 3 missiles per Combat Turn. Every weapon used in the defense cannot be used for other



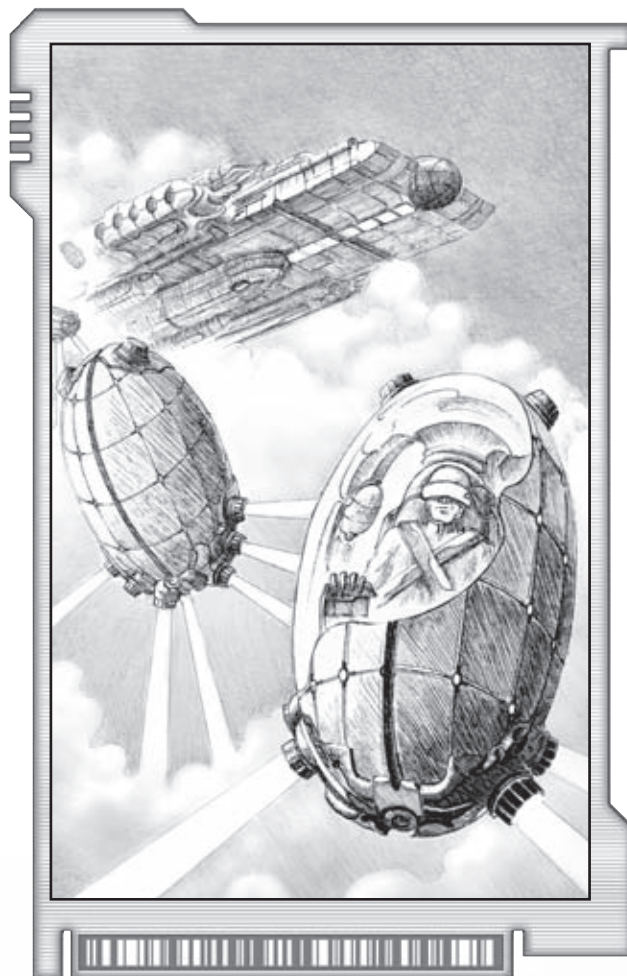
purposes in the next Combat Turn, as the MDS keeps them ready for defensive purposes should more missiles come raining down on the vehicle. Only after one complete Combat Turn has passed without using the missile defense does the MDS hand back the control of the weapons for other uses. MDS can switch between point and area defense as a Free Action, but can only be changed once per Combat Turn.

Motorcycle Gyro Stabilization (Standard, Motorcycles Only): Thanks to technology, your bike no longer crashes to the ground when you forget to employ the kickstand. With motorcycle gyro stabilization, the bike will stay upright in all but the worst conditions. In cases where a Handling failure may bring about a motorcycle crash, add 2 to the vehicle's Handling to represent the gyro stabilization's assistance in keeping the rider upright.

Multifuel Engine (Standard): Most 2070-era vehicles use hybrid drives with a combination of solar power/electricity for inner city use, switching over to a combustion engine when needed. Most of these combustion engines use the common varieties of gasoline derived either from petroleum or biofuels, though many can be purchased with engines that use other fuels, such as diesel, methane, or hydrogen. The multifuel engine allows the engine to use any form of combustion fuel in a single engine, though you cannot mix fuel types in the same fuel tank. It can switch modes automatically, detecting whatever fuel is in the tank, within reasonable limits (for example, liquefied coal can be used as fuel, but not coal itself).

Nanomaintenance System (All, Body 8 or less): An advanced version of the self-repair modification (p. 143), this mod serves as a vehicle's field maintenance and repair unit. The vehicle is equipped with the drone version of a nanoware hive and system that swarm the vehicle's frame, keep it functioning within its normal operating parameters, and take instructions from the Pilot for repairing damage. When the vehicle suffers damage, this system may attempt to repair a number of boxes of damage equal to its rating. Make a Rating Test each time the vehicle takes damage, each hit repairing one box of damage. This repair process takes one hour. These systems are rated from 1 to 4. Nanomaintenance also reduces the threshold for cyborg maintenance tests (see p. 160, *Augmentation*).

Nitrous Injection (Standard): The nitrous injection modification allows the injection of nitrous oxide into a combustion engine, giving it a temporary but significant increase in power. This may cause damage to the engine, however, so using it for



more than one Combat Turn is not encouraged. The typical system has 6 charges—every Combat Turn of using the nitrous injection consumes 1 charge. During a Combat Turn in which a vehicle uses nitrous injection, increase its running acceleration by +20. After the second and every subsequent Combat Turn of continuous nitrous injection use, the vehicle suffers damage equal to the total number of Combat Turns that the nitrous injection is in use times 2—this damage can only be resisted with the vehicle's Body.

This modification is only available for diesel or gasoline-powered groundcraft, watercraft, and aircraft. This system can be used, with gamemaster permission, in engines that rely on other fuels, but in that case it represents systems that have a

GEAR AND VEHICLE MODIFICATIONS

Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Off-Road Suspension	1	8	Shop	Vehicle Cost x 25%	4	—
Oil Slick Sprayer	1	10	Shop	500¥	8F	—
Passenger Protection (Rating 1–6)	2	Rating x 4	Shop	Rating x 2,000¥	Rating x 2	—
Personal Armor (Rating 1–10)	2	Rating x 2	Shop	Rating x 500¥	(Rating)R	Armorer
Pimped Ride						
Level 1	1	10	Shop	Body x 50¥	2	Artisan
Level 2	1	20	Shop	Body x 500¥+	8	Artisan

result similar to nitrous injection, even if the exact mechanism is different. In those cases, the gamemaster should increase the difficulty of the modification to suit his tastes.

Off-Road Suspension (All, Wheeled Groundcraft Only):

Off-road suspension provides a set of specialized absorbers that have exactly the opposite effect on a vehicle's maneuverability as the improved suspension upgrade—in this case, it gets better in off-road surroundings while its on-road abilities are reduced. The on-road Handling suffers a reduction of -1, while the off-road Handling gets a bonus of +1. This mod is usually combined with off-road tires (p. 106).

Oil-Slick Sprayer (Standard, Groundcraft Only):

Some things never go out of date, and the good old oil-slick still does the trick if you want to shake off pursuers. This device consists of an electric hydraulic cylinder, an oil reservoir, and a multi-nozzle sprayer. Once activated with a Free Action, it sprays a sheet of teflon-powdered oil onto the street, turning the ground right behind the vehicle into hazardous terrain for most types of groundcraft except hovercraft (even vehicles with caterpillar tracks may be in trouble, if their tracks are equipped with cushions to prevent them from destroying pavement), raising the threshold on all vehicle tests by +2 (see *Vehicle Combat*, pp. 167, *SR4A*). The oil-slick sprayer has 6 charges, and a complete refill costs 50¥.

Instead of oil, the sprayer can be filled with another liquid chemical—see *Chemtech*, p. 80, for other options. If the sprayer is filled with other chemicals, watercraft and aircraft may also receive this modification (a crop duster being a good example), but this requires gamemaster approval.

Passenger Protection (Standard):

Considering the amount of damage the runners dish out and expect to receive, it never hurts to have a little bit more protection. The passenger protection modification gives the passenger increased protection in the case of crashes and other Handling mishaps. This includes such precautions as four-point crash harness, specialized additional airbag systems, and in certain cases a fast-drying foam that fills the interior of the vehicle in order to make sure objects inside do not rattle around in the case of a crash. Passenger protection has a rating of 1 to 6. The rating

is added as a dice pool bonus to any tests to avoid damage from vehicular accidents of any sort.

Personal Armor (Standard):

Personal armor is an attempt to protect the passengers from damage inflicted by people outside the vehicle. This includes ballistic cloth lining the interior of the vehicle, bullet- and shatter-resistant glass, interior items made of non-frangible material, and curtains of flexible armor that can be moved into place as needed. Personal armor has a rating of 1 to 10, which is added as a dice pool bonus to any test to avoid damage inflicted by outside sources onto passengers.

Pimped Ride (Standard):

If you are one of the flamboyant bad asses that are so hard that they don't care who knows who they are, the pimped ride modification is your thing. One of the vehicle modifications most common on the streets, it makes your vehicle look anything but common: chrome hubcaps, fluorescent undercarriages, convertible tops, stylized ruthenium paint designs, scrolling holo artwork, raising or lowering, custom grillwork, ear-splitting sound systems, etched crystal windows, shag carpet, and fuzzy dice are just some of the types of accessories that pimped rides have. While a pimped ride may be expensive to keep up, no one will forget who took the loot and got away with it. For the time being, that is.

The *Level 1* pimped ride gives you a +1 dice pool modifier on tests that involve intimidation and reputation in situations where the vehicle's appearance is a factor. *Level 2* gives you a +2 dice pool modifier. Showing off with a custom-looking vehicle is a sure way of raising one's public profile (p. 265, *SR4A*).

Gamemasters should feel free to modify the slots, threshold, cost, availability, and special skills of this modification, as appropriate to the specific features.

Rail Propulsion (All, Groundcraft Only):

This modification turns the modified vehicle into a rail-only vehicle, so it can only travel by means of a rail system. Rail-only vehicles are powered via the rail system, so they have an unlimited operation time (p. 103) as long as the rail system itself remains operational. Rail vehicles are also controlled via the rail system's touch link rather than by wireless link, so they are less vulnerable to hacking. Rail-only vehicles (especially drones) also have the advantage that they don't suffer from recoil (see *Vehicle Weapons and Recoil*, p. 105)



Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Rail Propulsion	— (perm.)/1 (temp.)	16	Facility	Body x 500¥	4	—
Ram Plate	1	8	Shop	Body x 250¥	6R	—
Reflective Hull	1	20	Shop	Body x 300¥	10	—
Removed Manual Controls	1	4	Shop	200¥	2	—
Retrans Unit	1	4	Kit	4,000¥	12	Hardware
Rigger Adaptation	1	6	Kit	2,500¥	4	Hardware
Rigger Cocoon						
Basic	1	6	Kit	1,500¥	8	—
Enhanced	2	10	Kit	4,000¥	14R	Hardware
Road Strip Ejector	1	10	Shop	800¥ + strips	12F	—
Smoke Projector	1	8	Shop	700¥	6R	—



A version of this modification exists in which the rail movement is only temporary, as the system engages rail wheels for a time to allow the vehicle to use train rails.

Ram Plate (Standard, Groundcraft and Watercraft Only): At those times when simply shooting someone doesn't give you satisfaction, it's better to just ram them with the largest vehicle you can find. To make that ramming more effective, equip your vehicle with a ram plate. Using a ram plate means that damage done to the rammed vehicle is raised to the next higher damage value on the ramming table (p. 169, *SR4A*), while the damage to the ramming vehicle remains the same.

Reflective Hull (All): This covers the exterior surface of a vehicle with plates of highly reflective material to distort laser hits. This reduces the AP of laser weapons (p. 41) from -half to 0. This mod is not compatible with smart armor (see *Armor*, p. 132), chameleon coating (p. 134), or suncell (p. 145). Because the surface is so reflective, sensors get an especially strong response from the vehicle, giving +2 to all Sensor rolls targeting the vehicle.

Removed Manual Controls (Standard): Some riggers have so much confidence in their own abilities, or enough confidence in the abilities of the hacker that constructed their Firewalls, that they remove all manual control from their vehicles and control them solely via wireless (or if they're still worried about outside hacking, via a touchlink or fiberoptic cable running to their datajack.) This modification also makes it impossible to control the vehicle without hacking it, thus making it that much more difficult to steal.

Retrans Unit (All): A retransmission unit ("retrans" for short) is a receiver-transmitter that receives transmissions from drones/devices on one end and retransmits them to drones/devices on another. In other words, a retrans unit is designed to sit between two nodes that would normally be out of Signal range with each other, creating a link to chain them together. Retrans units have a default Rating of 6, though some larger vehicles and military models have even higher Signal ratings (at an appropriate increased expense, of course).

Rigger Adaptation (Standard): This upgrade installs a basic black box to allow a rigger to control a vehicle and to "jump" into it if required. While this is a common modification, that doesn't mean that it is any less complicated. A datajack must be installed to allow fiberoptic communication, followed by a Signal 1 wireless system so a rigger can control the vehicle wirelessly from the driver seat, a basic sensor network so a jumped-in rigger can sense the area around the vehicle, and a control system interface to allow the rigger's black box to control the vehicle. All off-the-shelf drones come already equipped with a rigger adaptation.

Rigger Cocoon (Standard): A rigger can jump in and out of vehicles, continually flitting his consciousness from place to place. While doing this, many riggers sometimes forget to peek in on their bodies, and too many riggers die when an opponent simply sneaks up to the rigger's body and pulls the trigger. A rigger cocoon is an attempt to solve that dilemma. It consists of a seat completely surrounded by fire-resistant ballistic cloth, reinforced by metal plates to prevent someone from merely sticking a sword through it, and including cushions and harnesses to keep the rigger from rattling around. In cases where a rigger cocoon is installed in an aircraft, additional measures are included to help the rigger stay conscious in high speed maneuvers. The downside of the rigger cocoon is that the rigger is entirely dependent on sensors and the information that he receives through his commlink. Getting settled into the rigger cocoon takes about a minute, and using the quick-release system takes a Complex Action.

The rigger cocoon has an Armor rating of 20 and a Structure rating of 10 (see *Barriers*, p. 166, *SR4A*). Increase the rigger's dice pool by 5 in all cases where the rigger cocoon can help protect him from damage due to crashing or vehicle maneuvers. This system can of course also be used to protect other passengers, tranquilized extraction victims, and so on.

The enhanced version of the cocoon includes the capabilities of a valkyrie module (p. 146), so the rigger can be patched up and stabilized if the protection fails him.

Road Strip Ejector (Standard): This system ejects a road



Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Satellite Communication	1	6	Kit	500¥	4	Hardware
Searchlight	1	10	Kit	1,200¥	4	—
Self-Repair	1	20	Shop	Body x 1,500¥	16R	—
Sidecar	1	24	Shop	1,500¥	6	—
Signature Masking (Rating 1–6)	Rating	Rating x 6	Shop	Rating x 2,000¥	14F	—
Smoke Projector	1	8	Shop	700¥	6R	—
Smuggling Compartment						
Normal	1	16	Facility	1,500¥	6F	Disguise
Shielded	1	20	Facility	3,000¥+	12F	Disguise
Special Armor Mod (Rating 1–6)	1	12	Shop	Rating x 500¥	8	Armorer
Special Machinery	variable	variable	variable	variable	variable	variable
SunCell	1	16	Shop	Body x 500¥	6	Hardware



strip (p. 106) with a Free Action. The ejector has a magazine that can be loaded with up to 6 road strips of any kind.

Rocket Booster (Standard, Groundcraft and Aircraft Only): This is a major modification of the vehicle's framework to give insane drivers of groundcraft a last resource to escape their pursuers. It consists of four specialized rocket engines, positioned as far to the vehicle's corners as possible. Commanding these engines to fire takes a Complex Action. When fired, they steer the vehicle, lifting it about 5 meters into the air with a trajectory similar to that of a jump ramp, straight in the traveling direction. *Theoretically*, this allows a vehicle to cross an obstacle as large as a truck, train, wall, or gap in the ground. Landing inflicts at least 10 DV to the vehicle (7 DV with off-road suspension, 15 DV with improved suspension), depending on the landing spot, resisted with the vehicle's Body only. The driver or Pilot must make an immediate Vehicle Test with a threshold of at least 4 to avoid a crash. The rocket booster can only be used once, and then it needs to be overhauled and refueled (with a Logic + Automotive Mechanic (10, 1 hour) Extended Test).

For aircraft, the rocket booster mod provides a one-shot use of Level 1 or Level 2 improved takeoff or landing (p. 138).

Satellite Communication (Standard): This mod provides the vehicle with a satellite link (p. 328, *SR4A*) both for communication purposes as well as controlling the vehicle via remote control on extremely extended missions.

Searchlight (Standard): Usually mounted on the front or the doors of a vehicle, the searchlight usually has a 180-degree arc and is controlled wirelessly. It has a maximum candlepower of 7.5 million and can illuminate an area roughly the size of a baseball field from a distance of up to 500 meters. Searchlights are also available in versions that work outside the visible spectrum (infrared for example) for undetected observation. Anyone looking into the spotlight suffers glare modifiers (see p. 136, *SR4A*).

Self-Repair (Standard): With the advance of plastics, some forms of limited vehicle self-repair have become possible through a combination of memory metals that can return to their original shapes and plastic panels that release capsules of liquid plastic when crushed, filling in cracks from the inside. Of course, if the metal is deformed too far or the damage is too severe, there is no way that the material can compensate. However,

for a quick fix while on the road, having that little extra can be essential. For every individual attack that inflicts less than 7 boxes of damage to the vehicle, self-repair automatically repairs 1 damage box. This repair takes 1 full minute to take effect. Self-repair can be used (Body) number of times before it is no longer effective and must be replaced. This mod is not compatible with signature masking (p. 143).

Sidecar (Standard, Motorcycles Only): Adding a sidecar to a racing bike is likely to encourage every go-ganger in the 'plex to beat your ass, but if you mount it with a large gun, it should persuade them of the wisdom of your decision.

Adding a sidecar raises the motorcycle's Body by +3, but reduces both its Acceleration and Speed by 20% as well as reducing Handling by 1. The sidecar can carry a passenger, mount weapons, or hold drones, all dependant on the gamemaster's approval.

Signature Masking (All): When you don't want your vehicle to be found, you must mask its signature in some way. To do this, you can use a combination of RAM (radar absorbent materials), thermal masking in order to reduce the thermal spikes that would attract attention, and a moderate reshaping of the vehicle's exterior in order to scatter signals. Signature masking is rated from 1–6 and reduces the dice pool of all attempts by sensors to locate or lock onto the craft by an amount equal to the signature masking rating or the searcher's Sensor rating, whichever is lower. This mod is not compatible with self-repair (p. 143).

Smoke Projector (Standard): An old design that still serves its purpose, the smoke projector can fill an area with thick smoke (or thermal smoke) in a couple of seconds. Once activated with a Free Action, it covers an area with a diameter of 20 meters after the first Combat Turn and 30 meters after the second Combat Turn. The cloud obscures vision, applying visibility modifiers for smoke or thermal smoke to all relevant tests. It lasts for approximately 10 Combat Turns (less in windy areas, longer in confined areas at the gamemaster's discretion). The projector has 6 charges, and a complete refill costs 50¥.

The most common use of this device is to hide a non-moving vehicle from view or to cover its retreat, but the smoke can also be used in chase combat, raising the threshold of all Vehicle Tests in the area directly behind the vehicle by +1 (see *Vehicle*



Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Termination System						
Basic	1	20	Shop	500¥	8R	Hardware
Enhanced	1	24	Shop	700¥ + gas	10R	Hardware
Self-Destruct	2	30	Shop	1,000¥	12F	Demolitions
Torpedo Launcher	1	8	Shop	2,000¥	12F	Armorer
Touch Sensors	1	16	Shop	Body x 500¥	8	Hardware
Tracked Vehicle	1 (perm.)/2 (temp.)	20	Facility	Body x 1,000¥	4	—
Turbocharger	1	10	Shop	Accel. (Running) x Body x 20¥	4	—
Unstable Structural Agility	4	24	Facility	Body x 5,000¥	12R	—
Valkyrie Module	2	6	Kit	2,000¥	10	Hardware



INCOMING FEED.....

Combat, p. 167, *SR4A*). This can be combined with the oil-slick sprayer (p. 141), both activated with a single Free Action, inflicting an overall threshold modifier of +3.

Instead of smoke charges, the projector can be filled with another gaseous chemical—see *Chemtech*, p. 80, for suggestions—if the gamemaster so approves.

Smuggling Compartment (Standard): Despite their public appreciation for capitalism, usually the megacorps and governments find some reason to disapprove of the poor shadowrunner who's just trying to fulfill a need for an item that may be considered illegal in some jurisdictions. In that case, the items have to be smuggled, and smuggling compartments are intended hide items from the prying eyes of inspectors and other ne'er-do-wells. Even when searches are particularly determined, the Concealability rating for items in smuggling compartments is -6, though certain items in the compartment can be detected in other ways (such as radioactive materials showing up on Geiger counters, or explosives being found by chemical sniffers).

Shielded smuggling compartments are specially designed to carry cargo in a way that blocks certain sensors from detecting it. Each type of shielding must be specified, and a compartment may be shielded more than once. For example, an airtight compartment would defend against chem sniffers, a wi-fi negating compartment would protect against radar scans, a lead compartment would shield radioactive material, a biofiber compartment would block astral scans, and so on.

The gamemaster has final say over what can and cannot fit into a smuggling compartment, as appropriate to the vehicle type. You can't hide a dwarf in a medium drone for example, but you could stash a pistol. At the gamemaster's discretion, smuggling compartments that are large for a particular vehicle type may take up extra slots.

Special Armor Modification (All): A vehicle can be made more resistant to certain types of damage by exchanging its components with more robust materials. Special armor modification works in the same way as personal armor modification (see p. 50 or p. 327, *SR4A*). Each armor mod is available in a rating between 1 and 10, and protects both the vehicle and its passengers. This modification is available for Chemical Protection, Fire Resistance, Insulation, Nonconductivity, and Radiation Shielding. It can be taken more than once, each time for a different version.

Special Machinery/Storage (All): There are dozens of different types of special equipment that vehicles can mount, such as dozer blades, cranes, or cold storage to transport goods. This modification requires some gamemaster interpretation, but as a guideline the slot cost for a modification is approximately a quarter of the size of the modification itself (a large dozer blade may have a Body size of 8, for instance). External special machinery can also be modular, so it can be swapped with a Logic + Automotive Mechanic (10, 5 minutes) Extended Test.

A special cargo hold with specific requirements would have a slot cost of about a quarter the Body size of the goods that would fit inside it. Instead giving strict numbers, the gamemaster should adjust them as he needs them for his campaign.

SunCell (All): While every vehicle has a basic solar power collection system embedded in its paint, the SunCell system is a more expansive and thorough system, squeezing much more power out of the sun's rays. In daylight the vehicle's operation time (p. 103) is doubled, and as long as the sun is clearly visible, the vehicle will recharge up to its half of its operation time at a rate of two hours of recharging for each hour of operation time. SunCell is not compatible with smart armor (see *Armor modification*, p. 132), chameleon coating (p. 134), or reflective hull (p. 142).

Termination System (All): The termination system is an independent system hidden deeply within the vehicle's functions. When activated by a wireless signal, it locks the occupants inside and immediately shuts down all of the vehicle's systems, bringing it to a halt. It can be set to just freeze the vehicle's on-board electronics until a different signal is sent, or to fry them beyond repair. In the *enhanced* version, the system also releases a gas (which must be purchased separately) into the vehicle's passenger compartment (see *ChemTech*, p. 80, for some options). In the *self-destruct* version, the vehicle is packed with explosives that detonate the vehicle, destroying it entirely and dealing 20P Damage (AP -5) to all occupants (already taking the "chunky salsa effect" into account), and blast damage with a DV of 14P(f), AP +5, and a Blast value of -1/m to everyone outside the vehicle.

Torpedo Launcher (Standard, Aircraft, Watercraft, Hovercraft, and Amphibious Groundcraft Only): This is an upgrade for a weapon mount (p. 146), turning it into launching device for torpedoes (please note, that the torpedo launcher does not necessarily need to be located below the waterline, but can instead be installed on the deck of a ship or the belly of an aircraft, from where the torpedoes are launched into the water). A normal weapon mount can be turned into a *small torpedo launcher*, while a reinforced weapon mount can be turned into a *large torpedo launcher*. As an alternative, the weapon mount can be fitted with a weapon capable of or modified to shoot underwater (see the extreme environment modification, p. 135).

Touch Sensors (All): For riggers, controlling a vehicle often gives them the illusion of using the vehicle's skin as their own. With this modification, this illusion becomes one step closer to reality. The exterior of the vehicle is covered with sensors that allow the vehicle to sense the surrounding world by touch. These sensors give the sensations of heat, cold, pressure, wind, and so on to the jumped-in rigger, and in extreme cases when the rigger is hotsimmed into the vehicle, they also provide the sensation of being shot when the vehicle takes damage. Even if a rigger is not jumped in, the data is still collected, though it is not intuitively understood in the same way as when the rigger is experiencing it directly from a sim module. Riggers get a +1 dice pool modifier to Perception/Sensor Tests where this touch sensitivity may play a factor and a bonus of +1 to Handling, but suffer from a -2 dice pool modifier to resist biofeedback Stun damage (see *Jumping In*, p. 245, SR4A). Touch sensors are not compatible with smart armor (see *Armor*, p. 132).

Vehicle Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Vehicle Tag Eraser	1	8	Shop	Body x 250Y	6F	Hardware
Walker Mode	2	10	Shop	Body x 500Y	4	—
Winch						
Standard	1	10	Shop	600Y	2	—
Enhanced	2	16	Facility	5,000Y	8	—
Workshop	1	20	Facility	10,000Y	10	—
Workshop Forge	1	20	Facility	50,000Y	20R	Hardware
Weapon Mount						
Normal Size	1	6	Kit	1,500Y	8F	Armorer
Reinforced Size	2	10	Kit	4,000Y	10F	Armorer
External Visibility	—	—	—	—	—	—
Internal Visibility	+2	+6	Shop	+1,000Y	+2F	—
Concealed Visibility	+3	+10	Shop	+4,000Y	+4F	Disguise
Fixed Flexibility	—	—	—	—	—	—
Flexible Flexibility	+1	+6	Shop	+2,000Y	+2F	—
Turret Flexibility	+3	+16	Facility	+5,000Y	+6F	—
Heavy Turret Flexibility	+4	+24	Facility	+15,000Y	+8F	—
Manual Control	+1	—	—	—	—	—
Armored Control	+2	+10	Shop	+2,000Y	+2F	—
Remote Control	—	+6	Shop	+500Y	+2F	-V



Tracked Vehicle (All, Groundcraft Only): Sometimes it is necessary to go truly off-road, and in those cases tracks are still the best solution. In some cases, runners have been able to get away with a *temporary track system*, where the tracks can be taken on and off as needed (requiring a Logic + Automotive Mechanic (10, 1 hour) Extended Test).

The Speed of a tracked vehicle is cut in half (round up). The on-road Handling suffers a reduction of -1, while the off-road Handling gets a bonus of +3. Tracked vehicles also have advantages in that they can move through terrain where even an off-road wheeled vehicle would get stuck, cross trenches, and climb extreme angles.

Turbocharger (Standard): The turbocharger allows for sudden bursts of acceleration, giving a bonus of +5/+10 to the Acceleration value. The modification can be taken more than once, up to a maximum slot value of 4 or the vehicle's Body, whichever is lower. Microdrones can take it only once.

This mod is only available for diesel or gasoline-powered groundcraft, watercraft, and aircraft. This system can be used, with gamemaster permission, in engines that rely on other fuels, but in that case it represents systems that have a similar result as a turbocharger, even if the exact mechanism is different. In those cases the gamemaster should increase the difficulty of the modification to suit his tastes.

Unstable Structural Agility (All, Aircraft Only): This is a radical modification in which the surfaces and control areas of the aircraft are altered to the point where the vehicle is aerodynamically unstable, and it is only through the aircraft's continuous computer-controlled readjustments that it remains airborne. This modification is a favorite of stunt pilots, since the aircraft doesn't really want to remain in the sky, thus it can pull off the most amazing maneuvers by selectively un-controlling the computer-assisted surfaces and turning the systems back on in time to prevent a nearly inevitable crash. This modification improves the aircraft's Handling by +3. The aircraft is now heavily reliant on its computer system, however, so if a hacker manages to compromise the system or something else goes wrong, the aircraft's Handling is reduced by 4 (do not count the +3 either) until the computer is able to reestablish control.

Valkyrie Module (Standard): The valkyrie is a mobile stabilization unit and medical shop. Patients hooked up to the valkyrie are automatically stabilized (see p. 253, *SR4A*) and can be operated on remotely (see *Remote Medical Operations*, p. 125, *Augmentation*). The valkyrie module is equipped with a Rating 4 medkit, and with a skilled operator can conduct basic surgical operations.

Vehicle Tag Eraser (All): With the ubiquity of tagging, what can one do to make sure that a vehicle is not electronically tagged or otherwise traced? Sometimes the crudest solution is the best: to wit, a mesh that serves as a tag eraser (p. 330, *SR4A*) installed under the skin of the vehicle, in the undercarriage, and in the wheel wells so that as the tires rotate, they are brought close the skin of the car. This modification allows the vehicle to erase all RFID tags that may be attached to it. The downside that it will erase *all* RFID tags, including friendly ones, and does not do anything to RFID tags that are already inside the vehicle. The vehicle tag eraser can be activated with a Simple Action,

but it automatically puts all of the vehicle's electronics into a suspended mode in order to protect them. This suspension lasts for one full Combat Turn, during which the vehicle's sensors may not be used and it may not be controlled electronically (manual only). If the vehicle is moving and uncontrolled, it will coast for that full Combat Turn. At the gamemaster's discretion, an activated vehicle tag eraser may also impede the communications of anyone inside the vehicle during that Combat Turn, reducing Signal ratings by -2.

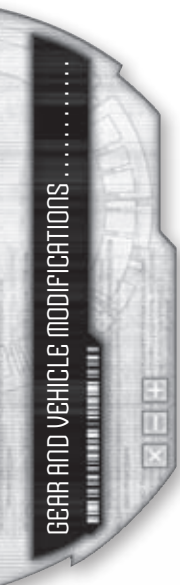
Walker Mode (All, Groundcraft of Body 10 or Less Only): The transport mechanism of the drone or vehicle is completely swapped out for one that turns it into a walker, or at least provides it with multiple independent wheels or tracks so that it can handle most obstacles with the same ease as a human. For smaller drones, the walker option can feature multiple legs, with a configuration similar to that of an insect or spider, while larger drones or vehicles are typically made bipedal, turning them into the classical representation of robots. Speed and Acceleration are halved (round down), while Handling is increased by +1 and the vehicle's ability to pass hazardous terrain is greatly improved.

Winch (Standard): The winch is a handy tool with countless possible applications, especially when in the wild or breaking and entering. It is equipped with 100 meters of sturdy steel cable and an automatic hook that has to be attached manually, but that can be released via wireless command. The whole system is able to support a weight of up to 10 tons, provided that the vehicle itself is heavy enough to lift this weight (or fixed to the ground). There is an *enhanced* version commonly found in rescue vehicles, in which the hook is replaced with an industrial strength gecko patch that can be activated via wireless command, and the vehicle comes equipped with stabilizers that doubles its apparent weight for lifting purposes. However, sometimes the gecko patch, if not carefully placed, will literally rip away part of the lifted object.

Workshop (Standard): A vehicle workshop is a mobile version of a shop (see *Tools*, p. 332, *SR4A*). Workshops are generally not meant to be used while the vehicle is in motion, though the gamemaster may permit some limited amount of work (perhaps treating the tools as a kit rather than a shop, and adding further limitations if the project being worked on is too large to fit within the vehicle). For one additional slot, you can even fit in a workshop desktop forge (see *Desktop Manufacturing*, p. 130), which allows the workshop to do the work of a facility, albeit with the limitations inherent to a desktop forge.

Weapon Mount (Standard)

If you want to arm your vehicle with a weapon, you need a weapon mount. This is one of the most common but also most complex modifications in terms of different variations to choose from, so it has been subdivided it into 4 steps: Size, Visibility, Flexibility, and Control. In each step, you choose one of the presented options, and then add up the Slot, Threshold, Cost, and Availability ratings to get the overall value of the modification. The highest-ranking tool required for any of the chosen options will be the tool necessary for the entire modification. The modification and its costs do not include the weapon itself; that must be purchased separately.

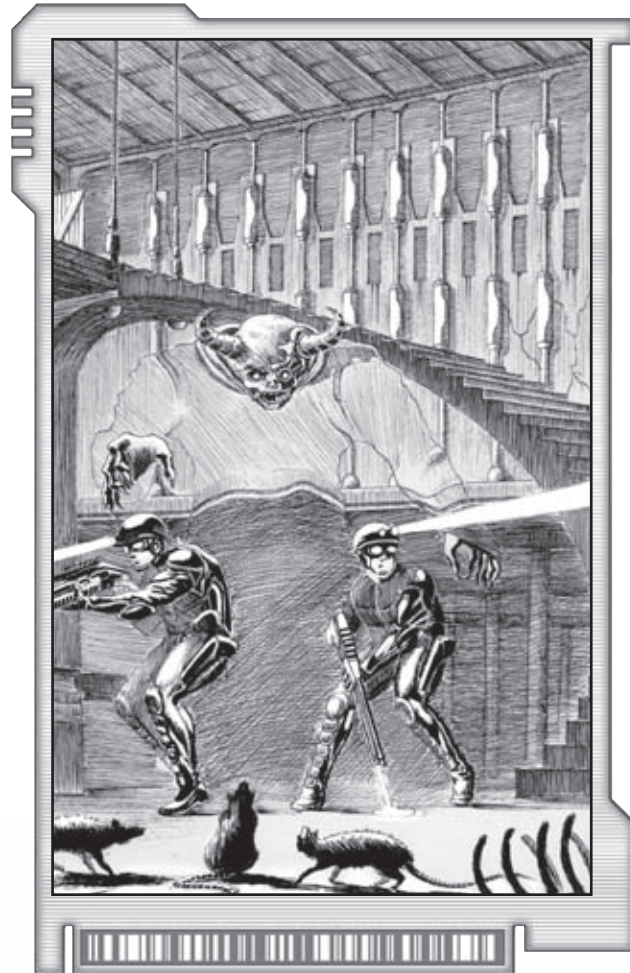


Size: The size of a weapon mount determines which weapons you can mount into it. A *normal* weapon mount can hold a firearm of up to LMG size, while a *reinforced* weapon mount can hold firearms larger than LMG size. As a general rule, one normal weapon mount can be added to a vehicle for every 3 points of Body it has, rounded up. One reinforced weapon mount counts as two normal weapon mounts. Each weapon mount can also hold up to 250 rounds of ammunition, if the weapon has a beltfeed loading mechanism. Weapons with other loading mechanisms or larger ammunition (rocket launchers, for example) are restricted to their standard amount of ammunition.

The time it takes to mount and unmount a weapon depends largely on the type of weapon, as well as the design of the weapon mount and where it is attached to the vehicle. In most cases, assume that manually mounting or unmounting a weapon takes 2 minutes each.

Visibility: The *external* version of the weapon mount attaches the weapon to the outside of the vehicle. This increases the vehicle's Signature (see p. 171, *SR4A*) by +1, and may raise eyebrows or attract law enforcement in certain areas. The *internal* version puts the weapon into the inside of the vehicle, only revealing it when it is used. Internal weapon mounts have a Concealability modifier of -2. The *concealed* version is the same as the internal version, but is also hidden by special flush panels, providing a Concealability rating of -6 to notice that the vehicle is armed.

Flexibility: The basic weapon mount configuration can hold a *fixed* weapon, but unfortunately sometimes shadowrunners' opponents refuse to stand still in front of their vehicle. In those cases, weapons need to be mounted on more adjustable mounts so that they can be aimed. *Flexible* mounts have a roughly 90-degree field of fire (horizontal and vertical), while a *turret* mount has a full 360-degree rotation and a vertical fire arc of 90 degrees, which means that



GEAR AND VEHICLE MODIFICATIONS

Weapon Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Additional Clip	2	20	Facility	Weapon Cost	10R	—
Advanced Safety						
Basic System	1	6	Kit	100¥	—	—
Immobilizer	1	6	Shop	200¥	6	—
Self-destruct	1	10	Shop	300¥	8F	Demolitions
Explosive Self-destruct	2	16	Facility	400¥	10F	Demolitions
Glue Trap	1	10	Shop	400¥	8	—
Spring Trigger Spike	1	8	Shop	300¥	8	—
Electro Shocker	1	8	Shop	500¥	8R	—
Pain Inducer	1	10	Shop	2,000¥	8R	—
Ammo Skip System	1	16	Shop	250¥	8R	—
Barrel Extension	1	20	Facility	Weapon Cost	8R	—
Barrel Reduction	1	6	Kit	20¥	4R	—
Bayonet Mount	1	4	Kit	20	2	—
Camera Upgrade	1	6	Kit	Enhancement Cost	6	Hardware
Camouflage Ghillie Shroud	1	10	Shop	100¥	4	—

a hemispherical area—usually on the vehicle’s roof—is covered. The *heavy turret* mount is available for vehicles with a Body rating of at least 14. It holds one main gun (see p. 123) with a 360-degree rotation and a vertical fire arc of 30 degrees. The gamemaster is encouraged to restrict the use of turrets and/or heavy turrets to a maximum of one turret per vehicle and impose other restrictions, based on common sense. For example, a tank style vehicle may hold one heavy turret with a standard turret for air defense on top of it, and small aircraft designed for speed maneuvers might not be appropriate to hold any turrets.

Control: *Manual* control means that the weapon mount must be manned by a crew member. The gunner is not protected while firing the gun, unless the *armored manual* control option is chosen. *Remote* control means that the weapon can only be fired by remote control. If for some reason a character wants to have a weapon mount that can both be manned *and* fired remotely, he can combine both options, adding them together.

WEAPON MODIFICATIONS

These rules may be used to modify any type of weapon, though they are primarily intended for modifying firearms.

WEAPON MOD NOTES

The following additional rules apply to weapon mods.

Modifications vs. Accessories

Some of the weapon modifications presented in this list are also available as firearm accessories. The difference between the two of them is that accessories can be installed without requiring extensive mechanical knowledge, while modifications require an application of the modification rules mentioned at the beginning of this chapter.

Please note that a firearm can only hold one upgrade of a type, either from a modification *or* from an accessory. Once a firearm holds a modification of a particular type, it cannot be further equipped with an accessory of that type. On the other hand, if a weapon has an accessory attached to it, this accessory must be removed before a modification of the same type can be installed.

If an off-the-rack weapon comes with certain upgrades like smartgun, gas-vent system, etc., it is assumed that those upgrades are modifications instead of accessories. However, those modifications do not count toward the slot limit and the weapons themselves still count as unmodified.

Restrictions to Recoil Compensation

Not all methods of recoil compensation are cumulative in their effect:

- Recoil compensation from an auto-adjusting weight, bipod, foregrip, gyromount, sling, tripod, or underbarrel weight are not cumulative with each other (except that the compensation from a foregrip and sling can be combined into an overall recoil compensation of 2).
- Recoil compensation from a folding stock, hip pad, rigid stock, shock pad, or sling are not cumulative with each other.
- Recoil compensation from a gas-vent system is not cumulative with that from any other gas-vent system.

- Recoil compensation from electronic firing and personalized grip are not cumulative with each other.
- Recoil compensation from a heavy barrel is cumulative with all other recoil compensations.

Smart or Not?

A standard weapon is considered a “dumb” device with no Device rating and no wireless connection, so it cannot interact with the Matrix nor can it be manipulated through it. This is the case for most melee and thrown weapons. Many 2070-era firearms, however, are equipped with a smartgun system, either off-the-rack, as an internal or external firearm accessory, or as a weapon modification. These weapons are considered smart weapons with a Device rating of 3 and a wireless connection, as well as the basic equipment that comes with a smart system (laser range finder, small camera, sensors to keep track of heat buildup and ammunition, an automatic gun mode switch, and clip ejection). Some of the weapon modifications listed below require a weapon to be a smart weapon.

Terminology

The following terminology is used in the *Weapon Modification Listing* below.

Slots: The number of slots filled by a modification. Weapons have a standard maximum slot value of 6, though the gamemaster may adjust this as he feels appropriate.

Threshold: The threshold of the Extended Tests for the modification and for locating the relevant building plans.

Tools: The tools necessary to perform the modification: kit, shop, or facility.

Cost: The cost for acquiring the necessary materials.

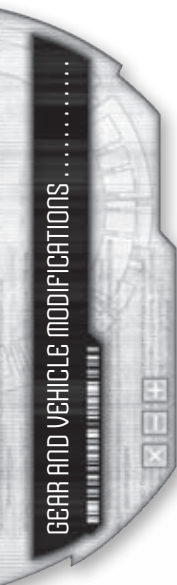
Availability: The availability of the necessary materials.

Special Skill: Additional skills (if any) necessary to perform the modification.

WEAPON MODIFICATION LISTING

Additional Clip: The weapon has been radically modified to take an additional clip (i.e., both clips are loaded at the same time). If the weapon is a pistol, both clips are at 75% of their original capacity, while in the case of larger weapons the clips retain their original capacity. This modification adds +2 to Concealability. If the gun is a smartweapon, the character can switch between the clips with a Free Action, otherwise a Simple Action is required.

Advanced Safety (Smartguns Only): All firearms come readily equipped with one or more mechanical safety systems to prevent them from firing accidentally. Smartguns can also be equipped with an advanced safety system, just like the accessory described on p. 32. Basic advanced safety systems are equipped with either a biometric scanner (see p. 263, *SR4A*) embedded into the weapon’s grip and/or butt or a system that scans for an authorized RFID tag or PAN within the immediate proximity (1 meter, functioning much like a maglock cardreader system, p. 263, *SR4A*). Only when a person whom the system has previously identified as a permitted user is holding the gun, can its safety be switched off. The default Device rating for these systems is 3.



The basic system can be further upgraded with special theft-repellent options. When a person not previously identified as an authorized user touches the weapon, the system will activate. (Alternately, the theft repellent can be a mechanical trap with no electronic parts—anyone holding the weapon's grip trips a timed mechanism that can only be stopped by pushing a hidden button in time.)

Several defense mechanisms are available: The *immobilizer* freezes all mechanical parts of the weapon so that it takes an Armorer toolkit and a Logic + Armorer (10, 5 minutes) Extended Test to get it back into shape. The *self destruct* destroys the weapon itself, so it can no longer be used. The *explosive self destruct* rigs the weapon with explosives that will not only destroy the weapon, but also cause 10P(f) blast damage with an AP value of +5 (AP -4 for the person holding the weapon) and a Blast value of -2/m. The *glue trap* is a combination of the immobilizer function and a Rating 5 adhesive

(see p. 80) that glues the unauthorized person's hands to the weapon. The *spring trigger spike* injures the person holding the weapon with a 4P damage attack—only armor that includes hand protection protects against this kind of damage, and it can also result in the impairment of the hand (gamemaster's decision). The *electro shocker* delivers 5S(e) damage to the person holding the weapon; it has three charges. The *pain inducer* delivers a Power 5 toxin attack against the person holding the weapon—failure means that the person drops the weapon; it also has three charges.

Each theft repellent modification can only be installed once, but a character can choose to install more than one type of theft repellent (one at a time).

Ammo Skip System (Smartguns Only): This allows the character to skip through the ammunition of his gun. For example, a character could load the first 10 shots of his clip with gel rounds for non-lethal purposes, and the remaining shots

Weapon Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Ceramic/Plasteel Components						
Level 1	1	16	Facility	Weapon Cost x 2	12F	—
Level 2	1	24	Facility	Weapon Cost x 3	16F	—
Level 3	1	40	Facility	Weapon Cost x 6	20F	—
Chameleon Coating	2	10	Shop	1,000¥	10R	—
Custom Look						
Level 1	1	8	Shop	100¥	2	Artisan
Level 2	1	16	Shop	1,000¥	8	Artisan
Easy Breakdown						
Manual	1	24	Shop	Weapon Cost	8R	Industrial Mechanic
Powered	2	30	Facility	Weapon Cost + 200¥	10R	Industrial Mechanic
Electronic Firing	2	16	Facility	1,000¥	10R	—
Endoscope	1	8	Shop	300¥	8	—
Exchangeable Weapon Mod	as mod	+4	Shop	+50¥	+2	—
Extended Clip	1	4	Shop	500¥	4R	—
Drum	2	16	Facility	1,000¥	6R	—
Extreme Environment Mod						
Level 1	1	6	Shop	100¥	8R	—
Level 2	4	36	Facility	Weapon Cost x 3	16R	—
Firing Selection Change						
Small Mod	1	10	Shop	300¥	4R	—
Large Mod	4	40	Facility	Weapon Cost + 2,000¥	12F	—
Flashlight	1	6	Kit	Flashlight Cost	—	—
Folding Stock	1	4	Kit	30¥	2	—
Powered Folding Stock	1	8	Shop	100¥	6	—
Foregrip	1	8	Shop	50¥	—	—
Gas Vent 2	1	4	Shop	200¥	4R	—
Gas Vent 3	2	8	Shop	400¥	6R	—
Gecko Grip	1	10	Kit	100¥	6	—



with explosive rounds. When the shit hits the fan, he can skip the remaining gel rounds to get to the good stuff. In all but revolvers, the weapon simply ejects the skipped ammunition. The character simply takes a Free Action and ejects 1 round if in semiauto mode, 3 in burst fire mode, or 5 in full auto mode. If the character takes a Simple Action, he can increase that to 1 (SS), 3 (SA), 6 (BF), or 10 (FA) rounds. In the case of revolvers, the cylinder simply spins to the selected round with a Free Action.

Barrel Extension/Reduction: Extending a firearm's barrel increases each of the weapon's range categories by 10% and adds +1 to Concealability. Reducing the barrel decreases the range categories by 20% and reduces Concealability by 1. Shotguns that have their barrels reduced (sawed off) cannot use the narrow spread.

Bayonet Mount: The bayonet mount allows the attachment of a bayonet (see p. 32) without using up the barrel mount, as it usually does. The bayonet is bought separately.

Camera Upgrade (Smartguns Only): This modification upgrades the guncam with vision enhancement systems (p. 333, *SR4A*). It can be taken more than once, each time adding a new vision enhancement system.

Camouflage Ghillie Shroud: The weapon is covered in a shroud designed to break up its silhouette. The shroud has a color scheme designed to match an environment (urban, forest, desert, etc.). It provides a -4 Concealability modifier when used in an appropriate environment, or a +2 Concealability modifier in an inappropriate environment.

Ceramic/Plasteel Components: This modification replaces the metal components of a gun with ceramic/plasteel components to increase the difficulty of detecting the weapon via MAD systems. There are three levels of replacement: *Level 1* provides a -2 dice pool modifier to detection tests, *Level 2* provides a -4 dice pool modifier to detection tests, and *Level 3* makes a weapon undetectable by MAD systems. This modification cannot be combined with the reduced weight mod (p. 153).

For the cost modifier you do *not* use the weapon's basic cost, but its actual cost (basic cost + all previous modifications), because all those parts must be replaced in order for the modification to function properly. Likewise, when further modifying a weapon with the ceramic/plasteel components modification, apply the cost modifier to the material costs of the new modification and raise its Availability to that of the ceramic/plasteel modification, unless it is already higher. For example, if a character wants to modify a Level 3 ceramic/plasteel rifle with a gas-vent 3 system (400¥, Availability 6R), he has to pay 2,400¥ (6 x 400) and the Availability for the material is not 6R but 20F.

Chameleon Coating: A coating of ruthenium polymers is added to weapon. A character wearing a chameleon suit and carrying a weapon larger than pistol size needs this modification to receive the full bonus of the chameleon suit (otherwise it's reduced to -2). This modification applies a -4 Concealability modifier.

Custom Look: Over the years, shadowrunners have found dozens of ways to intimidate and frighten their opponents, but none of them are as effective as simply pointing a gun in someone's face. The more menacing and personalized the gun,

the more the person on the wrong end sees nothing but the gun and that big empty barrel pointing at them. Thus, having a signature piece that is embossed or engraved, with a pearl grip, tinted steel, or even a solid gold barrel always has an effect on people, though sometimes it ends up making it harder for its user to remain undetected or unremembered.

Level 1 custom look gives you a +1 dice pool modifier on tests that involve intimidation and reputation (in situations where you can brandish the weapon). *Level 2* gives you a +2 dice pool modifier. Showing off with custom-looking weapons is a sure way of raising one's public profile (p. 265, *SR4A*).

Easy Breakdown: With this modification, weapons can be modified to easily break down to pieces small enough to be easily hidden (a rifle might fit into a large briefcase, while the parts of a pistol might serve as pieces of jewellery, etc.). *Manual* easy breakdown means that the weapon can be broken down or assembled in 3 Complex Actions. *Powered* easy breakdown means that the weapon can be broken down or assembled in 2 Complex Actions.

Electronic Firing: With this modification, most of the weapon's moving parts are removed and it fires electronically, meaning that an electrical signal detonates the bullet's propellant. This provides 1 point of recoil compensation (for restrictions on recoil compensation, see p. 148) and a -1 dice pool modifier to sound-based Perception Tests when trying to locate where the weapon is being fired from. Electronic firing is usually combined with trigger removal (see p. 153) to further reduce the number of moving parts, but this is not mandatory.

The weapon still includes a loading mechanism that moves the bullet into the chamber, and it requires caseless ammunition.

Endoscope: This modification attaches an endoscope (p. 332, *SR4A*) to the barrel of a firearm, so that the character can use it to see around corners while still holding the gun or even fire the gun around corners while viewing through the endoscope.

Exchangeable Weapon Modification: This is a special option that can be chosen for many of the modifications described in this list (underbarrel weapons are the most likely candidates, but with the gamemaster's permission a character may also choose other modifications to become exchangeable). When designing a new modification, the player character has to announce that this will be an exchangeable modification. Once built, this special type of modification does not become a fixed part of the weapon but rather a standalone object that can only be attached to a weapon via a powered slide mount (p. 152). The number of slots mentioned in the modification's description becomes the slot size of the exchangeable weapon modification.

Extended Clip: This increases the ammo capacity of a clip. The standard extended clip upgrade increases the ammo capacity of a normal clip by 25% (round up). A larger increase requires the clip-loading mechanism to be exchanged with a drum loading mechanism. This setup, available for SMGs and assault rifles, allows attachment of an ammo drum with an ammo capacity of 50 (+2 to Concealability) or 100 (+4 to Concealability).

Extreme Environment Modification: This prepares a weapon to be used in extreme environments, where unprepared weapons will cease to function after a while or wouldn't work



at all. Note that some special weapons cannot be upgraded for extreme environments (a flamethrower won't work in space or underwater, for example) or are already capable of working in such environments (such as the FN-AAL Gyrojet Pistol, which was originally designed for underwater usage). *Level 1* modifies a weapon to be usable in sandy desert or cold polar environments. *Level 2* modifies a weapon to be usable in all environments, including space and underwater, but this comes with a price: when using the weapon in normal atmospheric conditions, as well as underwater, its range is halved, and it also needs extensive service after firing 100 rounds, requiring 500¥ of material and a Logic + Armorer (10, 1 hour) Extended Test. The Level 2 extreme environment modification includes electronic firing (p. 150) and cannot be combined with the additional clip, ammo skip system, extended clip, gas-vent system, or silencer/sound/thermal suppresser mods.

Firing Selection Change: This modification is not available for weapons using unusual loading mechanisms or exotic ammunition, like the Sakura Fubuki or Pain Inducer. It modi-

fies the gun's selection of firing modes to include more options. Available options are single shot (SS), semi automatic (SA), burst fire (BF), and full auto (FA). Upgrading an SS or SA weapon to BF or FA mode is considered a *large modification*. Everything else (equipping an SS weapon with an SA mode and vice versa, equipping a BF weapon with an FA mode and vice versa, equipping a BF or FA weapon with an SS or SA mode) is considered a *small modification*. It is possible to take this modification more than once, each time choosing a new mode.

Flashlight: This modification adds a built-in flashlight (p. 32) to the weapon, so the user benefits from its visibility modifiers.

Folding Stock: The folding stock provides 1 point of recoil compensation when braced against the shoulder. For restrictions on recoil compensation, see p. 148. As the name suggests, the stock can be folded into the weapon's frame so it is not in the way when it's not needed. Folding and unfolding requires a Simple Action or, when the powered servo-motor version is used, a Free Action.

Weapon Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill
Heavy Barrel	3	16	Facility	Weapon Cost	6R	—
High Velocity	2	30	Facility	Weapon Cost x 2	8R	—
Improved Range Finder	1	10	Kit	1,000¥	6	—
Increased Cylinder	1	10	Facility	500¥	4R	—
Internal Bipod	3	16	Shop	400¥	4	—
Laser Sight	1	4	Kit	100¥	2	—
Melee Hardening	1	16	Facility	300¥	4	—
Metahuman Customization	1	8	Shop	50¥	—	—
Personalized Grip	1	10	Kit	100¥	2	Artisan
Pilot Upgrade						
Rating 1–3	—	10	Kit	Rating x 1,000¥	(Rating x 3)R	Hardware
Rating 4–6	—	10	Kit	Rating x 2,500¥	(Rating x 3)R	Hardware
Powered Slide Mount	mount slot max + 1	8	Facility	3,500¥	8	—
Propulsion System						
Limping	2	16	Facility	3,000¥	10F	Automotive Mechanic
Crawling	5	24	Facility	10,000¥	14F	Automotive Mechanic
Flying	8	36	Facility	20,000¥	18F	Aeronautics Mechanic
Reduced weight	1	24	Facility	Weapon Cost	6	—
Safe Target System	1	6	Kit	200¥	4	Hardware
Silencer	2	10	Shop	400¥	8F	—
Sound Suppressor	3	16	Shop	600¥	12F	—
Revolver Silencer	4	24	Facility	2,500¥	16F	—
Thermal Suppressor	1	8	Shop	200¥	6F	—
Skinlink	1	6	Kit	50¥	6	—
Sling/Lanyard	—	4	Kit	10¥	—	—
Smartgun System	1	8	Shop	Weapon Cost	6R	—
Tracker	—	4	Kit	150¥	—	—
Trigger Removal	—	8	Kit	50¥	2	—
Underbarrel Weapon	3	20	Facility	As Underbarrel Weapon	As Underbarrel Weapon	—
Underbarrel Weight	2	6	Kit	25¥	6	—
Auto-adjusting Weight	4	10	Shop	150¥	10	—
Voice Activation/Response	1	6	Shop	50¥	2	Hardware



Foregrip: The foregrip is an additional handle at the front of the weapon that helps control it when firing, providing 1 point of recoil compensation. For restrictions on recoil compensation, see p. 148. The foregrip also adds +1 to Concealability.

This mod is not available for pistols and hold-outs.

Gas-Vent System: A side effect of the quest for ever larger and deadlier weapons is the fact that increased recoil means that it's getting harder to actually hit targets. Gas-vent systems help diminish the punishing recoil of more powerful rounds by allowing gases to vent through more points than just the barrel opening.

Gas-vent systems can be built into machine pistols, SMGs, assault rifles, and machine guns. They provide recoil compensation equal to their rating. For restrictions on recoil compensation, see p. 148. Characters can have a firearm equipped with a sound suppressor or thermal suppressor (p. 153) and a gas-vent system at the same time; however, the gas-vent system must be turned off in order to receive the benefits from the suppressor. Turning a gas-vent system on and off requires a Simple Action, or a Free Action in the case of smartguns.

Gecko Grip: The grip and butt of the weapon have been covered with tiny fibers that replicate the effect of a gecko's appendages, sticking strongly to whatever it touches—a function that can be turned on and off via wireless command (smartguns only) as well as mechanically by pressing two buttons simultaneously. An activated gecko grip adds a +6 dice pool modifier to any tests to determine whether or not the bearer can hold on to the weapon (this modifier is not cumulative with that of a lanyard). In addition, the character can stick the weapon to virtually any surface.

Heavy Barrel: This provides a rebuilt barrel that is heavier than the original, designed to absorb recoil. A weapon with a heavy barrel provides 1 point of recoil compensation when firing full bursts. For restrictions on recoil compensation, see p. 148.

High Velocity (Full Auto-Capable Weapons Only): This turns the firearm into a high velocity weapon (see *High-Velocity Weapons*, p. 26).

Improved Range Finder (Smartguns Only): The standard laser range finder from the smart system is improved by two additional systems for range measurement: one based on microwave, the other on radar technology. All three systems have their disadvantages, but when added together, finding the exact range to the target becomes much easier, reducing range penalties by 1. This mod is not compatible with the image magnification system accessory.

Increased Cylinder (Revolvers Only): This modification raises the ammo capacity of a cylinder from 6 to 8.

Internal Bipod: This is the fixed internal version of the bipod weapon accessory (pp. 322, *SR4A*). It allows the bipod to be deployed or retracted via wireless command with a Free Action (deploying or retracting a mechanical bipod would require a Simple Action). The internal bipod adds +2 to the weapon's Concealability.

A bipod provides 2 points of recoil compensation when used while sitting or prone. It can also serve as a foregrip (p. 34) by folding both legs into one grip. For restrictions on recoil compensation, see p. 148.

Laser Sight: This modification is the internal version of the firearm accessory of the same name (p. 322, *SR4A*).

Melee Hardening: The firearm has been modified so that it can be used in physical attacks and parrying without damage. Barring unusual circumstances, the weapon will not be damaged or unintentionally discharge during melee combat.

Metahuman Customization: This modification customizes the weapon for troll or dwarf hands (see *Size Customization*, p. 310, *SR4A*).

Personalized Grip: Available for all kinds of ranged and melee weapons that include a handle or grip. The weapon's grip is personalized for one specific person. When using the weapon, this person receives 1 point of recoil compensation in the case of a ranged weapon (for restrictions on recoil compensation, see p. 148.), or +1 dice pool modifier on melee combat rolls in the case of a melee weapon.

Pilot Upgrade (Smartguns Only): Normal smart systems are quite smart—hence the name—but not capable of thinking on their own. For this to occur requires an upgrade to more advanced hard- and software. Heard the old saying that guns don't kill people, people kill people? Not with this modification. A weapon with a pilot upgrade is equipped with a customized Pilot program (see p. 245, *SR4A*) and becomes a drone in all respects (though with the downside of immovability unless you also install a propulsion system). Pistols become minidrones (Body 1, Armor 1, Sensor 1), Longarms become small drones (Body 2, Armor 2, Sensor 1).

Powered Slide Mount: Sometimes it's impractical or downright impossible to put all the necessary modifications into one gun at the same time. To get around this, one or more powered slide mounts can be installed on the weapon. Each such slide mount can hold up to one *exchangeable weapon modification* (p. 150) with a slot size of up to the slot maximum of the slide mount. For example, a slide mount with a slot maximum of 5 could hold one exchangeable weapon modification with a slot size of 1 to 5—it can never hold two or more modifications, even if the size would allow for it. Attaching and removing the exchangeable weapon modifications requires a Simple Action.

Propulsion System (Smartguns with Pilot Upgrade Only): The weapon is equipped with a limited means of propulsion, so the only thing that distinguishes it from a real drone is the fact that it still looks like a weapon. The most common propulsion system is the *limping* upgrade—a set of tiny protrusions that allow a weapon that is lying on the ground to change its facing or move along at very slow speeds (1 meter per minute), unnoticed by all but the most paranoid. More advanced is the *crawling* upgrade, which turns the weapon into the equivalent of a crawler drone of its relevant size, with a Handling of -1, an Acceleration of 2/10, and a Speed of 10. Most advanced is the *flying* upgrade, which works like the limping upgrade, except combined with jet propulsion for airborne movement with Handling -3, Acceleration 2/10, and Speed 10.

Note that a weapon with a propulsion system still counts as a weapon in terms of modifications, so it cannot profit from any drone or vehicle modifications. Due to the small size of its battery pack or fuel tank, the propulsion method has a reduced



operation time (p. 103): 30 minutes for the limping upgrade, 10 minutes for the crawling upgrade, and 2 minutes for the flying upgrade. While the limping upgrade is not distinguishable from a regular weapon, the crawling and flying upgrades are quite cumbersome, so an experienced enemy might spot them. Also, due to their cumbersomeness, a weapon with a crawling or flying upgrade suffers a -1 negative dice pool modifier when used.

Reduced Weight: The weapon's components have been replaced by lighter, advanced materials. Material strength has not been changed, but in cases where the weapon's weight may be important, such as when throwing it, generally assume it has been cut in half. This mod cannot be combined with ceramic/plasteel components or heavy barrel.

Safe Target System (Smartguns Only): This is the internal version of the safe target system accessory (p. 33).

Silencer/Sound Suppressor: This modification works in the same way as the weapon accessories of the relevant names (pp. 322, *SR4A*), but due to its internal nature it provides an improved dice pool modifier of -6 to Perception Tests to notice the weapon's use, rather than -4.

The standard silencer does not work with revolvers and other cylinder-fed weapons; however, a special *revolver silencer* modification is available for such weapons, installing gaskets and sealing the cylinder.

The *thermal suppressor* is a simpler version of the silencer/sound suppressor, reducing only the flash and heat from a firearm's muzzle, but not the sound. It provides a -4 dice pool modifier to Perception Tests to locate the position of the weapon by means of looking for the flash and/or heat signature.

Skinlink: This equips the weapon with a skinlink (p. 328, *SR4A*) in order to make it more difficult to hack. The weapon can be commanded to default to the skinlink, immediately switching to wireless mode if the skinlink is broken.

Sling/Lanyard: A sling attached to a longarm or heavy weapon allows the user to have it ready with a -1 Concealability modifier or unready with a -2 Concealability modifier. Also, the user receives a +2 dice pool modifier on any tests to determine whether he can hold onto the weapon. The sling provides one point of recoil compensation. For restrictions on recoil compensation, see p. 148.

A smaller sling called a lanyard can also be attached to melee weapons and firearms smaller than longarms, providing a +4 dice pool modifier on any tests to determine whether or not the user can hold onto the weapon.

Smartgun System: This modification is the internal version of the smartgun system (p. 322, *SR4A*).

Tracker: Installing a mix of security and stealth RFID tags into your weapon allows you to retrace it if it is stolen. Use the rules for RFID tags (p. 329, *SR4A*).

Trigger Removal (Smartguns Only): The time needed to mechanically pull a trigger might just be the fraction of a second, and the deviation of the barrel due to the movement of the trigger finger just the fraction of a millimeter, but this is enough for many professionals to instead rely on wireless commands. The game effect of removing the trigger is negligible, but the gun can no longer be fired manually.

A weapon without a mechanical trigger can only be fired by wireless command, via skinlink or smartlink, or over a fiber-optic cable that connects the weapon with its user's datajack.

Underbarrel Weapon: Attaching an additional weapon under the barrel of another has a long tradition for all those who aim for tactical flexibility.

For standard underbarrel weapons, see *Weapon Accessories*, p. 32. If you instead want to rebuild a specific weapon into an underbarrel weapon and attach it to the barrel of your gun, you can do so as follows: The ammo capacity of the underbarrel weapon is halved (round up), and it does not profit from any of the weapon's recoil compensations (you can install recoil compensation modifications specifically for it, but those are restricted to gas-vent system, electronic firing, and heavy barrel). Some weapon designs might not be suitable for underbarrel attachment (gamemaster's decision) and the underbarrel weapon cannot be larger than the weapon it's attached to. In most cases, it is practically impossible to hide the whole composition, but for rules purposes assume a Concealability modifier of +4. The underbarrel weapon modification cannot be combined with other underbarrel modifications or accessories that reduce recoil (foregrip, bipod, tripod, underbarrel weight). You cannot attach an underbarrel weapon to another underbarrel weapon.

You may make an underbarrel weapon attach to a powered slide mount (p. 152) with the gamemaster's permission.

This mod is generally only available for longarms, machine guns, and assault cannons. It is also possible to install this system into melee and other unconventional weapons—popular options include single-shot weapons installed in parallel, guns with an under-barrel one-shot shotgun barrel, and smart swords with a small pistol in the hilt to fire a bullet along the blade, etc.

Underbarrel Weight: An *underbarrel weight* at the end of the barrel helps control the recoil, providing 1 point of recoil compensation. The underbarrel weight cannot be used on hold-outs.

An *auto-adjusting weight* moves a heavier weight to the end of the barrel as the weapon fires, providing 1 point of recoil compensation for the first shot of an Action Phase, and 2 points of recoil compensation for the second shot. A weapon firing on FA mode receives 2 points of recoil compensation. The auto-adjusting weight cannot be used on pistols and hold-outs.

For restrictions on recoil compensation, see p. 148.

Voice Activation/Response (Smartguns Only): This is a microphone-loudspeaker combination that allows the user to control the weapon via verbal commands, as well as allowing the weapon to verbally respond with any information it may have. Mercenaries with a sense of humor have been known to give this modification to grenades, then command them to count down to detonation loudly before throwing them, just to watch their opponent's reactions.



... MORE WAYS TO DIE ...

He should have been able to block that last kick. Instead, he felt a welt blossom where the woman's foot had struck him, just above the left eye. That same foot was arcing toward Lainn again, and though he blocked it this time, the force of the impact was enough to rock the elf backwards. His arms were sore and beaten blue. A third kick followed and then a fourth. Lainn's new master, Daerien'rent, looked on as Kala'niach twisted like a dancer, her attacks never coming from the same angle.

"Enough!" Lainn cried shrilly. "I submit."

Kala'niach had a laugh that sounded like a taunt. "You submitted once we began, Samriel."

Lainn made no effort at words. He spit at the ground, shrugged, and did his best to massage out the deep aches that had crept into his arms.

Daerien'rent spoke then in a low voice. "Carromeleg is not a human art. All your training, all your karate must be forgotten if you hope to have a chance at learning here. Our way is like that of the arrow. You must move into the path of danger, strike at the root from which it springs."

Lainn decided then that his master sounded like one of those old kung fu trids that his human father always went on about, and chuckled softly.

"Or perhaps the way of Carromeleg isn't in your blood."

The young elf's face hardened into a sneer. "You bet your ass it is."

Kala'niach smacked Lainn hard across the mouth, a move so quick that the male elf hadn't even seen it coming. She said, "If you can't show respect on your own, I'll beat it into you."

Daerien'rent halted her with a raised hand, addressing Lainn again. "Tell me, how you can hit my student when you spend all of your effort blocking her blows?"

"I can wear her down, draw her into a mistake. If I had forearm guards—"

"If' has no place in combat. We work with what we have and who we are. If you cannot understand that, then you know nothing."

"The fuck I don't. I've been training for three years. Karate, savate—shit, even good old fashioned Irish boxing. Are you trying to say that all that training was worthless?"

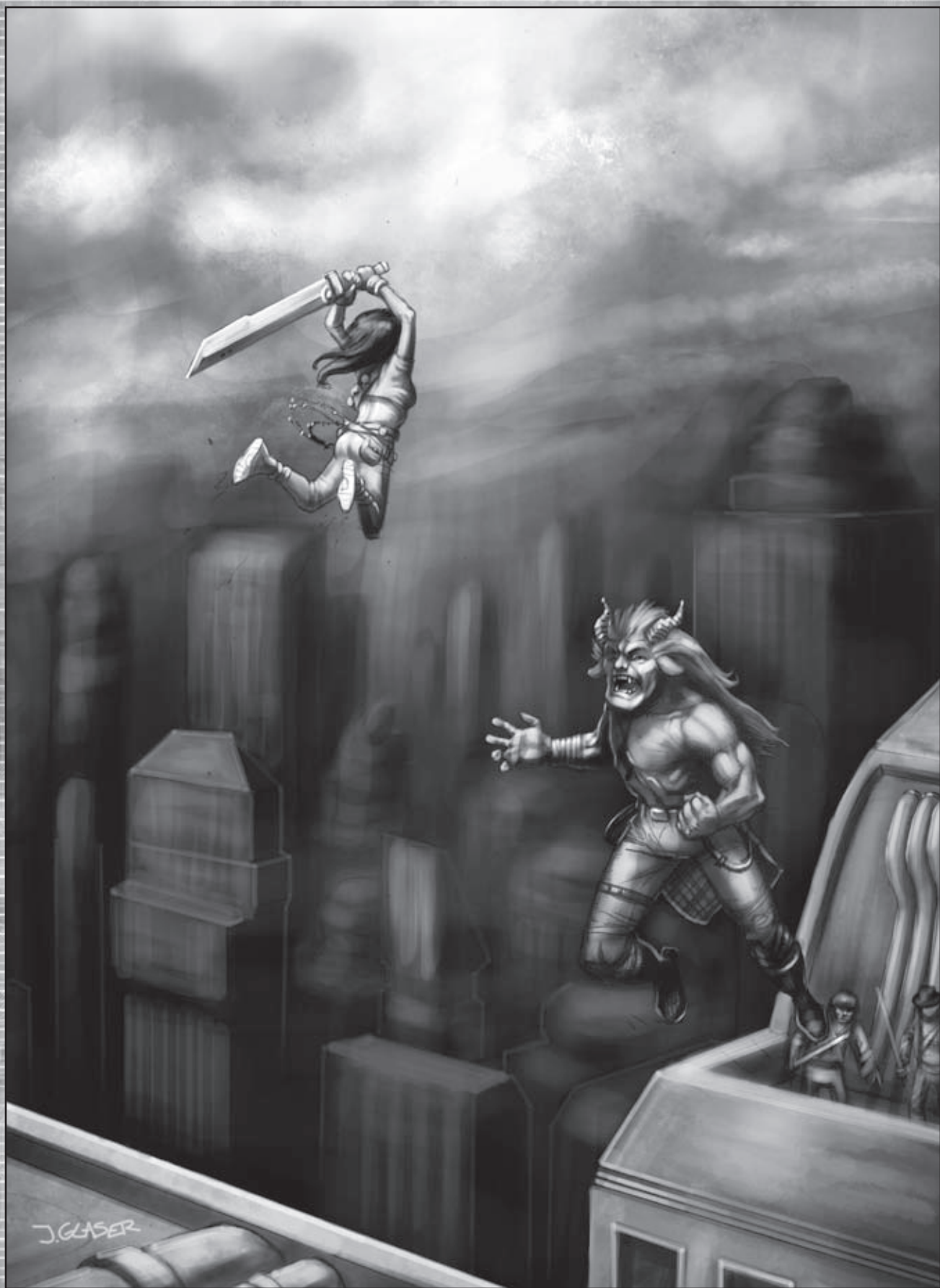
Kala'niach came at him again. He bobbed to the left and snaked out a jab that caught her flush on the chin, and followed through with a kick to her midriff. She fell back a step, glaring and sucking wind.

"There may be hope for you yet, Lainn'niach." Daerien'rent grinned.

"Does that mean you'll take me on?"

Lainn saw a flicker of movement in the corner of his eye. He pivoted on one foot, turning toward Kala'niach as she surged at him, the slightest hint of a smile playing at the corners of her mouth.

"There is still the matter of respect." Kala'niach chuckled. This time Lainn, knew what to do. He relaxed, and stepped directly into her charge.



J. GLASER

This chapter includes expanded rules that detail a number of ways your characters can inflict or receive bodily harm, including martial arts, advanced combat rules, and hazardous environments.

MARTIAL ARTS

The following martial arts optional rules provide a way for characters to expand their melee combat options. Martial arts add a level of variety and complexity to armed and unarmed combat. A martial art represents both a scientific development of a particular form of fighting and an artistic expression of the principles of combat. A character's personal fighting style results from the sum of her training. In the heat of a fight, characters rely on the conditioned reflexes and muscle memory ingrained from repeated training and sparring. More than a collection of tricks, the specialized techniques and training inherent in each martial art combine to form the character's own unique style.

In game terms, a character who wishes to learn a martial arts style must purchase the Martial Arts Positive quality for that style either during character creation for 5 BP, or after character creation by spending twice the BP amount in Karma points. This quality follows all of the normal rules for qualities (see p. 68, *SR4A*).

Learning a Martial Arts Style

Certain martial arts are illegal or controlled in certain jurisdictions, or are considered secrets not to be shared with outsiders, so characters must engage caution when pursuing them or look to black market teachers/providers. In addition to the Karma cost, a character learning a martial arts style during gameplay must pay for the cost of an appropriate instructor or tutorsoft.

MARTIAL ARTS INSTRUCTION COST

Teaching Method	Cost
Black Market Instructor (Skill 1-7)	Instruction Skill x 2,000¥
Certified Instructor (Skill 1-7)	Instruction Skill x 1,500¥
Tutorsoft (Rating 1-4)	Rating x 1,000¥

Once a character has a teacher or tutorsoft, she makes an Intuition + Agility (BP Cost, 1 month) Test. Instructors can make an Instruction Test (see *Using Instruction*, p. 134, *SR4A*) to add extra dice to the learning test. All injury modifiers apply, as do distractions for poor conditions, and so on. Many styles are not available on tutorsoft, and the few living masters with knowledge of such styles require gifts and services other than nuyen before they will pass on their knowledge. A character may learn a style at the same time she learns or improves a Combat skill.

Note that the advantages of martial arts styles may not be conveyed by skillssofts; only real-life training works.

MARTIAL ARTS SPECIALIZATION

In *SR4*, Martial Arts is listed as a specialization (see *Specializations*, p.121, *SR4A*) of the Unarmed Combat skill. If the gamemaster allows, this specialization may be taken for other melee combat skills as well (presuming that the martial arts style used by the character trains for such weapon use). This reflects that the character has enhanced his skill training with a focus on that martial arts style's techniques.

MARTIAL ARTS (POSITIVE QUALITY)

Cost: 5, 10, 15, or 20 BP

Martial Arts represents the character's training in a particular martial arts style. The particular style must be noted when the quality is purchased; additional styles may also be learned, but each requires the quality to be purchased again.

Each style provides a set of specific advantages to certain aspects of melee combat. Only one advantage may be chosen for every level of the quality. For example, at 5 BP the character learns one advantage, at 10 BP, two advantages, and so on.

A character gains the advantages of all martial arts styles she knows; should they overlap, these dice modifiers stack. The maximum number of dice that can be added to or subtracted from a character's dice pool from martial art modifiers is equal to the rating of the relevant Combat skill.

The Martial Arts quality also allows the character to purchase maneuvers (see p. 158).

Urgent Message...

At the gamemaster's discretion, this specialization may not apply to all situations, if he feels the circumstances fall outside of the style's reach. For example, the gamemaster may decide that a character with the Unarmed Combat skill and the Martial Arts specialization in the style of Boxing may not apply his specialization bonus when grappling with an opponent on the ground, as the boxing style does not normally encompass groundfighting techniques.

Jimmy No knows the kung fu martial arts style. After studying with his master, Jimmy specializes in using his kung fu with the traditional butterfly sword; his skill description would be Blades 3 (Kung Fu +2). When Jimmy finds himself armed with only a kitchen knife and fending off an opponent, however, the gamemaster rules that Jimmy's kung fu training did not encompass knife-fighting techniques, so the specialization does not apply to that situation.

MARTIAL ART STYLES

The following martial arts styles are purchased in conjunction with the Martial Arts Positive Quality (p. 156). Each martial arts entry gives the name of the style and the names of technically similar but distinct styles in parentheses, followed by a short description or history of the style and the advantages the character can choose from (only one advantage is gained per 5 BP of quality). The gamemaster should modify these styles or create new ones as he sees fit.

Aikido (Judo, Jujutsu)

A "soft form" martial art designed for defense, Aikido emphasizes circular movements that turn an attacker's strength against him. Aikido and similar arts are practiced throughout the Americas and Asia, particularly in Japan. The greatest living masters run dojos in Kyoto or Neo-Tokyo, and require their students

to study Japanese philosophy in addition to martial arts as they advance. Black belts are highly regulated, requiring a test from a committee of existing black belts.

Advantages: +1 die for Full Dodge; +1 die for Full Parry; +1 die for Subduing; or +1 die on Attacks to Knockdown

Arnis De Mano (Escrima, Kali)

Arnis de Mano is a Filipino art more than a thousand years old. It emphasizes the use of rattan clubs and knives, but also includes a variety of kicking techniques, throws, and sweeps. Arnis de Mano is practiced mainly in the Philippines, though the Japanese occupation forbade its use and actively hunted down and prosecuted those who taught it before the islands were liberated. Despite this repression of the art, it is taught across North America, Europe, and Asia.

Arnis de Mano emphasizes the use of clubs and knives, especially to disarm the opponent—preferably by breaking the weapon (or the hand that holds the weapon).

Advantages: +1 die on Called Shots to disarm; +1 DV on Club attacks; +1 DV on Blades attacks; or arnisadors may inflict damage to their opponent when making a Called Shot to disarm (see p. 161, *SR4A*, or the Disarm maneuver on p. 159).

Boxing (Musti Yudha, Rince an Bhata Uisce Bheatha)

Boxing remains a popular international sport with three separate federations each offering titles in eleven Olympic-based weight classes. Whether bare-knuckle brawling or dueling with gloves, boxing stresses footwork, fortitude, stamina, and punching power. Boxers, or pugilists, are skilled one-on-one strategists taught to use their own strengths against their opponent's disadvantages.

Advantages: +1 DV on Unarmed Combat attacks (may be taken twice, for a cumulative +2 DV), +1 on Defense Tests against unarmed attacks (may be taken twice for a cumulative +2 dice).

Capoeira (Hopak, Kalari-payattu)

This style was originated by African slaves working in Brazil. The movements of Capoeira were disguised as a dance so that the masters would not discover that their slaves were studying martial arts. Because the slaves' hands were manacled, offensive movements focus on kicks and sweeps. Capoeira was taught to the slaves in secret societies called *quilombos*. During the 1900s, these *quilombos*, and even the style itself, became outlawed. In the 2070s, Capoeira is a popular style in Latin American countries, but rare elsewhere. Practitioners are constantly spinning, flipping, and rolling, making them difficult to hit.

Advantages: +1 die on melee dodge (but not block or parry) Defense Tests (may be taken twice for a cumulative +2 dice); +1 die for Gymnastics Dodge; or +1 die on Attacks to Knockdown

Carromeleg

Despite elven claims to the contrary, there is no proof that this martial art existed prior to the Awakening. All of the motion in Carromeleg takes place at the point of attack; a practitioner of Carromeleg will often appear at ease until the last moment. In Sperethiel, a master of Carromeleg is known by the honorific suffix *-rent*.

Elves are fiercely protective of their native art. It is extremely difficult to find a teacher willing to train non-elves. Those who do will only do so for black market prices.

Advantages: +1 die on Surprise Tests when initiating an attack (may be taken twice for a cumulative +2 dice); +1 die for Receiving a Charge; +1 die on Interception attacks (see p. 161, *SR4A*).

Firefight

In 2068, Ares Macrotechnology unveiled a completely new martial arts form based on the popular image of a gunfighter whirling through a melee with a pistol in each hand, shooting as much as punching and kicking. The product found its market in eager young gunslingers raised on a steady diet of trideo action flicks.

Firefight is characterized by distinctive stances that allow proper shooting techniques to be applied regardless of distance to target. In essence, the user is trained to make the weapons an extension of her hands. Firefight is a growing style among Ares Firewatch teams.

Advantages: Reduce the ranged combat “attacker in melee combat” modifier by 1 (may be taken twice, for a cumulative modifier reduction); or +1 die on melee dodge (but not block or parry) Defense Tests

Karate (Kenpo, Soo Bahk Do)

Karate, meaning “empty hand,” is composed of a large number of different styles and schools, most of which have their roots in Okinawan fighting arts developed to circumvent a “no weapons” law. Focusing mainly on punching, kicking, and blocking instead of grappling, karate is the most widely practiced martial art in the world.

Advantages: +1 DV on Unarmed Combat attacks; +1 die for Full Parry; +1 die on melee block (but not dodge or parry) Defense Tests (may be taken twice for a cumulative +2 dice)

Kiai (Tai Chi Ch'uan)

The Japanese art of the “Spirit Shout” gained new popularity after the Awakening when Professor Akiko Kano demonstrated its effectiveness against manifest spirits. Kiai focuses on mental discipline and enhancing the character's chi, which Eastern magicians associate with both mana and life force.

Advantages: +1 DV on Attacks of Will (see *Attack of Will*, p. 94, *Street Magic*—may be taken up to three times for a cumulative modifier); or +1 on Intimidation Tests

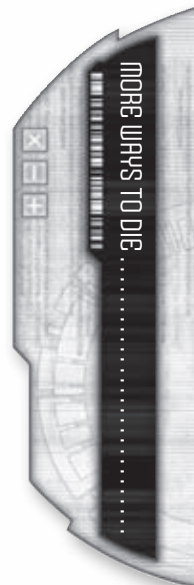
Krav Maga (Hasidut, ROSS)

The official self defense system of the Israeli Defense Force, Krav Maga was also one of the first martial arts developed to deal with modern weapons. Krav Maga's strength lies in its adaptability and focus on dealing with opponents armed with pistols or other firearms, both when the Krav Maga practitioner is armed and when he is unarmed. The greatest living practitioners of Krav Maga are the qabbalistic mystic adepts who train the agents of MOSSAD in self defense.

Advantages: +1 die on Called Shots to disarm; Take Aim (see p. 148, *SR4A*) becomes a Free Action; Ready Weapon (see p. 147, *SR4A*) becomes a Free Action; or reduce the ranged combat “attacker in melee combat” modifier by 1.

Kung Fu (Hwarang-do, Wushu)

“Kung fu” means “skill” or “ability” and is a general term used to describe Chinese martial art styles. Most are generally focused on linear attacks and rely on strength and speed, while others are designed to be used in limited or enclosed spaces.



The various styles of kung fu are practiced throughout Europe, Asia, and North America, but are still most popular in the nations and splinter states that emerged from the fall of China.

Advantages: +1 dice on either block, dodge, or parry (choose one) melee Defense Tests; or +1 DV on Unarmed Combat attacks

Muay Thai (Kickboxing, Savate)

This Thai martial art is often referred to as Thai Boxing because of how closely Muay Thai tournaments are styled after professional boxing matches. Muay Thai began as part of the Thai military's standard training regimen. As time progressed, it flowered into a national pastime. Since the early 2030s, Thai Boxing has been an international sport on par with traditional boxing. Unlike boxing, Muay Thai uses legs, knees, and elbows as weapons, emphasizing swift, brutal kicks and knee strikes. The martial art is well known for its brutality, and is a staple of illegal pit fights.

Advantages: +1 DV on Unarmed Combat attacks (may be taken twice for a cumulative +2 DV); +1 on Defense Tests against unarmed attacks; +1 Full Parry

Ninjutsu

The martial art used by the legendary ninja, Ninjutsu focuses on stealth and the use of all types of weapons. Unarmed forms of the art, however, are just as deadly as the weapon-wielding forms.

Ninjutsu developed in Japan approximately five hundred years ago and has been maintained by secret organizations ever since. These organizations, or ninja clans, are jealous guardians of their knowledge, and students must swear loyalty to the clan before they will be taught this art. It is fairly rare in Japan, and even more so in the rest of the world.

Advantages: +1 die on Surprise Tests when initiating an attack; +1 die for Gymnastics Dodge; reduce Visibility modifiers in melee combat by 1; +1 die on Infiltration Tests

Pentjak-Silat (Bersilat, Gatka)

An Indonesian martial art more than a thousand years old, Pentjak-Silat teaches the use of several weapons as well as attacks that strike vital points of the body and channel the body's energy. The most well known weapon used by Pentjak-Silat students is the wavy bladed *kris* (see p. 14), though other weapons of a similar size may be substituted.

Though most predominantly practiced in Indonesia, Pentjak-Silat is spreading to the rest of the world. The largest pockets of practitioners outside its homeland exist in North America and Asia. Adepts have discovered that the ancient techniques are especially potent when used with weapon foci.

Advantages: +1 die when using the Called Shot option to increase attack damage; +1 DV for Astral Combat attacks (Awakened only); +1 die on Attacks to Knockdown; or +1 Full Parry

Sangre y Acero (Eztlitzli, Ars Cybernetica)

Beneath the dark streets of Tenochtitlan lie the bloodiest pit-fighting dens in the Sixth World. Unaugmented metahumans rarely last long in the gore-stained arenas, and combatants often introduce new and unusual cyberweapons to surprise their enemies and titillate the crowd. The fighters who have survived longest collect a body of tricks and techniques known as Sangre y Acero – Blood and Steel.

Advantages: +1 die for Exotic Melee Weapon attacks using a cyber-implant in an unusual location; +1 DV on Blades attacks; re-

duce the ranged combat “attacker in melee combat” modifier by 1; or reduce an opponent’s “friends in melee” bonus by 1

Tae Kwon Do (Hapkido, Savate)

Tae Kwon Do is an art from Korea whose origins can be traced back two thousand years. It incorporates movements from karate and kung fu with native kicking techniques. Though dangerous at all ranges of close combat, Tae Kwon Do is most famous for its flying kicks, which are both beautiful and deadly.

Advantages: +1 die on Charging attacks; +1 DV on Unarmed Combat attacks; +1 die on using Unarmed Combat when attacking multiple targets; or +1 on Attacks to Knockdown

Wildcat

A martial arts style developed by the Sioux Nation for use by their special forces, Wildcat combines parts of Aikido, Muay Thai, and Karate into a single straightforward and deadly style. Over the last few years, Wildcat has focused on disabling augmented troops by targeting vulnerable areas.

Though mainly confined to the Sioux Nation, Wildcat has spread to the surrounding Native American Nations and the Amerind gangs of Seattle.

Advantages: +1 DV on Unarmed Combat attacks; +1 die on Called Shots to target an unprotected area; +1 die on Called Shots to increase damage; or +1 die on Subduing

Wrestling (Glima, Sumo, Brazilian Jiu-Jitsu)

Wrestling is a grappling style that involves submission and ground fighting maneuvers. The goal in wrestling is to gain a superior position over your opponent. Once this is achieved, you can force him into submission or employ a joint lock in order to make him tap out. Wrestling is as much a sport as it is a self-defense technique.

Advantages: +1 die on Attacks to Knockdown; +1 die on Subduing (may be taken twice for a cumulative +2 dice); or +1 DV when inflicting damage to a subdued opponent

MANEUVERS

Maneuvers are specialized movements and combat techniques used by martial artists to enhance their effectiveness. The use of a maneuver must be declared prior to any dice rolls. Unless otherwise noted, maneuvers may be used with other combat options in the same Action Phase. Gamemasters are encouraged to modify these maneuvers as they see fit or to create their own.

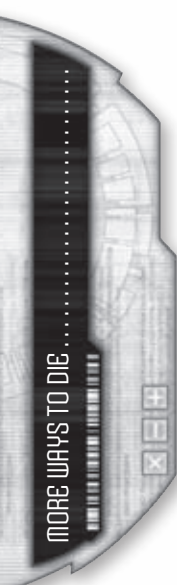
Learning Martial Arts Maneuvers: Maneuvers can be used only by characters who learn them—a process that takes time, practice, and training. Any character who possesses the Martial Arts quality may learn/purchase maneuvers. Only two maneuvers may be learned/purchased per level (5 BP) of the quality.

Maneuvers are purchased at a cost of 2 BP at character creation or 4 Karma during gameplay. Characters cannot learn maneuvers in gameplay without being taught by an instructor or tutorsoft. Learning a maneuver requires an Intuition + Agility (5, 1 week) Test and costs half the amount of learning a martial arts style.

Maneuvers are not available on skillsofts.

Blind Fighting

The character is adept at fighting without the sense of sight. The modifier for attacking a hidden target (see *Blind Fire*, p.150, *SR4A*) in melee combat is reduced from -6 to -3.





INCOMING FEED.....

The target, whether invisible or simply hidden, must be within range of the character's other senses (hearing, smell, etc.).

Break Weapon

Breaking an opponent's weapon requires skill and, in some cases, brute strength. A character with the Break Weapon maneuver may make a Called Shot (see p. 161, *SR4A*) with a +1 dice pool modifier to attack the opponent's weapon; treat this as destroying a Barrier (see *Destroying Barriers*, p.166, *SR4A*). At the gamemaster's discretion, the remains of a destroyed weapon may still be used as an improvised weapon (see *Improvised Melee Weapons*, p. 17).

Clinch

This maneuver allows the character to step inside an opponent's reach and get up close and personal. The character can choose to make a melee attack and if successful, she engages her opponent in a clinch rather than dealing damage. While clinched, both characters' Reach bonuses are negated. To break the clinch and move away, a character must succeed at a Strength + Body Opposed Test, which costs a Complex Action.

Disarm

Disarming an opponent is an effective way to end many fights. Characters with the Disarm maneuver may choose to go on Full Parry with a -4 dice pool modifier. If they successfully defend against the attack (i.e., they score more hits than their opponent),

they knock the weapon out of their opponent's hand. This maneuver does no damage to the opponent.

Disorient

Confusing the enemy can be just as effective as a swift jab. If a character using the Disorient maneuver achieves more hits than her opponent on an attack, no damage is inflicted, but her opponent is stunned (-1 dice pool modifier to all actions) until the end of his next Action Phase (or the end of the current Combat Turn, whichever comes first). This modifier is cumulative, so an opponent who is disoriented twice will suffer a -2 dice pool modifier, and so on (to a maximum penalty of -4).

Evasion

A full defense is good, but a mobile defense is better. Characters using the Evasion maneuver receive a +2 dice pool bonus when defending against interception attacks (see *Interception*, p. 161, *SR4A*).

Finishing Move

A character with this maneuver who has succeeded in striking an opponent (whether damage is inflicted or not) may immediately follow that attack up with a move designed to finish the opponent off. This allows the character to make an immediate follow-up melee attack in the same Action Phase. Finishing Move counts as an interrupt action and uses up the character's next available action.

MORE WAYS TO DIE

Focus Will

By taking a Complex Action to focus their chi, characters gain a +2 dice pool modifier to any Willpower Tests they must make by the end of their next Action Phase. If not used by the time the character's next Action Phase is over, the modifier is lost.

Full Offense

The Full Offense maneuver represents a near-berserker attack with no regard for defense. The character receives a +2 dice pool modifier on the attack test, but may not defend against any melee attacks until her next Action Phase.

Ground Fighting

Some styles teach their students to fight from the ground. Characters employing the Ground Fighting maneuver do not suffer the negative dice pool modifier for defending while prone.

Herding

With clever use of feints and attacks, a martial artist can force her opponent into a bad position—on top of a pile of used syringes, up against an open elevator shaft, and so on. On a successful attack, the character deals no damage to her opponent, but the opponent is forced to move 1 meter per net hit in a direction of the attacker's choosing. A character with this maneuver may attempt to herd multiple opponents, splitting her dice pool as normal (see *Multiple Targets*, p. 152, *SR4A*).

Iaijutsu

A character with this maneuver may use the Quick Draw rules (p. 147, *SR4A*) to draw any weapon, not just pistols. The character may draw and use a single melee weapon, missile weapon, throwing weapon or firearm of Reach 1 or less with a Simple Action. If attacking with the weapon requires a Complex Action, he may still draw and attack with a Complex Action. He must succeed in an appropriate Weapon Skill + Reaction (3) Test to Quick Draw.

Kick Attack

A staple of many martial arts, kicking has a greater range and power than punching. The attacker receives +1 Reach on Unarmed Combat Tests when using a Kick Attack.

Multi-Strike

A character with this maneuver has trained in attacking multiple targets or with two weapons at once. Apply a +1 dice pool modifier to the total dice pool (not the split dice pools) whenever the character attacks more than one opponent in the same action (see *Multiple Targets*, p. 152, *SR4A*) or attacks with two melee weapons at once (see p. 163).

Off-Hand Training

Characters who take Off-Hand Training may use weapons from one melee weapon category of their choice (Blades, Clubs, Exotic Melee Weapons) in their off hand without penalty. This maneuver cannot be taken for the Unarmed Combat skill, but it can be purchased multiple times, choosing a separate category each time.

Riposte

A character with Riposte who successfully parries or blocks a melee combat attack may make an immediate attack on her

attacker, even if it is not her Action Phase in the turn. Making a riposte is considered an interrupt action, however, and uses up the character's next available action.

Set-Up

The Set-up maneuver allows a character to maneuver her opponent into a position where she is vulnerable to a follow-up attack. The character makes an attack test, inflicting no damage if successful. Instead, her net hits are added as dice pool bonus to the next attack she makes against that opponent. This maneuver is particularly effective when combined with Finishing Move.

Sweep

Martial artists often learn to unbalance their opponents and force them to the ground. When a character with the Sweep maneuver makes a successful Knockdown attack (see p. 161, *SR4A*), she may choose to inflict damage as if it were a normal melee attack. Damage inflicted in this way is always Stun damage.

Throw

A character using Full Defense who successfully blocks or parries a melee combat attack may choose to throw her opponent as part of the defense. The character using the Throw maneuver must beat her attacker in a Strength + Unarmed Combat Opposed Test. If successful, the attacker is thrown a number of meters equal to the net hits scored on the test. The attacker suffers damage as if he had fallen an equal distance (see *Falling Damage*, p. 164, *SR4A*), and is considered prone. This maneuver may also cause secondary damage if the opponent is thrown into something dangerous (such as a dumpster full of broken glass, the edge of a cliff); this additional damage is assigned at the gamemaster's discretion. The Throw maneuver is considered an interrupt action and uses up the character's next available action.

Two Weapon Style

A character using this maneuver has trained to wield a second melee weapon in his off hand. In order to use two weapons, each weapon must have a Reach of 0 or 1.

The character may choose to apply the Full Defense option using only one of these weapons, attacking with the other weapon as normal (and without sacrificing an action). The defense or attack action with the off-hand weapon suffers the standard -2 off-hand weapon modifier.

Vicious Blow

A character may choose to use a weapon or unarmed attack that normally inflicts Stun damage in such a way that it inflicts Physical damage instead. The character suffers a -2 dice pool modifier on her Attack Test. If the attack succeeds, the Damage Value of the attack remains the same, but the attack results in Physical damage rather than Stun damage.

Watchful Guard

Characters using the Watchful Guard maneuver reduce the penalty for "defender has defended against previous attacks" (see p. 159, *SR4A*) by 1 (meaning they can defend against two attacks between actions without penalty).



ADVANCED COMBAT RULES

The rules described in this section add detail and complexity to various aspects of the *SR4* rules. These rules will certainly be useful in the situations they were designed to cover, but if your style of gaming is fast and loose you may find them unnecessary. All of them are considered optional rules, so before adding these rules to a game, the gamemaster and players should review the rules and agree to their use.

ADDITIONAL RANGED COMBAT MODIFIERS

The follow modifiers can be used when resolving ranged combat.

Attacker Walking

If the attacker moves from a stationary position in the same Action Phase, the attack suffers a -1 dice pool modifier.

Attacker Moving Over Broken Ground

If the attacker is walking or running over difficult, hazardous, or broken ground, he suffers an additional -1 dice pool modifier (in addition to the Attacker Walking or Attacker Running modifiers).

Target Point-Blank

A target within one meter can be difficult to miss; apply a +2 dice pool modifier to the attack. Note that this may be offset by the *Attacker in Melee Combat* modifier (see p. 150, *SR4A*).

Micro Target

Micro-sized targets such as insects and micro-drones are incredibly difficult to hit, especially at range. Apply a -6 dice pool modifier. At certain ranges, these targets may not even be visible without magnification (meaning the *Blind Fire* modifier p. 150, *SR4A*, would apply as well).

Mini Target

Mini targets include minidrones, very large insects, small rodents, and similar small animals. Apply a -4 dice pool modifier.

Small Target

Small targets include small drones, cats, small dogs, babies and toddlers, and similar small creatures. Apply a -2 dice pool modifier.

Large Targets

Large targets such as car-sized and larger vehicles, some orks, most trolls, big trees, horses, and similar bulky creatures are easier to hit. As a general rule, anything with a Body of 8-14 counts as large. Apply a +1 dice pool modifier to the attack.

Massive Targets

Really, really big targets are rare, but hitting them can be as easy as shooting the side of a barn. This includes things like buildings, trucks, hovercraft, aircraft, and large creatures like dragons. As a general rule, anything with a Body of 15+ counts as large. Apply a dice pool modifier of +2 or more, as appropriate.

RANGED COMBAT MODIFIERS



Situation	Dice Pool Modifier
Attacker walking	-1
Attacker moving over broken ground	-1
Target point-blank	+2
Micro target	-6
Mini target	-4
Small target (dog-sized)	-2
Large target (Body 8+)	+1
Massive target (Body 15+)	+2 or more
Misfit weapon size	-2
Firing two-handed firearms with one hand	-2 (-1 for trolls)
Information-guided indirect fire	-4
Target-designated indirect fire	-2
Attacker in reduced gravity environment	-1
Attacker in zero-gravity	-2
Attacker on a Floating Platform	-1 to -4
Target submerged in water	-1



HOLDING WEAPONS

Due to differences in the size of weapons and stature of meta-humans, certain rules apply to the use of large weapons and to using two-handed weapons with one hand.

Misfit Weapon Size

As noted under *Size Customization*, p. 310, *SR4A*, dwarfs and trolls require weapons that are modified for their stature and size, particularly their hands. A dwarf or troll using a weapon that has not been customized for her metatype suffers a -2 dice pool modifier. Likewise, an elf, human, or ork trying to use a dwarf- or troll-modified weapon suffers the same penalty.

Dwarfs and Large Melee Weapons

It is impractical to assume that dwarfs can wield large melee weapons with the same ease as a human, elf, or ork. Whenever a dwarf wields a melee weapon with a Reach of 2 or more, she suffers a -1 dice pool modifier.

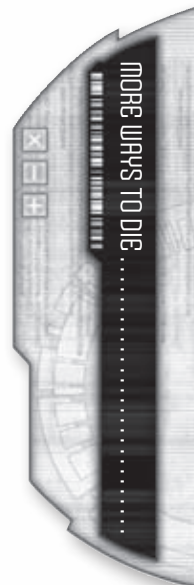
Using Two-Handed Melee Weapons

A number of melee weapons are designed to be used with two hands. These include most pole arms and most weapons with a Reach of 2, plus any others the gamemaster designates as requiring two hands. It is possible for a character to use a two-handed weapon with only one hand, though doing so is difficult and the attack is less powerful. Apply a -2 dice pool modifier to such attacks and reduce the DV of the attack by -2.

Trolls can wield such two-handed weapons in a single hand more easily, suffering only a -1 dice pool modifier and a -1 to DV.

Using One-Handed Melee Weapons

A character may choose to use a one-handed weapon (Reach 0 or 1) with both hands to swing with more strength and power. This adds a +1 DV bonus to such attacks. Only weapons capable of being grasped with two hands may be used in this manner; knives and similar small weapons do not get any bonus when used in this way.





Using Two-Handed Firearms

Large firearms (anything rifle-sized and larger) are typically used with two hands. A character wielding a large firearm with only one hand will suffer a -2 dice pool modifier to ranged attacks (-1 for trolls).

Carrying Heavy Weapons

Heavy weapons are so large and potentially damaging to the user that they cannot be carried and fired without the help of a gyro stabilization unit. Trolls and other unusually large and strong metahumans may be an exception to this rule. Any character with a Body of 8 or higher and Strength of 8 or higher can carry and use a heavy weapon without benefit of a stabilizer. However, whenever a character fires a heavy weapon he is carrying, he must resist Stun damage equal to half the Power (round down) of the weapon, and may be knocked down (see p. 161, *SR4A*).

INDIRECT FIRE

Under most circumstances, a character trying to use a ranged weapon against a target she cannot see or sense must apply a -6 Target Hidden dice pool modifier to such attacks. In certain situations, however, a character, drone, or vehicle may acquire a target lock for a weapon that is in a different location. This enables the weapon to engage in *indirect fire* on a target even when it does not have line of sight or a sensor lock on the target.

MELEE COMBAT MODIFIERS



Situation	Dice Pool Modifier
Attacking with two weapons simultaneously	splits dice pool
Dwarf wielding Reach 2+ weapon	-1
Misfit Weapon Size	-2
Wielding two-handed weapon in one hand	-2 (-1 for trolls)
Underwater (with mask or cybereyes)	-2
Underwater (no mask or cybereyes)	-3

DEFENSE MODIFIERS

Situation	Dice Pool Modifier
Attacker using two melee weapons simultaneously	-1
Defender using two melee weapons simultaneously	$+1$

Indirect fire may only be used if a spotter acquires the target and guides the attack either with spotting information or with a target designator.

Information-Guided

With information-guided indirect fire, a spotter feeds targeting data to the firer or the weapon itself. Only weapons that can be directly fed targeting data may be used for information-guided indirect fire. This includes smartguns, missiles, rockets, mortars, and artillery.

To lock onto the target, the spotter must succeed in a Sensor Test (see p. 171, *SR4A*). For smartgun-equipped characters, this is handled as a ranged combat attack test. Cover, visibility, and other ranged combat modifiers apply. The spotter's net hits are used as extra dice for the indirect fire test. The act of locking onto the target includes notifying and/or transmitting data to the weapon being spotted for and is included in the same action (the spotter and weapon must be meshed via wireless or the Matrix).

Target Designator-Guided

A spotter can use a target designator (see p. 34) to reflect laser, microwave, or radar energy off a target, allowing a weapon with an appropriate seeker head to home in on the reflected energy. Only self-propelled seeker-guided munitions may be used in this way, such as seeker-guided missiles, rockets, mortars or even gyrojet rockets.

To "paint" the target with reflected energy, the spotter must succeed in a ranged combat Attack Test. The spotter's net hits are used as extra dice for the indirect fire test.

Maintaining the Lock

The spotter must keep a lock on the target until the weapon strikes. Maintaining the lock is a Free Action during each of the spotter's Initiative passes, but adds a -2 dice pool modifier to any other tests made while the lock is maintained. If the spotter loses contact with the target, the attack automatically misses. Add an extra 2D6 to the scatter roll.

The Attack Test

Guided either by targeting data or by a target designator, a weapon can be fired indirectly at the target. A standard Attack Test

is made for the weapon using the range between the weapon and the target. The spotter's net hits are added to the attacker's dice pool. The only modifiers that apply are a -4 modifier for information-guided indirect fire or a -2 modifier for target-designated indirect fire.

Net hits on the Attack Test are used to reduce the scatter per standard rules for the weapon type. If scatter is reduced to 0, the target is hit directly. Additional hits increase the DV as normal.

RECOIL AND STRENGTH

In addition to modifications to the weapons and various accessories, characters can reduce a weapon's recoil penalty simply by having extraordinary Strength. A character with Strength of 6-9 has 1 point of recoil compensation, Strength 10-13 has 2 points, Strength 14-17 has 3 points, and Strength 18+ has 4 points.

THROWING BACK GRENADES

In *SR4*, grenades are thrown or fired and roll to a stop according to the scatter rules, exploding in the next Initiative Pass unless the attacking character used an airburst link (see *Grenades*, p. 155, *SR4A*). This means that some characters, friends and foe alike, may have a chance to act before a grenade explodes.

A character who has an action before the grenade explodes may attempt to retrieve the grenade and throw it (either back at the attacker or somewhere else) with a single Complex Action. It cannot be relaunched using a grenade launcher. The character must be within movement distance of the grenade and succeed in an Agility + Reaction (3) Test to pick up the bouncing, jumping, skittering explosive. If the test is unsuccessful, the character will be at an effective Range of 0 meters when the grenade detonates. If the character succeeds, she may make an Agility + Throwing Weapons ranged Attack Test to throw the grenade elsewhere.

WIELDING TWO WEAPONS

When one weapon isn't enough, a character can always wield two. As noted in *SR4* (see *Attacker Using a Second Firearm*, p. 150, *SR4A*), any attempt to use two weapons *at the same time* requires the character to split her dice pool between the two attacks. Several other factors may apply, as noted below.

Two Weapon Ranged Combat

The use of two firearms simultaneously with the same Simple Action is covered under *Attacker Using a Second Firearm*, p. 150, *SR4A*. Additionally, the character may also suffer modifiers for using an off-hand weapon (unless she has the Ambidextrous quality) and/or multiple targets (if shooting two separate targets simultaneously).

Only SMG or smaller-sized weapons that can be fired with a Simple Action can be fired simultaneously. This means that you may not fire a full burst (which requires a Complex Action) while simultaneously firing another weapon. It is possible, however, to fire a full-auto long burst simultaneously with another weapon, or even to fire long bursts with two weapons at the same time.

Two Weapon Melee Combat

When wielding two weapons in melee combat, it is assumed that a character only uses one weapon at a time, and so the appropriate skill for that weapon is used for attacks and parries. If a character wishes to attack with both weapons simultaneously (with the same

Complex Action), then she must split her dice pool between the two attacks. If two separate skills are being used (such as Blades and Clubs), use the smallest dice pool. Split the pool *before* applying modifiers. The character may suffer a modifier to one attack for using an off-hand weapon (unless she has the Ambidextrous quality).

Someone who is simultaneously attacked with two weapons suffers a -1 defense modifier. Note that the defender is also forced to defend against two attacks with this rule, so also he receives a -1 modifier on the second Defense Test for already defending against a previous attack (see p. 159, *SR4A*). This means, in total, the defender suffers -1 against one attack and -2 against the other.

A character wielding two melee weapons does receive a bonus when parrying: apply a +1 dice pool modifier for melee parry Defense Tests and Full Parries.

In order to use two weapons in melee combat, each weapon must have a Reach of 0 or 1.

HAZARDOUS ENVIRONMENTS

The rules given for Survival skill (see *Using Survival*, p. 137, *SR4A*) cover a character's basic chances of getting by in the great outdoors. Extreme environments such as deserts, polar regions, space, toxic zones, and deep undersea, however, bring a wide variety of other dangerous factors into play. The following rules apply to situations where characters must cope with hostile environments.

DESERT HAZARDS

Desert heat and sand provide many hazards to travelers.

Heat and Dehydration

Water is essential in the desert. The gamemaster should feel free to inflict Stun damage on any character who spends too much time in the direct sunlight, overly exerts himself, wears improper clothing (armor) or doesn't drink enough water (4 liters a day, 8 liters for trolls). Dehydration and heat exhaustion can lead to confusion, disorientation, nausea, and unconsciousness.

Scorching Sands

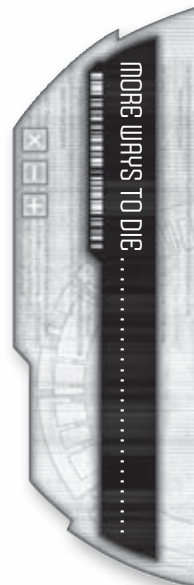
The desert sun can superheat sand, rocks, and metallic surfaces to the point where they are dangerous. A character that comes into unprotected contact with a scorching surface must resist 3P Fire damage. Even with good footwear, walking on such ground can be painful: apply a -1 dice pool modifier to all actions. Burns easily become infected in such environments, so if a character does not have his burns treated the gamemaster can choose to inflict additional damage or lengthier healing periods.

Desert Travel

Most desert terrain can be considered difficult ground (see *Attacker Moving Over Broken Ground*, p. 161). Steep dunes, fine sand and rocky areas may reduce movement rates by half. Especially steep sand dunes may require Climbing Tests. Ground vehicles can become bogged down in sandy areas or rockfields. Terrain is always Restricted or Tight, increasing the threshold for Vehicle Tests (see p. 168, *SR4A*), and may simply be impassable.

Sand and Gear

In the desert, sand and grit get into everything. Weapons, exposed cyberware, and vehicles are especially vulnerable. If



cyberware that is not internal (datajacks, cybereyes, cyberlimbs, etc) is not protected or regularly maintained, the gamemaster should feel free to inflict negative dice pool modifiers to their use. Vehicles and drones that are not environmentally-adapted (see p. 135) are more prone to breaking down each week they operate in such conditions (apply the effects of the Gremlins quality, p. 94, *SR4A*, to their use).

Firearms (and other gear with moving parts) may become jammed or gummed up if not adapted (p. 151) or consistently cleaned. Each day the firearm or item is used, roll 1D6. If the result is a 1, it jams, and must be cleaned with a Logic + Armorer (4, 1 hour) Extended Test before it will operate again. If the gear is not regularly cleaned, the gamemaster can increase the likelihood of a jam by 1 per day. For example, on day two, the gun will jam on a 1D6 roll of 2 or less. Gamemasters should time the jamming so that it occurs during a moment that maximizes the dramatic tension in the game.

Sandstorms

Sandstorms have several effects on characters, including reduced visibility and hearing, impaired breathing, and electrical interference.

Impaired Visibility: Sandstorms propel sand and grit, obscuring vision. Apply a Visibility modifier between -4 (mild storms) and -6 (severe storms) for visual Perception Tests for normal, low light, and thermographic vision. Ultrasound vision reduces this modifier by half. Sandstorms also affect astral perception by clouding the astral plane; apply half the Visibility modifier (round down) to Astral Perception Tests.

Impaired Hearing: The roar of wind and flying grit applies a -1 to -3 modifier for all hearing-based Perception Tests.

Flying Particles: During a sandstorm, sand particles will get into everything. Double the likelihood of glitches and jams during sandstorms (see *Sand and Gear*).

Impaired Breathing: A character who is caught without a mask, filter, or respirator during a sandstorm will find it difficult to breathe without getting grit in his throat. Apply a -1 dice pool modifier to the character's actions.

Impeded Movement: Strong winds and waves of propelled sand make even regular movement problematic. Reduce a character's Movement rate by half during a sandstorm. Major wind gusts may even knock characters down if they fail a Body + Strength (3) Test.

Electrical Interference: Electrical gear operating during a sandstorm runs the risks of damage from the static electricity that fills the air (internal cyberware is immune to this). For every electrical item that is on during a sandstorm, roll 1D6. On a result of 1 the item shorts out and/or blows a fuse. Optical gear (most electronics in 2070) is immune to this effect, but power supplies, vehicles, RFID tags, and so on are vulnerable. Non-insulated explosives and munitions are also vulnerable to static discharge; on a 1D6 roll of 1, they detonate.

Desert Magic

There are many creative applications for spells, adept powers, and spirits that are useful for desert conditions and survival. Desert travelers can use spells like Alter Temperature to keep cool, Shadow to create shade, or even Ice Sheet for some temporary refreshment.

Likewise, Fast or Nutrition can help sustain a character without supplies. The adept ability of Traceless Walk allows an adept to cross desert sands without leaving a trail, while the Temperature Tolerance ability helps to protect against the desert heat.

Spirits can also be a boon in the desert. An air spirit's service can provide a cool, sand-free breeze for a day. Water spirits can provide enough water to sustain a number of characters equal to their Force for one day with a service. Other spirits can use their Guard power to protect characters from sandstorms and may, if the gamemaster allows it, be able to point the characters in the direction of an oasis.

POLAR HAZARDS

Surviving in the Arctic or Antarctic or high atop a cold mountain peak is one of the most demanding tasks possible for a metahuman. In polar environments, even simple tasks like breathing must be carefully monitored—dehydration is just as much of an issue here as in the Sahara, and almost everything requires more energy to accomplish. Above all, the person must have a will to survive. Even properly equipped adventurers can get themselves killed if they are unprepared for the realities of the situation. Coldness is an insidious killer. It saps the ability to think and weakens the will to do anything but get warm. Even in a roleplaying context the mental effects of cold weather are extremely important.

Dehydration and Warmth

Polar air sucks moisture from the body just like a desert, so drinking the right amounts of liquid is important. Proper clothing is important not just to keep warm, but also to keep the body from sweating during exertion since the sweat freezes. The gamemaster should feel free to inflict Stun damage on characters who are improperly clothed (too little or too much), or who don't drink enough water.

Cold characters quickly become numb, which hinders manual dexterity. Likewise, thick cold-weather gear can impede a character's movement and agility. In either case, the gamemaster can impose dice pool modifiers of -1 or -2 to represent this difficulty.

Sunburn and Glare

Snow and ice reflect sunlight and UV radiation (even more dangerous now, thanks to the ozone hole). Characters outdoors during the day will suffer glare penalties without vision protection; extended exposure may result in temporary snow blindness. Gamemasters may also inflict 2P sunburn damage on characters whose skin is exposed for long periods. Characters who spend time outdoors in Antarctica will pick up a slight bit of radiation contamination each month that might eventually lead to radiation poisoning (see p. 168).

Frostbite

In the extreme cold and biting winds of the Polar areas, exposed skin can succumb to frostbite (tissue death due to extreme cold) in a matter of seconds. Consider the rules given for severe wounds (see p. 120, *Augmentation*) whenever a character suffers damage from extreme cold, to determine if the character suffers permanent damage from frostbite. The gamemaster determines the exact effects of frostbite; it could mean the loss of an extremity (toe, finger, tip of nose, ear) or might even require amputation of a limb.



Foot Travel

Snow and ice can make travel difficult and dangerous. Depending on the terrain, the gamemaster can reduce Movement rates by half or more. Icy ground can also be slippery, requiring an Agility + Reaction (3) Test to avoid falling.

Crevasses are common on Polar ice sheets, requiring characters to jump, climb, or circumvent them. Some crevasses are concealed by snow, requiring a Perception + Intuition (3) Test to be noticed before a character falls in. Snow bridges sometimes span crevasses, though these are risky to cross, especially for trolls or burdened characters.

Snowstorms

Snowstorms can severely reduce visibility, especially when accompanied by strong winds. Apply the Visibility modifiers for Light or Heavy Rain, as appropriate to the storm. Severe “white outs” may reduce visibility altogether (–6 dice on Perception Tests). Ultrasound vision reduces this modifier by half. Snowstorms also affect astral perception by clouding the astral plane; apply half the Visibility modifier (round down) to Astral Perception Tests.

Strong Polar winds may also inhibit hearing and movement; apply a –1 to –3 dice pool modifier for all hearing-based Perception Tests.

If appropriate, the gamemaster can reduce movement rates by half or more. Major wind gusts may even knock characters down if they fail a Body + Strength (3) Test.

Endless Days and Nights

Characters in the Arctic or Antarctic Circles may have to deal with the long days and nights of the “White Nights.” This phenomenon may throw off a character’s sleep patterns. The gamemaster should monitor the number of hours characters stay awake and apply appropriate modifiers for lack of sleep and exhaustion.

Polar Vehicles

Polar conditions can be very demanding on vehicle operations. Vehicles and drones that are not environmentally-adapted (see p. 135) are more prone to breaking down each week they operate in such conditions (apply the effects of the Gremlins quality, p. 94, *SR4A*, to their use).

Ground vehicle travel across snow and ice is risky. Travel across snow is only possible by snowmobiles, caterpillars, crawlers, hovercraft, and skimmers. Travel across hard-packed snow and ice may also be possible by ATVs, sand buggies, and walkers. Terrain is always Restricted or Tight, increasing the threshold for Vehicle Tests (see p. 168, *SR4A*), and may simply be impassable. If a vehicle hits an ice sheet (sometimes covered in snow), a Crash Test is immediately called for.

Aircraft attempting to take off or land on snow or ice require double their usual takeoff/landing distance (see p. 103).

Sea Travel

Sea travel is risky in Polar climates. Ships may collide with icebergs or become trapped in the ice. Even undersea, icebergs are a threat as many of them float below sea level. Navigating icy areas is largely a game of luck. The gamemaster should feel free to introduce icy collisions and damage as dramatically appropriate.

Icy waters are an immediate danger to anyone not equipped with a drysuit (p. 55), inflicting 12S Cold damage every minute the character remains in the water.

Polar Magic

Magic can be crucial for Polar survival, and there are many spells, adept powers, and uses for spirits to aid this. Spells like Alter Temperature or Fire Wall can protect a character from the freezing cold. Fast and Nutrition can help sustain a character without supplies. The adept ability of Traceless Walk allows an adept to cross snow without sinking or leaving a trail, while the Temperature Tolerance ability helps to protect against the Polar cold. An adept with Sixth Sense also has a chance to avoid the dangers of thin ice, unstable snow, crevasses, or avalanches.

Spirits can also be useful. Fire spirits can keep a character warm with a service, or they can melt icy obstacles or snow for drinking water. Air spirits can block the strong, cold winds, Water spirits can manipulate icy obstacles, and any spirits with the Guard power can protect characters from snowstorms.

The lengthened periods of day and night in the Arctic and Antarctic can be a boon for conjurers. Summoned spirits will stay on hand until the next sunrise or sunset, even if that is weeks away.

SPACE HAZARDS

Violence in space should be kept to a minimum because space stations have thin hulls to keep construction and maintenance costs down. One stray shot can create a big hole in the bulkhead, resulting in explosive decompression and killing everyone involved.

Gamemasters should keep this in mind when planning *Shadowrun* adventures set in outer space. If players try to bring weapons into space (especially heavy weapons), the gamemaster should make it difficult, if not impossible. Security is tight on obvious heavy weapons and armor, but it may be less tight on lighter concealed or nonlethal weapons.

Some players may be more inclined to reach for their guns when the opposition is brandishing them in plain sight, so it may be more prudent to give the opposition highly concealable weapons. Similarly, using heavy armor tends to encourage heavy weapons, so gamemasters may want to refrain from giving NPCs heavy armor. Furthermore, the corps have one special weapon they can use on space habitats: cutting off the oxygen supply. All the armor in the world means nothing if the characters can’t breathe.

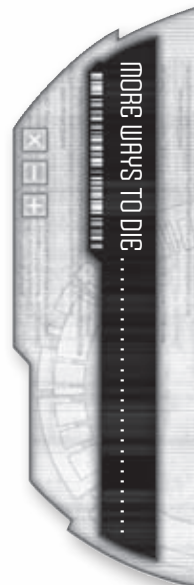
Matrix Lag Time

Due to the vast distances involved, Matrix communication between stations on the ground, in orbit, or on the moon may suffer from signal lag. Communication between the Earth and the moon, for example, takes a full Combat Turn—each way (meaning that if you ask a question, you won’t hear a response for 2 Combat Turns). The gamemaster determines exactly what effect this has on Matrix operations, based on the distances involved. At the least, characters in the Matrix should suffer –2 to their Response. At worst, they may only be able to act once every other Combat Turn.

Low and Zero Gravity

Most locations in space are weightless environments, where there is no gravitational pull to hold characters to the “floor.” Furthermore, in those locations that do have gravity (either natural or artificial), the pull is significantly less than it is on Earth.

The local gravity environment is defined by its g-strength, expressed as a multiplier of the natural gravitational pull at sea level on Earth. Most space stations with an artificial environment due to



spin have a gravity field of 0.8g. The moon has a gravity of 0.16g. A weightless environment has a gravity of 0g.

Movement

A reduced-gravity environment makes it easier for characters to move quickly but makes it harder to turn or stop. A character's walking or running speed in space is equal to his or her normal movement rate divided by the g-strength, rounded down.

Characters receive a -1 dice pool modifier to any physical actions involving movement in reduced gravity environments, including combat and defense. Additionally, whenever a character runs in low gravity, she must make an Agility + Reaction (2) Test to stop. If the test fails, the character loses control and falls prone.

In zero gravity, characters cannot run or walk normally because there is no weight for a character to achieve footing, with the exception of stations equipped with Velcro strips on surfaces, so characters with velcro slippers can walk/run at half their movement rate. Instead, characters may move in one of two ways: crawling or flying.

Crawling is the easier method and entails pulling oneself along using any available handholds (seat backs, overhead compartment handles, other passengers, and so on). A character can "crawl" at one-quarter of their Movement rate. Periodically the gamemaster can ask a crawling character to make an Agility + Climbing (1) Test; failure means she has lost her grip and starts floating off in a random direction.

Flying occurs when the character launches herself from Point A to Point B without using any handholds in the process. A character can "fly" at her regular Walking movement rate. Flying requires an Agility + Gymnastics (2) Test to propel yourself in the right direction. While in flight, a character can't change the direction of travel, but she can change her facing while in flight. To land properly, the character must pass an Agility + Reaction (2) Test; a bad landing means the character hurt herself and must resist 2S damage.

Characters who glitch while moving in zero-g environments risk becoming nauseous or disorientated (see p. 254, *SR4A*).

Combat

Fighting is difficult in low or zero gravity. In low gravity, a -1 dice pool modifier applies to Throwing Weapons and Archery attacks. Uncompensated recoil modifiers increase by an additional -1. An additional -1 modifier applies to any attacker movement.

In zero gravity, a -2 dice pool modifier applies when throwing objects or firing projectile weapons. Also, any characters involved in melee combat must make an Agility + Reaction (2) Test or fly off in a random direction.

Uncompensated recoil modifiers double in zero gravity. If a character is not braced when firing a weapon in SA, BF, or FA mode, she flies backward at a rate equal to the unmodified recoil in meters per turn.

Long-Term Effects

If a character spends more than a few days in space, she will suffer some long-term effects from living in zero gravity. For example, a human's height will stretch by 5 centimeters, the bones lose calcium and weaken, blood pressure drops, and muscles lose tone and develop slight atrophy. Drugs and exercise can counter these effects, but the effects still occur.

Whenever a character spends more than 24 hours in zero gravity, she suffers a -1 dice pool modifier to all Body and Strength-

related Success Tests. After another week, the modifier increases to -2. Every week after that, the character will lose 1 point in that attribute. If a character's Body or Strength reaches zero, she needs to be hospitalized and treated or she will die.

Attribute loss can only be recovered through a combination of medical intervention and Karma. Taking prescribed drugs and exercising will prevent the onset of this physical degeneration. A character that pops the pills (1¥ a day) and works out will reduce the modifiers by 1 for the next 24-hour period. The physical degeneration also begins to wear off once a character returns to a gravity environment (such as the centrifuge in certain space stations). Reduce the modifiers by 1 for every 12 hours spent in a gravity environment.

Low-gravity environments less than 0.5 g (such as the moon) have the same effect, but the modifier will never rise above -1.

Decompression

Decompression occurs whenever a character is exposed to outer space (either from explosive decompression, or by all the air escaping from a suit leak or hull breach). Unless the character takes appropriate countermeasures, she will quickly die from a combination of asphyxiation and severe hypothermia from the harsh, debilitating conditions (temperatures around -270 degrees Celsius and negative vacuum pressure). The character's surface capillaries will burst, her body will swell and her eyes will slightly bug out (distorting vision).

Characters who are exposed to space suffer a -2 dice pool modifier to all actions and automatically take one box of Stun damage per Combat Turn. After the Stun Condition Monitor is filled, the character will take one box of Physical damage each Combat Turn until dead.

Holding one's breath will not help, and in fact damages the lungs, so the effect is the same. Characters are likely to pass out, however, when the flow of oxygen to their brain ceases. To represent this, at the end of each Combat Turn after the third, the character must succeed in a Body + Willpower (3) Test or fall unconscious. If the character has an internal air supply (air tank cyberware or oxy-rush nanites, for example), she will not need to make this test, but will likely succumb to the Stun damage anyway.

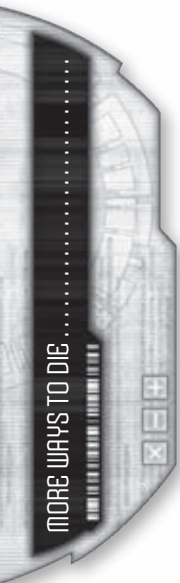
Suit Leaks

Any time a character in a spacesuit sustains a hit that can cause Physical damage, there is a chance of creating a puncture large enough to cause a leak. Whenever a character has to make a Damage Resistance Test, roll 1D6. If the result is less than the DV inflicted, the suit is breached and will not protect the character from open space; apply the effects from decompression as described above.

If a character's suit is breached, she can attempt to patch it. If performed in the middle of combat, the character must spend a Complex Action and make an Agility + Reaction (2) Test. Each hole must be patched separately. If performed out of combat, the attempt succeeds automatically, but it takes a minute to properly patch the suit.

Hull Breaches

Space station hulls are thinner than normal buildings, because it's expensive to lift thick-walled stations into orbit. Space stations have an equivalent Barrier Rating of 8. If a weapon creates a hole to space in the hull (see *Barriers*, p. 166, *SR4A*), the room decompresses to open space. Characters must make a Strength + Reaction (2) Test to avoid being jettisoned into open space. Apply a -1 dice pool modifier for each extra half-meter of hole. At the beginning



of the next Combat Turn, characters in that room will suffer from decompression as detailed above.

Weapon Effects in Space

Firearms do not function in outer space unless they have the extreme environment modification (p. 135). Explosives (including rockets and missiles) also do not function in space unless built with an integral oxidizer. Explosives built with an integral oxidizer also cost an additional 50 percent more than their normal counterparts.

Laser and energy weapons fired in outer space do not lose DV over range, since there is no atmosphere to diffuse the beam.

Radiation and Solar Flares

In space, characters do not have the luxury of Earth's ozone layer and atmosphere to protect them from cosmic rays. Most space stations and Lunar colonies are built with enough shielding that radiation is not a regular concern, though characters who spend enough time spacewalking or in a spaceship may slowly develop radiation sickness (see p. 168).

The real danger comes from solar flares that can generate enough radiation to kill a person. Though solar flares are rare, they can be used as an effective plot device. Solar flares can generate Severe or Deadly Radiation poisoning (see p. 169) and will last 1D6 days. During this period, space station personnel are likely to take shelter within specially constructed shielded chambers with food, water, and amenities.

Magic in Space

All locations in space are astral voids (see p. 119, *Street Magic*) with background counts ranging from -7 (the Moon and certain high-population habitats) to -12 (deep space). Assensing or astral projecting is a quick way to die or go insane. Some corps conduct theoretical magic research in space, since the lack of mana actually acts as a form of protection against potential backfires.

TOXIC ZONES

Toxic zones offer a variety of biological hazards that are difficult to combat because they are often invisible and undetected until it's too late to do anything about them. They are full of both diseases and toxins, and the appropriate rules for both apply (see *Diseases*, p. 129, *Augmentation*, and *Toxins*, p. 254, *SR4A*).

Acid Rain

All creatures not specifically immune to toxins or corrosives are assumed to have the equivalent of a Mild allergy (see p. 94, *SR4A*) to acid rain, so characters exposed to it suffer a -2 dice pool modifier due to the burning sensation and painful itching. Protective clothing (anything with a chemical seal or appropriate chemical resistance) can eliminate this penalty. At the gamemaster's discretion, long-term exposure can cause skin damage.

Air Pollution

Treat excessive air pollution as a toxin with a Power of 6, an inhalation vector, a Speed of 30 minutes, and the effects of Stun damage and nausea (coughing and impaired breathing).

Radiation

Radiation, particularly in large doses, can be extremely perilous to living beings. Metahumans can persist without protective



INCOMING FEED.....

MORE WAYS TO DIE

measures for months without suffering from any considerable contamination in lightly irradiated areas, however, sudden high doses of radiation can lead to death in a matter of minutes.

In the Sixth World the danger of irradiation comes from a variety of different sources, some obvious, some less so. Direct contact or proximity with obvious “hot” sources of radiation such as a depleted uranium round or leaking nuclear waste aren’t the sole danger, inhaled dust and irradiated particles are equally lethal. Normally the two factors to consider are intensity and duration of exposure. Other sources include: decommissioned or leaking nuclear reactors, nuclear strike fallout zones, heavy metal mines, toxic waste dumps, radioactive isotopes, nuclear testing grounds, and solar flares. Note that cumulative exposure to radiation sources can lead to higher levels of radiation poisoning.

The following section provides guidelines for dealing with damage from radioactivity and protection against it. As such, it abstracts many effects and aspects of radiation contamination in the interest of fluidity and drama.

The long-term effects of radiation hazards, contamination, and cumulative irradiation on characters uses the same mechanics given for pathogens (p. 129, *Augmentation*). Radiation has a Vector, Speed, Penetration, Power, and Effects as noted under Radiation Notes and on the Radiation Effects Table. In the interest of fluidity and drama, *Shadowrun* simplifies these effects into Mild, Moderate, Severe, and Deadly Radiation Poisoning.

Urgent Message...

RADIATION NOTES

Vector: Radiation employs a new irradiation vector. Irradiation does not require direct contact but simply proximity to a powerful source of radiation to cause damage. Only specially treated anti-rad fabrics and materials block or impair the effects of radiation, but even they can be overwhelmed by high enough levels of radiation.

Speed: As with pathogens (p. 129, *Augmentation*), Speed defines the time interval between initial exposure and the first Radiation Resistance Tests. It also notes the time frame in parentheses when each subsequent resistance test must be made. The character must continue to make Radiation Resistance Tests until the affliction is cured or treated.

Penetration: Similar to Armor Penetration for weapons, a particular radiation source’s Penetration rating affects the rating of any protective system deployed to counter it (including implanted filtration systems in the case of inhaled or ingested isotopes). For all intents and purposes any normal armor and clothing offers no significant protection.

Power: Power represents the intensity of the radiation dose and hence its potential to cause harm. Damage caused to organisms in real life is cumulative and measured in sievert (SV)—different sources and levels of exposure cause different levels of damage.

Effects: The various effects of radiation are detailed on the Radiation Effects Table.

Mild Radiation Poisoning

Vector: Irradiation, contact, ingestion

Speed: Immediate (1 Month)

Penetration: 0

Power: 4

Effect: Physical Damage, Physical Malaise. Mild radiation sickness corresponds to a contamination of 1–2 sievert (SV). If the character does not receive prompt medical treatment, his risk of developing cancer is increased and he may become sterile.

RADIATION EFFECTS

The following effects are listed by order of severity. While gamemasters are free to pick and choose which will afflict characters, it is suggested that they introduce some long term effects, depending on the severity of the sickness.

Physical Damage: When a character suffers exposure from hot radiation sources, cell and metabolic damage manifest as radiation burns.

Lasting Open Sores: The character suffers from skin injuries bursting over and over again, which need to be treated with bandages—otherwise, he suffers a –1 dice pool modifier. Furthermore, his physical condition monitor is permanently reduced by 1 box.

Loss of Body Hair: The character loses all his hair.

Physical Malaise: Shaking, vomiting, and diarrhea are just some of the possible symptoms that manifest from moderate or worse radiation poisoning, causing physical inconvenience and a constant –1 dice pool modifier until treated.

Blindness: The character is rendered blind by damage to his optical nerves and cells or suffers some other sight-related affliction. Sight may only be restored by cyberware or biological replacement. Characters with cybereyes do not suffer from this effect.

Fatigue: The character suffers a permanent –1 dice pool modifier due to constant tiredness.

Cancer: The character develops a serious form of cancer (leukemias, skin cancers, and lymphatic cancers are particularly common) and must undergo treatment or the cancer will become terminal in a few months.

Aura Deficiency Syndrome (Awakened characters only): The character loses a point of Magic attribute. This loss is permanent.

Mutation: The character gains a new Negative quality. Appropriate qualities include Allergy, Infirm, Low Pain Tolerance, Sensitive Neural Structure, Sensitive System, Weak Immune System, or Uncontrolled Metastasis (see p. 164, *Augmentation*).

Sterility, Sudden Fetal Death: No specific rules effects, but nonetheless potentially devastating.

Urgent Message...

MORE WAYS TO DIE.....

Moderate Radiation Poisoning

Vector: Irradiation, contact, ingestion.

Speed: Immediate (1 Week)

Penetration: 1

Power: 4

Effect: Physical Damage, Physical Malaise. Moderate radiation sickness corresponds to a contamination of 2–4 sievert (SV). If the affected character does not receive appropriate medical treatment and decontamination, he will develop *one* of the following long-term effects within the next months: Lasting Open Sores, Loss of Body Hair, Physical Malaise (continuing), Blindness, Fatigue, Cancer, Aura Deficiency Syndrome, Mutation, Sterility, and Sudden Fetal Death.

Severe Radiation Poisoning

Vector: Irradiation, contact, ingestion.

Speed: Immediate (1 Day)

Penetration: 2

Power: 5

Effect: Physical Damage, Physical Malaise, Fatigue. Moderate radiation sickness corresponds to a contamination of 5–9 sievert (SV). If the affected character does not receive appropriate medical treatment and decontamination, he will develop *two or three* of the following long-term effects within the next weeks: Lasting Open Sores, Loss of Body Hair, Physical Malaise (continuing), Blindness, Cancer, Aura Deficiency Syndrome, Mutation, Sterility, and Sudden Fetal Death.

Deadly Radiation Poisoning

Vector: Irradiation, contact, ingestion.

Speed: Immediate (1 Day)

Penetration: 3

Power: 8

Effect: Physical Damage, Physical Malaise. Deadly radiation sickness corresponds to a contamination of 10+ sievert (SV); poisoning at this level is always terminal. If the character survives the damage caused by the radiation burns, he enters the *walking ghost phase* for 1–4 days (gamemaster's discretion). During this time, he may act as normal—apart from constant disorientation and nausea—before he inevitably dies from general organ failure and total metabolic shutdown resulting from widescale cell death.

UNDERWATER HAZARDS

The overwhelming majority of metahumanity breathes air and must rely on gaseous oxygen to survive. There are exceptions—the merrow being one—but they are few and far between. The fluid properties of water differ substantially from the properties of air, which means that any would-be diver must adapt to a wholly different environment and set of circumstances. Over the past sixty years, magic and technology have allowed humans and metahumans to explore deeper into the underwater world for longer amounts of time. Of the two, though magic has had some beneficial effect, technological advancements primarily allow air-breathers to survive and even prosper underwater.

Because of the wide array of technology available, underwater diving falls into one of three categories, based primarily on depth: shallow-water diving, scuba diving, and deep-water diving.

Shallow-Water Diving

Shallow-water diving refers to dives descending no farther than 10 meters. Most recreational and sport diving falls into this

category, because most of the undersea life attracting sport divers resides above this depth.

The standard system for shallow water dives is the oxygen extraction system (OXSYS), a lightweight artificial gill that extracts oxygen dissolved in the water (see p. 56). Fitting over the mouth, the OXSYS system allows the user to spend an indefinite amount of time in the water without the risk of decompression sickness and does not require specialized training.

Scuba Diving

Despite numerous technological advancements, the self-contained underwater breathing apparatus (a.k.a. scuba gear) remains the predominant underwater system for some sport and most commercial divers. Requiring some specialized training, the scuba system is the standard for dives up to 300 meters, though safety precautions limit recreational diving to 33 meters. For purposes of *Shadowrun* diving rules, dives deeper than 80 meters are considered deep-water dives, regardless of the system used when making them.

The overall mechanics of scuba systems have remained unchanged for the past century. Scuba compresses air at high pressures in a metal tank and slowly dispenses it at a reduced pressure to a diver on demand (in other words, whenever the diver breathes in normally).

Deep-Water Diving

Deep-water diving (below 80 meters) is a high-risk activity requiring extensive training in specialized systems. Due to the amount of training necessary (which is relatively expensive), primarily commercial divers practice deep-water diving techniques.

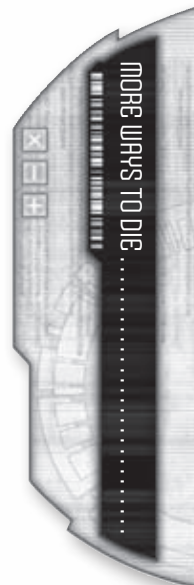
To cope with the high ambient pressure of the surrounding environment, deep-water divers use LBA (Liquid Breathing Apparatus) systems (see p. 56) similar to scuba gear, except the tank contains a “light” super-oxygenated liquid. The liquid floods the user's lungs, and the high concentration of dissolved, oxygenated gas makes it easy for the alveoli to draw it out of suspension. The system protects against the extreme pressure of the outside environment by compensating for its effect on the air cavities inside the body (the root cause of most diving hazards). The user needs an acclimation period prior to each dive to overcome the gag reflex and adapt to the liquid medium.

Diving Time

The most critical aspect of underwater diving is the amount of time spent underwater. Not only are lungs incapable of extracting dissolved oxygen from water, but water creates a high-pressure environment that has adverse effects on the metahuman body. Both factors limit the amount of time characters can safely spend underwater. The Diving Table lists the maximum period a diver can stay under using standard diving systems.

DIVING TABLE

Depth (in meters)	Maximum Safe Diving Time
0–10	8 hours
11–30	2.5 hours
31–50	1.5 hours
51–150	1 hour
151–300	30 minutes



The safe diving time does not apply when a character is using LBA, riding in a submarine, or is inside an underwater facility. In the latter two cases, the outer hull resists the water pressure and surrounds the character with atmospheric pressure similar to the surface.

Hazards of Ascent and Descent

The deeper a character dives, the greater the ambient pressure. As long as a character ascends or descends no faster than 1 meter per Combat Turn, pressure differences pose no threat. Normally, the body's air cavities are flexible enough to accommodate significant pressure changes. However, if a character ascends or descends too rapidly, the body cannot adapt quickly enough, and damage occurs. The primary hazards of pressure imbalance are ear squeeze and air embolism.

Ear squeeze occurs whenever the character descends or ascends too quickly. In this case, the imbalance between the outside water pressure and the inside air pressure creates an uncomfortable swelling of the eardrum. If the swelling is great enough, the eardrum ruptures and cold water rushes against the middle ear. This afflicts the character with feelings of vertigo.

If a character ascends or descends faster than 1 meter per Combat Turn, she must resist 2P damage with Body. If this damage is not completely resisted, she suffers the effects of disorientation (p. 254, *SR4A*) and receives a -2 dice pool modifier on all hearing-related Perception Tests for 24 hours.

If the character rolls a critical glitch on her damage resistance test, she suffers an air embolism as her lungs expand too fast and a tear occurs in the chest cavity. An air bubble escapes into the blood stream and rises upward through the carotid artery into the brain, where it becomes trapped in one of the capillaries and blocks the flow of blood to portions of the brain. She must immediately resist 12P damage with Body. If treatment is slow to arrive, she may suffer a permanent loss of 1 point of Logic from oxygen starvation.

Diving Hazards

Even in the Sixth World, the underwater environment is generally dangerous to metahumanity. Special protection is required and special precautions must be observed to avoid potentially fatal effects. The following are some of the main hazards diving characters may face:

Oxygen Toxicity: Oxygen in excessively high concentrations or high pressure is toxic. Oxygen toxicity occurs whenever the character breathes pure oxygen at shallow depths or when the character breathes an air mixture too rich in oxygen at excessive depths. Characters breathing pure oxygen cannot dive below 7 meters without risking oxygen toxicity.

If a character suffers from oxygen toxicity, she takes 1 box of Physical damage each minute until she ascends to a safe depth. Additionally, she suffers the effects of nausea (p. 254, *SR4A*) until treated for oxygen toxicity.

Decompression Sickness: Also known as the bends, this occurs whenever the character spends excessive time at extreme depths while breathing compressed air containing nitrogen. When the diver begins to ascend, pressure decreases and the nitrogen gas dissolved in the body condenses. If the diver ascends too quickly or absorbs too much dissolved gas, the gas is trapped in bubbles in the bloodstream, which has an adverse effect on the character's central nervous system. The bends can be fatal unless the character

is put in a decompression chamber, in which the pressure can be equalized slowly enough for the character to rid himself safely of dissolved nitrogen.

Upon surfacing, the character takes 1 box of Physical damage per hour until placed inside a decompression chamber. Characters suffering from the bends are virtually incapacitated from the intense pain, suffering the effects of nausea (p. 254, *SR4A*).

Nitrogen Narcosis: Also called "rapture of the deep," this results from breathing compressed nitrogen gas at deep depths, which can have an intoxicating effect on the body similar to alcohol. In game terms, the character suffers a -2 dice pool modifier while intoxicated, exhibiting impaired judgment and reckless and irrational behavior. Characters can eliminate the effects of narcosis simply by ascending 16 meters or more.

Helium Chills: This problem results from the use of helium for deep dives. The deeper one goes, the more body heat is lost through helium in the respiratory tract, leading to hypothermia over a prolonged period. A character suffering from hypothermia takes 1 box of Physical damage and suffers a -1 dice pool modifier on all tests due to the numbing effects of the cold.

High Pressure Nervous Syndrome (HPNS): This occurs whenever a diver spends an excessive amount of time at depths greater than 200 meters. Caused by the ambient water pressure around the diver, HPNS induces muscular tremors and shaking in the voluntary muscles. Theoretically, HPNS can lead to convulsions and possibly death, though no diver has remained at such a low depth long enough to find out. A character inflicted with HPNS suffers a -1 dice pool modifier to all actions that will slowly raise to -4 or even higher as the effect intensifies.

Underwater Perception

One factor adding to the mystique of diving is the radically different environment of the underwater world. Water profoundly alters the properties of light and sound, thereby changing the way a diver sees and hears.

The refractive properties of water actually improve normal, unaided vision slightly. Objects underwater appear approximately 25 percent larger and 25 percent closer than normal. Water also absorbs light in gradual color stages. Shades of red disappear at 4 meters depth, shades of orange and yellow at 10, and shades of green and blue at 20 meters. The deeper a character dives, the murkier the ambient light becomes and colors drain away to a dull gray. Low-light vision corrects this effect somewhat. Thermographic vision, however, is confounded by it, as well as by the shifting thermal currents in water. Ultrasound vision systems are also less efficient in denser, deeper, and colder water. The Underwater Visibility Modifiers table (p. 171) lists modifiers for vision-based Perception Tests, based on the depth, type of water, and type of vision.

On the astral plane, water near the surface is teeming with small life, and so obscures assensing to a small degree. At greater depths, however, the lack of such life combined with the glow of the Earth itself makes assensing easier.

Sound travels approximately four times faster underwater than through the air. Though this aids hearing by making sounds seem louder, it also poses problems, because the sound travels too quickly for the brain to discern the time differential between the sound's arrival at the left and right ears. Consequently, determining the location of a sound source is virtually impossible.



UNDERWATER VISIBILITY MODIFIERS TABLE

Depth (in meters)	Normal	Low-Light	Thermographic	Ultrasound	Assensing
Subsurface (less than 4)	—	—	-1	—	-1
Shallow (4-15)	-1	—	-2	—	—
Deep (15+)	-2	-1	-3	-1	+2
Murky waters	-2	-2	-1	-1	—

In game terms, characters receive a -1 dice pool modifier to Perception Tests for detecting sounds. Locating a sound source by sound alone is impossible without the aid of sonar or echolocation gear (such as spatial recognizer cyberware or echo location bioware).

Water Combat

Characters on or in the water can engage in three types of combat: firing a weapon from the surface to a surface target, firing into the water, and fighting in the water. Each has its own advantages and drawbacks.

Surface to Surface Combat: If a character is in the water (but not under it) or on a floating platform, the waves made by the sea automatically add a dice pool modifier ranging -1 to -4. A person treading in calm waters with his head and one arm above the surface may only suffer a -1 modifier, while someone standing on a platform in the wake of a motorboat may receive the -4 modifier.

Surface to Underwater Combat: Shooting into the water is difficult. Reduce the DV of a firearm by 2 for every meter of water it is fired through, and by 3 per meter for other projectiles. Water also refracts light, adding a -1 dice pool modifier when aiming from the air at a submerged target (for example, shooting a diver).

Underwater Combat: Regular weapons follow the restrictions for surface-to underwater combat above, except for weapons specially designed for underwater use, such as a spear-gun (see *AquaDyne Shark-XS Harpoon Gun*, p. 18). To function without problems underwater, firearms need the extreme environment modification (p. 151). Guns without this may still fire underwater if they have cased ammunition, but the shell ejection mechanism does not work, so they may only be fired in Single Shot mode and a Simple Action must be taken to clear the gun. Weapons not designed to do so are easily damaged when fired underwater (gamemaster's discretion). Caseless ammunition does not work underwater.

Melee combat is exceedingly difficult underwater: impose a -2 dice pool modifier to all melee attack and defense tests. If the gamemaster allows it, characters may purchase an Underwater Combat specialization for their melee combat skills, allowing them to offset this penalty. In addition, a character who does not have a swim mask or cybereyes suffers an additional -1 dice pool modifier. Melee attacks also suffer a -1 DV penalty underwater, with the exception of choke holds and other attacks that use crushing strength instead of swinging or thrusting. These penalties do not apply to marine critters or water spirits.

Underwater vision modifiers also affect undersea ranged and combat attacks.

Explosions

Explosions underwater tend to cause more damage because water transmits the shockwave very well. Multiply the DV of an underwater explosion by 1.5 (round up), but do not change the Blast for normal explosions. For explosives that throw out shrapnel, such as fragmentation grenades, double the Blast (halving its effective range) due to the greatly increased resistance the fragments are subject to.

Exploding Scuba Tanks

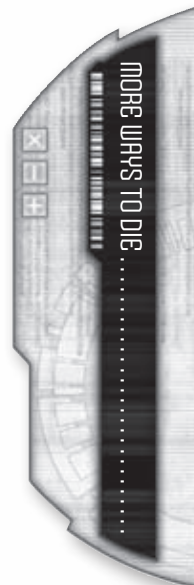
If punctured with great force, a highly pressurized tank such as a scuba tank will explode. Treat a normal scuba tank as having Armor and Structure ratings of 8 (see *Barriers*, p. 166, *SR4A*). If punctured, the tank will rupture and explode, inflicting 10P damage with an AP of -2 and a Blast of -1/meter.

Underwater Magic

Being underwater does not affect most magic use. Though line of sight can sometimes pose difficulties, the watery medium does not impede most spells. The Oxygenate spell is a particularly valuable spell on underwater trips. Characters on whom it is cast are immune to all underwater health hazards except for HPNS (which is caused by ambient water pressure rather than gas effects). Casters of physical illusion spells must consider the effects of water when attempting to make an illusion convincing. Likewise, such spells are affected by refractive distortion and appear larger and closer than the caster intended (mana-based illusion spells are not affected).

Various Manipulation spells and Combat spells with elemental effects may not function or may work differently underwater. Fire-based spells do not work underwater, as the water extinguishes any flames almost instantaneously, though Firewater/Napalm spells function normally. Blast effect spells take advantage of the concussive effects of explosions underwater (increase the DV by 1.5, round down) but they tend to create massive amounts of large bubbles, disrupting visibility. Acid-based spells are immediately diluted: targets receive a +2 dice pool bonus on their Spell Resistance Tests. Electricity-based spells are affected by the greater electrical conductivity of water. Normal lightning spells become area-effect spells, whereas area lightning spells double their radius of effect. Water spells work normally.

It is quite dangerous and painful for Fire spirits to materialize underwater, given their Severe allergy to water. Materialized air spirits may travel underwater, typically taking form as large air bubbles, but at the gamemaster's discretion they may suffer penalties to actions and movement. Water spirits are virtually invisible when materialized underwater: apply a -4 dice pool modifier to Perception Tests made against them. Spirits with Guard power may use that ability to protect characters from drowning or falling victim to other underwater hazards.



MELEE WEAPONS

Blades	Reach	Damage	Capacity	Availability	Cost	Page
Bayonet (on rifle)	2	(STR/2 + 1)P	—	3	40¥	14
Ceramic Knife	—	(STR/2 + 1)P	—	4	75¥	14
Claymore	2	(STR/2 + 4)P	-1	8R	900¥	14
Combat Axe	2	(STR/2 + 4)P	-1	8R	600¥	314, <i>SR4A</i>
Cougar Fineblade Knife						
Short Blade	—	(STR/2 + 1)P	-1	5R	550¥	14
Long Blade	—	(STR/2 + 2)P	-1	7R	900¥	14
Katana	1	(STR/2 + 3)P	-1	4R	1,000¥	314, <i>SR4A</i>
Katar	—	(STR/2 + 2)P	-2	9R	750¥	14
Knife	—	(STR/2 + 1)P	—	—	20¥	315, <i>SR4A</i>
Kris	—	(STR/2 + 1)P	—	10R	1,000¥	14
Macauitl	1	(STR/2 + 2)P	—	14R	3,000¥	14
Monofilament Sword	1	(STR/2 + 3)P	-1	8R	750¥	315, <i>SR4A</i>
Nodachi	2	(STR/2 + 4)P	-2	12R	2,500¥	14
Rapier	1	(STR/2 + 2)P	-1	4R	550¥	14
Spear	2	(STR/2 + 2)P	—	4	150¥	16
Survival Knife	—	(STR/2 + 1)P	-1	—	50¥	315, <i>SR4A</i>
Sword	1	(STR/2 + 3)P	—	4R	350¥	315, <i>SR4A</i>
Tomahawk	1	(STR/2 + 2)P	—	4	150¥	16
Vibro Blades						
Knife	—	(STR/2 + 2)P	-2	6R	1,000¥	16
Sword	1	(STR/2 + 4)P	-2	8F	2,000¥	16
Victorinox Memory Blade	1	(STR/2 + 2)P	-1	14R	1,250¥	16

Clubs	Reach	Damage	Capacity	Availability	Cost	Page
AZ-150 Stun Baton	1	7S(e)	-half	4R	800¥	16
Club	1	(STR/2 + 1)P	—	—	30¥	315, <i>SR4A</i>
Extendable Baton	1	(STR/2 + 1)P	—	—	50¥	315, <i>SR4A</i>
Jupiter Taser Club	1	6S(e)	-half	8R	1,200¥	16
Mace	1	(STR/2 + 3)P	—	4	120¥	17
Nunchaku	1	(STR/2 + 2)P	—	6R	75¥	17
Rattan Stick	1	(STR/2)P	+2	4	20¥	17
Sap	—	(STR/2 + 1)S	—	—	30¥	315, <i>SR4A</i>
Staff	2	(STR/2 + 2)P	—	—	50¥	315, <i>SR4A</i>
Stun Baton	1	6S(e)	-half	4R	400¥	315, <i>SR4A</i>
Stun Staff	2	6S(e)	-half	6R	650¥	17
Telescopic Staff	2	(STR/2 + 2)P	—	—	100¥	17
Tonfa	1	(STR/2 + 1)P	—	4	50¥	17

Exotic Melee Weapons	Reach	Damage	Capacity	Availability	Cost	Page
Garrote	—	(STR/2)P	—	0F	10¥	38
Hardliner Gloves	—	(STR/2+1)P	—	4	100¥	38
Kusarigama	—	—	—	8F	150¥	39
Sickle	1	(STR/2 + 2)P	—	—	—	—
Weighted Chain	2	(STR/2 + 1)P	—	—	—	—
Monofilament Chainsaw	1	5P	-2	4	300¥	335, <i>SR4A</i>
Monofilament Garrote	—	8P	-4	18F	2,000¥	39
Monofilament Whip	2	8P	-4	12F	3,000¥	315, <i>SR4A</i>
Pole Arm	2	(STR/2 + 2)P	-2	4R	1,000¥	315, <i>SR4A</i>
Riot Shield	—	(STR/2)S	+2	6R	200¥	327, <i>SR4A</i>
Sai	—	(STR/2 + 1)P or S	—	4	75¥	39
Taser Armor/Shield	—	6S(e)	-half	10R	750¥	327, <i>SR4A</i>
Whip	2	(STR/2)P	+2	3	100¥	39

Improvised Melee Weapons	Reach	Damage	Capacity	Skill Used	Page
Baseball Bat	1	(STR/2 + 1)P	—	Clubs	17
Bottle (unbroken, first use)	—	(STR/2 + 1)S	—	Clubs	17

Improvised Melee Weapons	Reach	Damage	Capacity	Skill Used	Page
Bottle (broken, after first hit)	—	(STR/2 + 1)P	—	Blades	17
Chain	1-2	(STR/2 + 1)P	—	Exotic Melee Weapon (Whip)	17
Chair	—	(STR/2 + 2)S	—	Clubs	17
Fork or Utensil	—	(STR/2)P	—	Blades	17
Frying Pan	—	(STR/2 + 1)P	—	Clubs	17
Folding Spade	1	(STR/2 + 2)P	—	Blades	17
Metahuman Body	1	(BOD/2 + 2)S	—	Unarmed Combat	17
Pistol	—	(STR/2)P	—	Clubs	17
Pool Cue	1	(STR/2)P	+2	Clubs	17
Potted Plant	—	(STR/2 + 1)P	—	Clubs	17
Rifle Butt	1	(STR/2 + 1)P	—	Clubs	17
Sledge Hammer	1	(STR/2 + 3)P	—	Clubs	17
Steel Pipe	1	(STR/2 + 1)P	—	Clubs	17

Unarmed	Reach	Damage	AP	Availability	Cost	Page
Shock Frills	—	6S(e)	-half	6R	200¥	327, SR4A
Shock Glove	—	5S(e)	-half	3R	200¥	315, SR4A

PROJECTILES AND THROWING WEAPONS

Projectile Weapons	Damage	AP	Availability	Cost	Page
AquaDyne Harpoon Gun	6P	-1	6R	600¥	18
Bow	(STR Min + 2)P	—	2	Rating x 100¥	315, SR4A
Arrow	—	—	2	5¥	315, SR4A
Injection Arrow	—	—	8R	50¥	315, SR4A
Collapsible Bow	(STR Min. + 1)P	—	4R	Rating x 125¥	18
Light Crossbow	3P	—	2	300¥	316, SR4A
Medium Crossbow	5P	—	4R	500¥	316, SR4A
Heavy Crossbow	7P	-1	8R	750¥	316, SR4A
Bolt	—	—	2	5¥	316, SR4A
Injection Bolt	—	—	8R	50¥	316, SR4A
Pistol Crossbow	2P	—	4R	250¥	18
Pistol Bolt	—	—	4R	3¥	18
Injection Bolt	—	—	8R	30¥	18
Slingshot	(STR/2)P	—	—	30¥	18

Special Arrowheads	Damage Modifier	AP	Availability	Cost	Page
Barbed Head	—	—	5R	7¥	19
Explosive Head	+1	—	9F	10¥	19
Hammerheads	— (Stun)	+2	—	—	19
Incendiary Head	—	—	12F	55¥	19
Screamer Head	(-2)S	+2	2	5¥	19
Stick-n-Shock	6S(e)	-half	6R	13¥	19

Throwing Weapons	Damage	AP	Availability	Cost	Page
Boomerang	(STR/2 + 1)P	—	4	50¥	18
Harpoon/Javelin	(STR/2 + 2)P	—	6	125¥	19
Net	—	—	6	350¥	19
Shuriken	(STR/2)P	—	2	30¥	316, SR4A
Throwing knife	(STR/2 + 1)P	—	2	20¥	316, SR4A

Exotic Ranged Weapons	Damage	AP	Mode	Ammo	Availability	Cost	Page
Ares Screech Sonic Rifle	5S	—	SS	10 (c) or external source	16	8,000¥	39
Blowgun	—	—	SS	1 (ml)	4	10¥	39
Bolas	—	—	—	—	6	75¥	40
FN-AAL Gyrojet pistol	6P	-1	SA	10 (c)	12F	1,000¥	40
Grapple Gun	5S	—	SS	1 (ml)	8R	500¥	337, SR4A

Exotic Ranged Weapons	Damage	AP	Mode	Ammo	Availability	Cost	Page
Micro Flare Launcher	3P	—	SS	1 (ml)	—	50¥	337, <i>SR4A</i>
Monofilament Bolas	8P	-4	—	—	16F	2,500¥	40
Mortimer "Trafalgar"							
Gun Cane	5P	—	SS	1 (b)	9R	750¥	40
SA Retiarius Net Gun							40
Normal	—	—	SS	4 (b)	9	750¥	
Large	—	—	SS	2 (b)	9	1,000¥	
Tiffani Élégance							
Shooting Bracer	4P	—	SS	1 (b)	10R	1,250¥	40

Improvised Throwing Wpns	Short Range	Medium Range	Long Range	Extreme Range	Damage	AP	Page
Baseball/Billiard Ball	0-STR x 2	To STR x 4	To STR x 6	To STR x 10	(STR/2)P	—	19
Bowling Ball	0-STR/2	To STR	To STR x 1.5	To STR x 2	(STR/2 + 2)P	—	19
Brick/Paving Stone	0-STR x 2	To STR x 3	To STR x 4	To STR x 6	(STR/2 + 1)P	—	19
Chair	0-STR	To STR x 1.5	To STR x 2	To STR x 2.5	(STR/2)S	—	19
Combat Axe	0-STR	To STR x 2	To STR x 3	To STR x 4	(STR/2 + 3)P	—	19
Knife (any)	0-STR	To STR x 2	To STR x 3	To STR x 4	(STR/2)P	—	19
Metahuman Body	(STR - BOD)/2	—	—	—	(BOD)S	—	19
Molotov Cocktail	0-STR x 2	To STR x 3	To STR x 4	To STR x 5	5P*	-half	19
Pistol	0-STR x 2	To STR x 3	To STR x 4	To STR x 6	(STR/2 + 1)S	—	19
Potted Plant	0-STR/2	To STR	To STR x 1.5	To STR x 2	(STR/2 + 1)P	—	19
Sword	0-STR	To STR x 2	To STR x 3	To STR x 5	(STR/2 + 2)P	—	19

*Starts fire, see p. 155, *SR4*

FIREARMS

Tasers	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Cavalier SafeGuard	5S(e)	-half	SA	—	6 (m)	—	275¥	20
Defiance EX Shocker	8S(e)	-half	SS	—	4 (m)	—	150¥	316, <i>SR4A</i>
Defiance Protector	6S(e)	-half	SA	—	3 (m)	4	300¥	20
Jupiter Taser Club	6S(e)	-half	SS	—	1 (m)	8	1,200¥	20
Yamaha Pulsar	6S(e)	-half	SA	—	4 (m)	—	150¥	316, <i>SR4A</i>

Hold-Outs	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Cavalier Scout	4P	—	SA	—	7 (c)	6R	375¥	20
Fichetti Tiffani Needler	6P(f)	+2	SA	—	4 (c)	5R	500¥	20
Fichetti Tiffani Self-Defender	4P	—	SS	—	4 (c)	4R	350¥	20
Morrissey Élan	4P	—	SA	—	5 (c)	7R	450¥	20
Raekor String	6P(f)	+2	SS	—	5 (c)	6R	350¥	316, <i>SR4A</i>
Streetline Special	4P	—	SS	—	6 (c)	4R	100¥	316, <i>SR4A</i>
Walther Palm Pistol	4P	—	SS/BF	—	2 (b)	4R	175¥	20

Light Pistols	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ares Light Fire 70	4P	—	SA	—	16 (c)	3R	350¥	21
Beretta 101T	4P	—	SA	—	12 (c)	4R	200¥	21
Beretta 200ST	4P	—	SA/BF*	(1)	20 (c)	7R	550¥	21
Ceska vz/120	4P	—	SA	—	18 (c)	4R	350¥	21
Colt America L36	4P	—	SA	—	11 (c)	4R	150¥	317, <i>SR4A</i>
Colt Asp	4P	—	SA	—	6 (cy)	3R	175¥	21
Fichetti Executive Action	4P	—	SA/BF	—	18 (c)	12R	700¥	21
Fichetti Security 600	4P	—	SA	(1)	30 (c)	6R	450¥	317, <i>SR4A</i>
Hammerli 620S	4P	—	SA	1	6 (c)	8R	650¥	317, <i>SR4A</i>
SA Puzzler	4P	—	SA	—	12 (c)	15F	900¥	21
Seco LD-120	4P	—	SA	—	12 (c)	3R	250¥	22
Taurus Multi-6	4P/5P	—	SA/SS	—	6 (cy)	6R	200¥	22
Walther PB-120	4P	—	SA	—	10 (c)/15 (c)	9R	400¥	22
Yamaha Sakura Fubuki	4P	—	SA/BF	(1)	10 (ml) x 4	10R	2,000¥	317, <i>SR4A</i>

* Burst fire on this weapon requires a Complex Action.

Machine Pistols	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ares Crusader	4P	—	SA/BF	2	40 (c)	7R	700¥	22
Ceska Black Scorpion	4P	—	SA/BF	(1)	35 (c)	8R	550¥	317, SR4A
FN 5-7C	4P	—	SA/BF	1	20 (c)	8R	600¥	22
PPSK-4 Collapsible Machine Pistol	4P	—	SA/BF	(1)	30 (c)	20F	2,800¥	22
Steyr TMP	4P	—	SA/BF/FA	—	30 (c)	8R	600¥	317, SR4A

Heavy Pistols	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ares Predator IV	5P	-1	SA	—	15 (c)	4R	350¥	317, SR4A
Ares Viper Slivergun	8P(f)	+2	SA/BF	—	30 (c)	5R	500¥	317, SR4A
Browning Ultra-Power	5P	-1	SA	—	10 (c)	4R	300¥	22
Cavalier Deputy	5P	-1	SA	—	7 (cy)	4R	225¥	22
Collapsible Heavy Pistol	5P	-1	SA	—	10 (c)	18R	1,050¥	22
Colt Government 2066	5P	-1	SA	1	14 (c)	6R	500¥	22
Colt Manhunter	5P	-1	SA	—	16 (c)	4R	300¥	317, SR4A
Eichiro Hatamoto II	7P	-1	SS	—	1 (m)	10R	800¥	22
HK Urban Fighter	5P	-1	SA	—	10 (c)	14F	1,400¥	22
Morrissey Alta	5P	-1	SA	—	12 (c)	7R	850¥	22
Morrissey Elite	5P	-1	SA	—	5 (c)	6R	450¥	23
Nitama NeMax	5P	-1	SA	—	10 (c)	16R	1,700¥	23
PSK-3 Collapsible Pistol	5P	-1	SA	—	8 (c)	18F	2,300¥	23
Remington Roomsweeper w/flechettes	5P 7P(f)	-1 +2	SA	—	8 (m)	6R	250¥	317, SR4A
Ruger Super Warhawk	6P	-2	SS	—	6 (cy)	3R	250¥	317, SR4A
Ruger Thunderbolt	5P	-1	BF	2	12 (c)	12R	750¥*	24
Savalette Guardian	5P	-1	SA/BF**	1	12 (c)	7R	800¥	24
Walther Secura	5P	-1	SA	—	12 (c)	5R	300¥	24
Walther Secura Kompakt	5P	-1	SA	—	9 (c)	7R	400¥	24
WW Infiltrator	5P	-1	SA	—	15 (c)	16F	1,100¥	24

* Does not include cost of integral laser sight or smartgun system.

** Burst fire on this weapon requires a Complex Action.

Submachine Guns	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
AK-97 Carbine	5P	—	SA/BF/FA	(1)	30 (c)	4R	400¥	317, SR4A
Ares Executive Protector	5P	—	SA/BF/FA	(1)	30 (c)	9F	1,000¥	24
Beretta Model 70	5P	—	BF/FA	—	35 (c)	5R	650¥	24
Colt Cobra TZ-110	5P	—	SA/BF/FA	2 (3)	32 (c)	5R	550¥	24
TZ-115	5P	—	SA/BF/FA	(1)	32 (c)	5R	475¥	24
TZ-118	5P	—	SA/BF/FA	(1)	32 (c)	5R	650¥	24
Colt M24A3 Water Carbine	5P	—	SA/BF	—	30 (c)	10F	1,200¥	24
FN P93 Praetor	5P	—	SA/BF/FA	1 (2)	50 (c)	11F	650¥	24
HK-227X	5P	—	SA/BF/FA	(1)	28 (c)	8R	800¥	317, SR4A
HK MP-5 TX	5P	—	SA/BF/FA	2 (3)	20 (c)	4R	550¥	317, SR4A
HK Urban Combat	5P	—	SA/BF/FA	2	36 (c)	16F	2,400¥	25
Ingram Smartgun X	5P	—	BF/FA	2 (3)	32 (c)	6R	650¥	317, SR4A
Ingram SuperMach 100	4P	—	SA/FA	3 (4)	40 or 60 (c)	9F	975¥	25
Ingram Warrior-10	5P	—	SA/BF	—	30 (c)	4R	400¥	25
Sandler TMP	5P	—	BF/FA	(1)	20 (c)	4R	350¥	25
SCK Model 100	5P	—	SA/BF	(1)	30 (c)	6R	750¥	25
Uzi IV	5P	—	BF	(1)	24 (c)	4R	500¥	317, SR4A

Assault Rifles	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
AK-97	6P	-1	SA/BF/FA	—	38 (c)	4R	500¥	318, SR4A
AK-98	6P	-1	SA/BF/FA	—	38 (c)	8F	1,000¥	26
Grenade Launcher	Grenade	—	SS	—	6 (m)	—	—	—
Ares Alpha	6P	-1	SA/BF/FA	2	42 (c)	12F	1,700¥	318, SR4A
Grenade Launcher	Grenade	—	SS	—	6 (c)	—	—	—
Ares HVAR	5P	—	SA/BF/FA	3 (4)	50 (c)	11F	2,400¥	26



Assault Rifles	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Colt M22A3	6P	-1	SA/BF/FA	1	40 (c)	9R	1,600¥	26
Grenade Launcher	Grenade	—	SS	—	6 (m)			
Colt M23	6P	-1	SA/BF/FA	—	40 (c)	5R	750¥	27
FN HAR	6P	-1	SA/BF/FA	2	35 (c)	8R	1,000¥	318, SR4A
HK G12A3z	6P	-1	SA/BF/FA	2	32 (c)	9F	1,750¥	27
HK XM30	6P	-1	SA/BF/FA	(1)	30 (c)	15F	2,500¥	319, SR4A
Grenade Launcher	Grenade	—	SS	—	8 (c)			
Shotgun	7P	+1	SA	(1)	10 (c)		+1,000¥	
Carbine	5P	—	SA/BF/FA	(1)	30 (c)		+500¥	
Sniper	7P	-2	SA	(1)	10 (c)		+1,000¥	
LMG	6P	-1	BF/FA	2 (3)	100 (belt)		+1,000¥	
Nitama Optimum II	6P	-1	SA/BF/FA	1	30 (c)	10F	2,200¥	27
Underbarrel Shotgun	7P	-1	SA	1	5 (m)			
Sernopal vz/88V	6P	-1	SA/BF/FA	2	35 (c)	8F	1,650¥	27
Steyr AUG-CSL						13F	4,000¥	27
Assault Rifle	6P	-1	SA/BF/FA	1	40 (c)			
Rifle	7P	-1	SA	1	20 (c)			
Submachine Gun	5P	—	SA/BF/FA	1 (2)	25 (C)			
Light Machine Gun	6P	-1	BF/FA	1	50 (c) or belt			

Sport Rifles	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Mannlicher Wildhüter	8P	-1	SS	—	6 (c)	7R	1,200¥	27
Remington 750	7P	-1	SS	—	5 (m)	4R	500¥	27
Remington 950	8P	-1	SS	—	5 (m)	4R	675¥	27
Ruger 100	7P	-1	SA	(1)	5 (m)	4R	900¥	319, SR4A
PJSS Elephant Rifle	9P	-1	SS	(1)	2 (b)	12R	6,000¥	319, SR4A

Sniper Rifles	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ares Desert Fox	8P	-3	SA	(1)	14 (c)	10F	3,350¥	28
Barrett Model 121	9P	-4	SA	(2)	14 (c)	18F	9,000¥	28
HK PSG Enforcer	7P	-3	SA	(2)	2 x 12 (c)	12F	4,800¥	28
Ranger Arms SM-4	8P	-3	SA	(1)	15 (c)	16F	6,200¥	319, SR4A
Walther MA-2100	7P	-3	SA	(1)	10 (m)	10F	5,000¥	319, SR4A

Shotguns	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Auto-Assault 16	7P	-1	SA/BF/FA	2	32 (d)	18R	8,000¥	28
Boyd & Richards Desperado	7P	-1	SS	—	5 (m)	10R	1,700¥+	28
Defiance T-250	7P	-1	SA	—	5 (m)	3R	475¥	28
Enfield AS-7	7P	-1	SA/BF	—	10 (c) or 24 (d)	12R	1,100¥	28
Franchi SPAS-22	7P	-1	SA/BF	(1)	10 (m)	10R	1,250¥	28
Mossberg AM-CMDT	9P(f)	+2	SA/BF/FA	—	10 (c)	12R	1,000¥	319, SR4A
PJSS Model 55 shotgun	7P	-1	SS	(1)	2 (b)	7R	1,200¥	28
Remington 990	7P	-1	SA	(1)	8 (m)	4R	550¥	319, SR4A
With flechettes	9P(f)	+2						
Street Sweeper	7P(f)	+2	SS	—	1 (b)	5R	175¥	29

Special Weapons	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ares S-III Super Squirt	Chemical	—	SA	—	20 (c)	4	500¥	319, SR4A
Fichetti Pain Inducer	Special	-half	SS	—	Special	8R	2,000¥	319, SR4A

Light Machine Guns	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ares MP-LMG	6P	-1	BF/FA	2 (3)	50 (c) or belt	12F	1,500¥	29
Ingram White Knight	6P	-1	BF/FA	5 (6)	50 (c) or 100 (belt)	12F	2,000¥	320, SR4A
SA Nemesis LMG	6P	-1	BF/FA	2	60 (c)	17F	3,500¥	29
GE Vindicator Minigun	6P	-1	FA*	—	50 (c) or belt	16F	5,500¥	29

* The fixed fire rate is 15 rounds per Complex action instead of 10.

Medium Machine Guns	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
FN MAG-5	6P	-2	FA	2 (8)	50 (box) or belt	14F	5,500¥	29
Stoner-Ares M202	6P	-2	FA	—	50 (c) or 100 (belt)	12F	4,500¥	320, SR4A
Ultimax MMG	6P	-2	FA	(6)	40 (c) or belt	13F	4,500¥	29

Heavy Machine Guns	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ruhrmetall SF20	7P	-3	FA	3 (4)	40 (c) or belt	15F	6,500¥	29
RPK HMG	7P	-3	FA	(6)	40 (c) or belt	16F	6,000¥	29
Stoner-Ares M107	7P	-3	FA	3 (9)	40 (c) or belt	15F	7,500¥	30
Ultimax HMG-2	7P	-3	FA	3 (10)	50 (c) or 100 (belt)	15F	7,500¥	320, SR4A

Assault Cannons	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ares Thunderstruck								
Gauss Rifle	9P	-4	SA	(1)	10 (c) + Energy	24F	13,000¥	30
Ares Vigorous								
Assault Cannon	10P	-5	SS	—	12 (c)	18F	4,000¥	30
Panther XXL	10P	-5	SS	(1)	15 (c)	20F	5,500¥	320, SR4A

Flamethrowers	Damage	AP	Mode	Ammo	Availability	Cost	Page
Aztechnology F3a	8P	-half	SS	10	14F	1,800¥	40
Shiawase Blazer	6P	-half	SS	4	16F	1,200¥	40

Laser Weapons	Damage	AP	Mode	Ammo	Availability	Cost	Page
Ares Redline	5P	-half	SA	10 (c) or external source	14F	7,500¥	41
Ares MP Laser 3	7P	-half	SA	2 x 5 (c) or external source	18F	12,000¥	41
Ares Heavy MP Laser	9P	-half	SA	External source	24F	30,000¥	41

Grenade and Mortar Launchers	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Ares Antioch-2	Grenade	—	SS	—	8 (m)	8F	600¥	320, SR4A
ArmTech MGL-6	Grenade	—	SA	—	6 (c)	10F	1,500¥	31
ArmTech MGL-12	Grenade	—	SA	—	12 (c)	10F	2,000¥	320, SR4A
Enfield GL-67								
Grenade Launcher	Grenade	—	SS	1	20 (d)	14F	4,000¥	31
M-12 Portable								
Mortar System	As Mortar Round	—	SS	—	1	16F	2,250¥	31

Missile Launchers	Damage	AP	Mode	RC	Ammo	Availability	Cost	Page
Arbelast II MAW	Rocket	Rocket	SS	—	1	14F	1,200¥	31
Aztechnology Striker	Missile	—	SS	—	1 (ml)	10F	1,000¥	320, SR4A
Ballista	Missile	Missile	SA	—	4 (m)	19F	7,500¥	31
Great Dragon								
ATGM Launcher	Missile	Missile	SS	—	1 (ml)	17F	1,200¥	31
M79B1 LAW	12P	-2/-6*	SS	—	1	12F	750¥	31
Mitsubishi								
Yakusoku MRL	Missile	—	SA	—	8 (m)	20F	12,000¥	320, SR4A
Phalanx Vogeljäger	Missile	Missile-	SS	—	1	22F	8,750¥	31

* AP of -2 against people, -6 against vehicles.

WEAPON ACCESORIES

General Accessories	Mount	Availability	Cost	Page
Advanced Safety System	—	4	600¥	31
Airburst Link	—	6R	500¥	322, SR4A
Ammo Drum/Box	—	4	25¥	31
Bipod	Under	2	100¥	322, SR4A
Bayonet (on rifle)	Barrel	3	40¥	31



General Accessories	Mount	Availability	Cost	Page
Concealable Holster	—	2	75¥	322, SR4A
Flashlight				33
Standard	Top/Under	2	50¥	
Low-Light	Top/Under	4	200¥	
Infrared	Top/Under	6	400¥	
Guncam	Top/Under	5	375¥	33
Hidden Gun Arm Slide	—	4	350¥	322, SR4A
Imaging Scope	Top	3	300¥	322, SR4A
Laser Sight	Barrel/Top/Under	2	100¥	322, SR4A
Periscope	Top	3	50¥	322, SR4A
Quick-Draw Holster	—	4	100¥	322, SR4A
Safe Target System	—	6	750¥	33
per additional set of RFID or GPS data	—	6	+25¥	
Image Recognition software	—	8	+200¥	
per additional Image	—	8	+5¥	
Shock Pad	—	2	50¥	322, SR4A
Silencer	Barrel	8F	200¥	322, SR4A
Sling	—	—	15¥	33
Smart Firing Platform	Under	12F	2,000¥	322, SR4A
Smartgun System, internal	—	6R	Weapon Cost	322, SR4A
Smartgun System, external	Top/Under	4R	400¥	322, SR4A
Sound Suppressor	Barrel	12F	300¥	322, SR4A
Spare Clips	—	4	5¥	323, SR4A
Speed Loader	—	2	25¥	323, SR4A
Tripod	Under	4	300¥	323, SR4A
Underbarrel				
Bola Launcher	Under	8R	350¥	34
Flamethrower	Under	as flamethrower +2	as flamethrower +200¥	34
Grapple Gun	Under	10R	550¥	34
Weapon Commlink	—	—	1,000¥ + Commlink Cost	34
Weapon Personality	—	8	250¥	34

Recoil Accessories	Mount	Availability	Cost	Page
Foregrip	Under	2	100¥	34
Gas-Vent 2 System	Barrel	4R	200¥	322, SR4A
Gas-Vent 3 System	Barrel	6R	400¥	322, SR4A
Gyro Stabilization	Under	7	3,000¥	322, SR4A
Hip Pad Bracing System	—	4	200¥	34
Stock	—	4	150¥	34
Underbarrel Weight	Under	2	75¥	34

AMMUNITION

Ammunition, per 10 shots	Damage Mod.	AP Mod.	Armor used	Availability	Cost	Page
APDS	—	-4	B	16F	70¥	323, SR4A
Assault Cannon	As Cannon	As Cannon	B	16F	450¥	323, SR4A
AV Rounds	—	-4/-6*	B	18F	120¥	34
Capsule Rounds	— (Stun)	+2	I	4	30¥	34
Explosive Rounds	+1	0	B	8F	50¥	323, SR4A
EX-Explosive Rounds	+1	-1	B	12F	100¥	323, SR4A
Flechette Rounds	+2	+5	I	2R	100¥	323, SR4A
Frangible Rounds	—	+2	B/I	6R	50¥	34
Gel Rounds	— (Stun)	+2	I	4R	30¥	323, SR4A
Hi-C Plastic Rounds	-/-1**	—	B	8F	150¥	34
Hollow Point Rounds	+1	+2	B	6F	50¥	34
Regular Ammo	—	—	B	2R	20¥	324, SR4A
Silver Bullets	—	+2	B	12R	250¥	34
Stick-n-Shock	6S(e)	-half	I	5R	80¥	324, SR4A
Subsonic Rounds	—	+2	B	10F	40¥	
Taser Dart	As Taser	-half	I	2	50¥	324, SR4A

Ammunition, per 10 shots	Damage Mod.	AP Mod.	Armor used	Availability	Cost	Page
Tracer	—	—	B	5R	75¥	313, <i>SR4</i>
Tracker Rounds						
Security Tag	—	—	B	6R	150¥	35
Stealth Tag	—	—	B	8R	75¥	35
Shotgun Rounds, per 10 shots						
Flare Rounds	-2	+2	I	6	25¥	35
Shock Lock Rounds	+1	—	B	10F	70¥	35

* AVR/AVMs have an AP of -4 against people, -6 against vehicles and Barrier ratings (see p. 166, *SR4A*).
 ** The Damage Value of Hi-C plastic rounds at long and extreme ranges is reduced by 1.

Miscellaneous Ammunition (per 10 shots)	Damage	AP	Blast	Availability	Cost	Page
AV Assault Cannon Rounds	—	-1/-3**	—	20F	2,500¥	35
Flamethrower Tank	—	—	—	As Flamethrower	Ammo capacity x10¥	35
Flamethrower Fuel Mixture	—	—	—	14F	5¥ (per shot)	35
Gauss Rifle Rounds	—	—	—	18F	350¥	36
Great Dragon Anti-Tank Missiles	18P	-2/-6	-4/m	27F	3,000¥ (per missile)	36
Gyrojet Rockets						
Standard Gyrojet Rockets	—	—	—	12F	80¥	36
Gyrojet Plus Rockets	+1	—	—	16F	200¥	36
Gyrojet Taser Rockets	6S(c)	-half	—	14F	300¥	36
Gyrojet Tracker Rockets						
with Security Tag	—	—	—	14F	200¥	36
with Stealth Tag	—	—	—	16F	125¥	36

* AVR/AVMs have an AP of -2 against people, -6 against vehicles.
 ** AV Assault Cannon Rounds have an additional AP of -1 against people, -3 against vehicles.

BATTERY PACKS

Peak-Discharge Battery Packs	Power Points	Availability	Cost	Page
Power Clip	10	14F	300¥	36
Satchel Power Pack	30	16F	750¥	36
Power Backpack	80	20F	2,200¥	36

GRENADES, ROCKETS, AND MISSILES

Grenades	Damage	AP	Blast	Availability	Cost	Page
Flare	—	—	—	4	40¥	36
Flash	—	—	Special	6R	30¥	37
Flash-Bang	6S	-3	10m Radius	6R	30¥	324, <i>SR4A</i>
Flash-Pak	Special	—	Special	4	200¥	324, <i>SR4A</i>
Fragmentation	12P(f)	+2	-1/m	10F	35¥	324, <i>SR4A</i>
Gas	Chemical	—	10m Radius	4 + Chemical	20¥ + Chemical	324, <i>SR4A</i>
High Explosive	10P	-2	-2/m	7F	45¥	324, <i>SR4A</i>
Incendiary	Special	—	Special	8R	50¥	37
Ink	—	—	—	6	35¥	37
Smoke	—	—	10m Radius	4R	30¥	324, <i>SR4A</i>
Splash	Chemical	—	10 m Radius	4 + Chemical	20¥ + Chemical	37
Thermal Smoke	—	—	10m Radius	6R	35¥	325, <i>SR4A</i>
White Phosphorus	8P/4P	-half	-1/m	12F	120¥	37

Mortar Rounds	Damage	AP	Blast	Availability	Cost	Page
Anti-Vehicle	16P	-2/-6*	-4/m	18F	210¥	37
Fragmentation	18P(f)	+2	-1/m	15F	105¥	37
Gas/Splash	Chemical	—	15 m Radius	6F + Chemical	60¥ + Chemical	37
High Explosive	15P	-2	-2/m	12F	135¥	37
Incendiary	—	—	15m Radius	12F	150¥	37
Seeker	As Round	As Round	As Round	+2F	+500¥	37
Smoke	—	—	15m Radius	8F	90¥	37

Mortar Rounds	Damage	AP	Blast	Availability	Cost	Page
Solar	—	—	40m Radius	8F	120¥	37
Thermal Smoke	—	—	15m Radius	10F	105¥	37
White Phosphorus	12P/6P	-half	-1/m	20F	360¥	37

* AP of -2 against people, -6 against vehicles.

Rocket	Damage	AP	Blast	Availability	Cost	Page
Anti-Vehicle Rockets	16P	-2/-6*	-4/m	20F	1,000¥	325, SR4A
Fragmentation Rockets	16P(f)	+2	-1/m	16F	500¥	325, SR4A
High Explosive Rockets	14P	—	-2	-2/m	20F	—
Inferno Rocket	6P/12P	+0/-half	-/-2/m	24F	1,500¥	38
MP Jabberwocky II (Rating 1-10)	—	—	Special	(6 + Rating) x 3F	1,000¥ + Rating x 300¥	38
Seeker Rocket	As Rocket	As Rocket	As Rocket	+2R	+500	38
Zapper Rocket	8P/12S(e)	+0/-half	-/-4/m	10R	1,150¥	38

Missile	Damage	AP	Blast	Availability	Cost	Page
As Rocket	As Rocket	As Rocket	As Rocket	+5	+ Sensor rating x 500¥	38
Ballista Missiles						
Ballista Mk I	14P	-2/-6	-7/m	24F	1,000¥ (per missile)	38
Ballista Mk II	14P	-2/-6	-7/m	28F	2,500¥ (per missile)	38
SAM	12P	-2/-6	-2/m	28F	1,250¥ + Sensor rating x 500¥	38

ARMOR AND CLOTHING

Generic Clothing	Ballistic/Impact	Availability	Cost	Page
Clothing	0/0	—	20-100,000¥	326, SR4A
Feedback Clothing	—	+8	+500¥	326, SR4A
Leather Jacket	2/2	—	200¥	326, SR4A

Armor	Ballistic/Impact	Availability	Cost	Page
Actioneer Business Clothes	5/3	8	1,500¥	320, SR4A
Armor Clothing	4/0	2	500¥	320, SR4A
Armor Jacket	8/6	2	900¥	320, SR4A
Armor Vest	6/4	4	600¥	320, SR4A
Camouflage Suit	8/6	4	1,200¥	320, SR4A
Chameleon Suit	6/4	10R	8,000¥	320, SR4A
Full Body Armor	10/8	14R	6,000¥	320, SR4A
Helmet	+2/+2	—	+1,000¥	320, SR4A
Chemical Seal	—	+6	+5,000¥	320, SR4A
Environment Adaptation	—	+3	+2,000¥	320, SR4A
Lined Coat	6/4	2	700¥	320, SR4A
Urban Explorer Jumpsuit	6/6	8	500¥	320, SR4A
Helmet	-/+2	—	+50¥	—
Mortimer of London				
Berwick Line (c)				
Suit Jacket*	3/2	12	1,500¥	45
Dinner Jacket*	2/2	12	1,750¥	45
Skirt/Trousers	1/1	12	800¥	45
Blouse/Shirt	1/0	12	550¥	45
Greatcoat Line	6/5	8	3,000¥	45
Ulysses Line	6/4	8	2,800¥	45
Vashon Island				
Aces High Jacket Line	3/3	7	1,250¥	46
Steampunk Line (c)				
Overcoat	3/3	7	1,000¥	46
Corset/Vest*	2/2	7	600¥	46
Slacks or Knickers/ Petticoat and Skirt	1/1	7	400¥	46
Blouse/Shirt	1/1	7	250¥	46
Dressing Gown*	1/0	7	750¥	46

Armor	Ballistic/Impact	Availability	Cost	Page
Synergist Business Line (c)				
Suit Jacket*	3/2	8	800¥	46
Short Jacket*	2/2	8	500¥	46
Skirt/Slacks	1/1	8	400¥	46
High-collar Shirt	1/0	8	300¥	46
Longcoat*	4/2	8	1,300¥	46
Victory				
Globetrotter Line				
Camouflage Jacket	6/4	5	1,000¥	46
Camouflage Jumpsuit	5/3	5	750¥	46
Camouflage Vest	3/3	5	400¥	46
Light Armor Clothing	3/0	5	400¥	46
Heavy Armor Clothing	4/2	5	600¥	46
Fatigues	3/0	5	500¥	46
Massaging Liners	—	+2	+800¥	46
Industrious Line				
Jumpsuit	4/2	4	700¥	47
Coverall	5/4	4	900¥	47
Hard Hat	+0/+2	4	50¥	47
Winterized Coverall	6/5	4	1,000¥	47
Zoé				
Executive Suite Line (c)				
Long Jacket*	4/1	9	1,000¥	47
Short Jacket*	3/1	9	750¥	47
Plain Blouse/Shirt	1/0	9	400¥	47
Skirt/Trousers	1/1	9	550¥	47
Heritage Line	2-6/1-4	14	10,000+¥	47
Moonsilver Line				
Evening Gown	4/1	10	7,500¥	47
Cocktail Dress	3/1	10	5,000¥	47
Shawl/Scarf/Stole	+1/0	10	500-1,000¥	47
Second Skin Line	4/1	12	5,000¥	48
Personal Armor				
Body Armor Bag	6/2	8	750¥	48
Chain Shirt	2/7	8	900¥	48
Form-Fitting Body Armor				
Shirt	3/0	6	500¥	48
Half-Body Suit	4/1	7	900¥	48
Full-Body Suit	6/2	8	1,600¥	48
Padded Leather Armor	2/5	8	600¥	48

Personal Armor Suits	Ballistic/Impact	Capacity	Availability	Cost	Page
Bike Racing Armor	4/7	6	6	500¥	48
Helmet	+1/+2	6	—	+200¥	48
Bunker Gear	3/6	4	6	2,500¥	49
Helmet	+1/+2	3	—	+750¥	49
Riot Control Armor	6/9	6	10R	3,000¥	49
Helmet	+1/+2	6	—	+1,000¥	49
SWAT Armor	12/10	8	16R	8,000¥	49
Helmet	+2/+2	4	—	1,200¥	49

SecureTech PPP System	Ballistic/Impact	Availability	Cost	Page
SecureTech PP System				
Forearm Guards	+0/+1	6	200¥	49
Helmet	+0/+2	4	100¥	49
Leg and Arm Casings	+1/+1	6	350¥	49
Shin Guards	+0/+1	5	150¥	49
Vitals Protector	+1/+1	4	200¥	49

Armor Modifications	Ballistic/Impact	Capacity	Availability	Cost	Page
Auto-Injector	—	[2]	4	1,500¥ + chemical cost	50
Chemical Protection	—	[2]	8	Rating x 250¥	327, SR4A
Fire Resistance	—	[1 or 2]*	4	Rating x 100¥	327, SR4A
Gel Packs	+1/+1	—	8R	1,500¥	50
Insulation	—	[1 or 2]*	4	Rating x 150¥	327, SR4A
Nonconductivity	—	[2 or 3]†	6	Rating x 200¥	327, SR4A
Radiation Shielding	—	[4]	8	Rating x 200¥	50
Ruthenium Polymer Coating	—	—	12R	7,500¥	50
Shock Frills	—	—	6R	200¥	327, SR4A
Thermal Damping	—	[3 or 5]§	10F	Rating x 500¥	327, SR4A

*Rating 1-3 = 1, Rating 4-6 = 2 • †Rating 1-3 = 2, Rating 4-6 = 3 • §Rating 1-3 = 3, Rating 4-6 = 5

Military Grade Armor	Ballistic/Impact	Capacity	Availability	Cost	Page
Light Military Armor	12/10	10	16F	12,000¥	51
Medium Military Armor	14/12	15	18F	16,000¥	51
Heavy Military Armor	16/14	20	20F	20,000¥	51
Military Helmet	+2/+2	5	—	+10,000¥	51
Modern Samurai Armor					
Oyoroi Armor	11/11	11	18F	11,000¥	51
Red Samurai Armor	13/13	12	20F	15,000¥	51
Kabuto Helmet	+2/+2	4	—	+10,000¥	51

Military-Grade Armor Enhancements	Capacity	Availability	Cost	Page
Articulated Weapon Arm	[8]	16F	3,000¥	51
Flotation System	[8]	8	2,000¥	51
Foot Anchor	[3]	10	3,000¥	51
Gyromount	[4]	8F	4,000¥	51
Hydraulic Jacks (pair, Rating 1–6))	[Rating + 1]	9	Rating x 1,500¥	51
Integrated Weapons	As weapon	As weapon	As weapon	51
Magnetic System	[2]	8	1,000¥	51
Mobility Upgrade (Rating 1–3)	[Rating x 2]	(Rating x 6)R	Rating x 2,500¥	51
Quick Release	[2]	8	500¥	51
Strength Upgrade (Rating 1–3)	[Rating]	(Rating x 4)R	Rating x 1,500¥	51

Helmets and Shields	Ballistic/Impact	Availability	Cost	Page
Helmet	+1/+2	2	100¥	327, SR4A
Ballistic Shield	+6/+4	12R	1,500¥	327, SR4A
Riot Shield	+2/+6	6R	200¥	327, SR4A
Taser Shield	+2/+6	10R	750¥	327, SR4A

ENVIRONMENTAL AND SURVIVAL GEAR

Arctic Survival Equipment	Ballistic/Impact	Capacity	Availability	Cost	Page
Coldsuit	—	—	4	600¥	51
Crevasse Detector	—	—	6	250¥	52
Filter Contacts (10 day pack)	—	—	6	35¥	52
Polar Survival Kit	—	—	4	200¥	52
Polar Survival Suit	1/3	6	8	1,000¥	52
Polar Tent	—	—	6	250¥	52
Skis, Cross-country	—	—	—	200¥	52
Skis, Alpine	—	—	—	600¥	52
Snowshoes	—	—	—	175¥	52

Desert Survival Equipment	Avail	Cost	Page	Desert Survival Equipment	Avail	Cost	Page
Desert Goggles	4	15¥	53	Snake Mesh Socks	6	50¥	54
Desert Suit	8	1,000¥	53	Solar Still	4	200¥	54
Desert Survival Kit	4	200¥	53	Thermal Air Bag	6	400¥	54
Desert Tent	4	150¥	54				

Camping and Survival Gear	Avail	Cost	Page
Backpack	—	250¥	53
Camouflage Netting (10 sq. meters)	4	100¥	53
Climbing Gear	—	200¥	336, SR4A
Flashlight	—	25¥	336, SR4A
Gecko Tape Gloves	12	250¥	336, SR4A
Ghillie Suit	6	500¥	53
GPS	3	200¥	336, SR4A
Light Stick	—	5¥	336, SR4A

Camping and Survival Gear	Avail	Cost	Page
Magnesium Torch	—	20¥	336, SR4A
Micro Flare Launcher	—	50¥	336, SR4A
Micro Flares	—	25¥	336, SR4A
Rappelling Gloves	—	70¥	336, SR4A
Rations	—	5¥	53
Sleeping Bag	—	75¥	53
Survival Kit	4	100¥	337, SR4A
Tent	—	75¥	53

Space Gear	Ballistic/Impact	Capacity	Availability	Cost	Page
Evo HEL Suit	4/6	5	10	3,000¥	54
Spacesuit	6/8	4	16	12,000¥	54
Security Spacesuit	12/12	8	24	25,000¥	54
Spacesuit Maneuvering Unit	—	—	16	2,500¥	54
Survival Bubble	—	—	Rating x 3	Rating x 2,000¥	54

Toxic Environment Gear	Ballistic/Impact	Capacity	Availability	Cost	Page
Chemsuit (Rating 1–6)	—	—	Rating x 2	Rating x 100¥	336, SR4A
Gas Mask	—	—	—	100¥	336, SR4A
Hazmat Suit	—	—	8	1,000¥	336, SR4A
Hazmat Tools	—	—	8	per tool size (p. 322, SR4)	55
Mitsuhamma EE Suit	3/3	5	10	1,500¥	55
Protective Tent	—	—	Rating x 2	Rating x 2,000¥	55
Radiation Film Badge	—	—	6	25¥	55
Respirator (Rating 1–6)	—	—	Rating x 2	Rating x 100¥	336, SR4A
Water Purification Tablet	—	—	—	5¥	53

Underwater Gear	Ballistic/Impact	Capacity	Availability	Cost	Page
Diving Armor	5/4	3	6	1,750¥	55
Diving Gear	—	—	6	2,000¥	336, SR4A
Diving Light	—	—	6	25¥	55
Drysuit	—	—	6	1,000¥	55
Dual Tank Manifold	—	—	6	600¥	56
Enclosed Breathing Helmet	—	—	8	900¥	56
Full Face Mask	—	—	8	300¥	56
Glow Spray	—	—	6	5¥	56
Ink Grenade	—	—	8	5¥	56
Liquid Breathing Apparatus	—	—	12	50,000¥	56
OXSYS Artificial Gill	—	—	6	1,000¥	56
Underwater Camera	—	—	—	—	56
Standard	—	—	6	125¥	
Professional	—	—	6	1,000¥	

ELECTRONICS

Commlink Accessories	Device Rating	Availability	Cost	Page
AR Gloves	3	—	250¥	328, SR4A
Biometric Reader	3	4	200¥	328, SR4A
Nanopaste Trodes	3	2	100¥	328, SR4A
Printer	1	—	5¥	328, SR4A
Satellite Link	3	4	500¥	328, SR4A
Sim Module	3	—	100¥+	328, SR4A
Modified for BTL/hot sim	3	4F	250¥+	328, SR4A
Simrig	3	12	1,000¥	328, SR4A
Skinlink	3	6	50¥	328, SR4A
Subvocal Microphone	3	6	50¥	328, SR4A
Trodes	3	—	50¥	328, SR4A



Commlink Model	Response	Signal	Cost	Page
Meta Link	1	2	100¥	327-328, SR4A
CMT Clip	1	3	300¥	327-328, SR4A
Sony Emperor	2	3	700¥	327-328, SR4A
Renraku Sensei	2	4	1,000¥	327-328, SR4A
Novatech Airware	3	3	1,250¥	327-328, SR4A
Erika Elite	3	4	2,500¥	327-328, SR4A
Hermes Ikon	4	3	3,000¥	327-328, SR4A
Transys Avalon	4	4	5,000¥	327-328, SR4A
Fairlight Caliban	4	5	8,000¥	327-328, SR4A

RFID Tags (per 20)	Device Rating	Availability	Cost	Page
Standard RFID Tags	1	—	1¥	329, SR4A
Security Tags	3	4	100¥	329, SR4A
Stealth Tags	3	6	5¥	329, SR4A

Communications	Availability	Cost	Page
Headjammer (Rating 1–6)	6R	Rating x 250¥	329, SR4A
Jammer, Area (Rating 1–10)	(Rating x 3)F	Rating x 500¥	329, SR4A
Jammer, Directional (Rating 1–10)	(Rating x 2)F	Rating x 500¥	329, SR4A
Micro-Transceiver (Rating 1–6)	Rating x 2	Rating x 200¥	329, SR4A
Tag Eraser	6F	150¥	330, SR4A
White Noise Generator (Rating 1–6)	Rating +1	Rating x 50¥	330, SR4A

Storage Media	Availability	Cost	Page
Datachip	—	1¥	330, SR4A

Misc. Electronics	Availability	Cost	Page
Biofabrics	4	100¥	57
Electronic Paper	—	20¥	329, SR4A
EMP Grenade	16F	500¥	57
Expendable Jammer			57
Area (Rating 1–10)	(Rating x 3)F	Rating x 50¥	
Directional (Rating 1–10)	(Rating x 3)F	Rating x 50¥	
Hardening (Rating 1–6)	4	+(Rating x 25¥)	57
Holo Projector	—	200¥	329, SR4A
HERF Gun	16F	2,500¥	57
Inkless Printer	6	50¥	57
Photochromatic Paper (50 sheets)	6	5¥	
Polygraph (Rating 1–5)	12	Rating x 500¥	58
Smart Jammer			58
Area (Rating 1–6)	(Rating x 3)F	Rating x 1,000¥	
Directional (Rating 1–6)	(Rating x 3)F	Rating x 1,000¥	
Voice Mask	8R	500¥	58

Emotitoy	Handling	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	Page
Emotitoy, nonmobile (Rating 1–6)	—	—	—	3	1	0	3	—	Rating x 100¥	57
Emotitoy, minidrone (Rating 1–6)	+1	3/15	15	3	1	0	3	4	(Rating x 100)+2,000¥	57

Electronics and Sensor Options	Availability	Cost	Page	Electronics and Sensor Options	Availability	Cost	Page
Environmental Resistance	8	+100¥	58	Photosensitive Trigger	4	+10¥	58
Hardening (Rating 1–6)	4	+(Rating x 25¥)	58	Self-Destruct			58
Inertial Trigger	8	+25¥	58	Localized	16F	2,000¥	
Laser Link	—	+50¥	58	Area Effect	20F	10,000¥	
Personality Software	—	+100¥	58				



Photographic Equipment	Availability	Cost	Page
Professional Camera	6	800¥	60
Film Camera	6	250¥	60
Infrared Film (per 25 shots)	6	10¥	60
Macro Lens	6	500¥	60
Steadicam	6	750¥	60
Telephoto Lens	6	625¥	60
Super-Telephoto Lens	6	6,000¥	60

ID/Credsticks	Availability	Cost	Page
Certified Credstick	—	25¥	331, <i>SR4A</i>
Fake License (Rating 1–6)	(Rating x 3)F	Rating x 100¥	332, <i>SR4A</i>
Fake SIN (Rating 1–6)	(Rating x 3)F	Rating x 1,000¥	332, <i>SR4A</i>

SOFTWARE

Matrix Programs	Availability	Cost (up to Rating 3)	Cost (Up to Rating 6)	Page
Common Use	—	Rating x 50¥	Rating x 100¥	330, <i>SR4A</i>
Hacking	(Rating x 2)R	Rating x 500¥	Rating x 1,000¥	330, <i>SR4A</i>
Agents/IC /Pilot	Rating x 3	Pilot rating x 1,000¥	Pilot Rating x 2,500¥	330, <i>SR4A</i>
System	—	Rating x 200¥	Rating x 500¥	330, <i>SR4A</i>
Firewall	—	Rating x 200¥	Rating x 500¥	330, <i>SR4A</i>
Autosoftware (Rating 1–4)	Rating x 2	Rating x 200¥	Rating x 500¥	330, <i>SR4A</i>

Data Software	Availability	Cost	Page
Datasofts (Rating 1–6)	—	Rating x 10¥	330, <i>SR4A</i>
Mapsofts (Rating 1–6)	—	Rating x 5¥	330, <i>SR4A</i>
Tutorsoft (Rating 1–5)	—	Rating x 500¥	330, <i>SR4A</i>

Skillsofts	Availability	Cost	Page
Activesofts (Rating 1–4)	8	Rating x 3,000	330, <i>SR4A</i>
Knowsofts (Ratings 1–5)	4	Rating x 1,000	330, <i>SR4A</i>
Linguasofts (Rating 1–5)	2	Rating x 500	330, <i>SR4A</i>

Simsense	Availability	Cost	Page
Sim Recordings	—	5–200¥+	330, <i>SR4A</i>
BTL Recordings	4F	20–200¥+	330, <i>SR4A</i>
VR Games	—	50¥	331, <i>SR4A</i>
ARE Programs	—	—	—
Virtual Surround Music	—	50¥	331, <i>SR4A</i>
Wall Space	—	50¥	331, <i>SR4A</i>
Virtual Pet	—	100¥	331, <i>SR4A</i>
Virtual Person	—	150¥	321, <i>SR4</i>
Virtual Weather	—	100¥	321, <i>SR4</i>
Miracle Shooter™	—	50¥ + 10¥ per month	321, <i>SR4</i>

Sensor Software	Availability	Cost (up to Rating 3)	Cost (up to Rating 6)	Page
Sensor Software, all types (Rating 1–6)	Rating x 2	Rating x 200¥	Rating x 500¥	60

SENSORS

Vision Enhancers	Availability	Cost	Page	Vision Enhancers	Availability	Cost	Page
Binoculars	—	100¥	324, <i>SR4</i>	Endoscope	8	250¥	332, <i>SR4A</i>
Contact Lenses	6	50¥	324, <i>SR4</i>	Monocle	4	25¥	332, <i>SR4A</i>
Glasses	—	25¥	324, <i>SR4</i>	Periscope	3	50¥	332, <i>SR4A</i>
Goggles	—	50¥	324, <i>SR4</i>	Mage Sight Goggles	12R	2,000¥	332, <i>SR4A</i>

Vision Enhancements	Avail	Cost	Page
Flare Compensation	+2	+50¥	333, <i>SR4A</i>
Image Link	—	+25¥	333, <i>SR4A</i>
Low Light	+4	+100¥	333, <i>SR4A</i>
Smartlink	+4R	+500¥	333, <i>SR4A</i>
Thermographic	+6	+100¥	333, <i>SR4A</i>

Vision Enhancements	Avail	Cost	Page
Ultrasound	+8	+1,000¥	333, <i>SR4A</i>
Vision Enhancement (Rating 1–3)	+4	+(Rating x 100)¥	333, <i>SR4A</i>
Vision Magnification	+2	+100¥	333, <i>SR4A</i>

Audio Enhancers	Avail	Cost	Page
Earbuds	—	10¥	333, <i>SR4A</i>
Headphones	—	50¥	333, <i>SR4A</i>

Audio Enhancements	Avail	Cost	Page
Audio Enhancement (Rating 1–3)	+2	+(Rating x 100)¥	333, <i>SR4</i>
Select Sound Filter (Rating 1–3)	+8	+(Rating x 200)¥	333, <i>SR4</i>
Spatial Recognizer	+6	+100¥	333, <i>SR4</i>

Sensor Packages	Capacity	Signal	Page
RFID	1	0	333-334, <i>SR4A</i>
Micro	1	2	333-334, <i>SR4A</i>
Handheld/Minidrone	3	3	333-334, <i>SR4A</i>
Spyball	3	3	63
Mounted/Small Drone	5	4	333-334, <i>SR4A</i>
Medium Drone	6	4	333-334, <i>SR4A</i>
Large Drone	8	4	333-334, <i>SR4A</i>
Vehicle	12	5	333-334, <i>SR4A</i>

Sensor Functions	Capacity	Availability	Cost	Page
Atmosphere Sensor (Rating 1–3)	[1]	2	Rating x 25¥	334, <i>SR4A</i>
Barometric	[1]	2	200¥	59
Camera	[1]	—	100¥	334, <i>SR4A</i>
Camera Neutralizer (Rating 1–6)	[5]	12	Rating x 250¥	59
Cyberware Scanner (Rating 1–6)	[1]	4R	Rating x 75¥	334, <i>SR4A</i>
Directional Microphone	[1]	4	50¥	334, <i>SR4A</i>
Geiger Counter	[1]	4	50¥	334, <i>SR4A</i>
Laser Microphone (Rating 1–6)	[2]	8R	Rating x 50¥	334, <i>SR4A</i>
Laser Range Finder	[1]	8	100¥	334, <i>SR4A</i>
Liquid Analyzer	[5]	10	2,000¥	59
MAD Scanner (Rating 1–3)	[1]	6R	Rating x 75¥	334, <i>SR4A</i>
Microphone	[1]	—	50¥	334, <i>SR4A</i>
Motion Sensor	[1]	4	50¥	334, <i>SR4A</i>
Non-Linear Junction Detector (Rating 1–6)	[1]	12R	Rating x 100¥	59
Olfactory Sensor (Rating 1–6)	[1]	4	Rating x 500¥	334, <i>SR4A</i>
Radar (Rating 1–6)	[5]	8	Rating x 200¥	60
Radiation	[1]	6	100¥	60
Radio Signal Scanner (Rating 1–6)	[1]	4R	Rating x 25¥	334, <i>SR4A</i>
Sonar				60
Passive (Rating 1–6)	[3]	8	Rating x 200¥	
Active (Rating 1–6)	[3]	8	Rating x 200¥	
Thermometric	[1]	—	20¥	60
Ultrawideband Radar (1–4)	[2]	8R	Rating x 500¥	60

Spy Toys	Availability	Cost	Page
Appraisal Tools	12	per tool size (p. 322, <i>SR4</i>)	63
Body Cavity Escape Kit	12F	10,000¥	63
Fingernail Data Storage	—	200¥	63
Operations Cleanup	12F	per tool size (p. 322, <i>SR4</i>)	63

Disguised Equipment	Availability	Cost	Page
Ballpoint Micro-transceiver (Rating 1–6)	Rating x 3	Rating x 500¥	63
Briefcase Rocket	12	1,400¥	63
Chemical Cosmetics			
Makeup Compact (3 chemicals, 10 doses each)	12	300¥	64



Disguised Equipment	Availability	Cost	Page
Lipstick (1 chemical, 100 doses)	12	1,500¥	64
Cologne (1 chemical, 100 doses)	12	1,000¥	64
Deodorant, roll-on (1 chemical, 100 doses)	12	1,000¥	64
Aerosol (1 chemical, 200 doses)*	12	2,000¥	64
Hollowed Objects			
Hollowed Book	12	50¥	64
False-Bottomed Attaché Case	12	300¥	64
Laés Cigarette	12	25¥	64
Scent-Masking Cigarette	12	10¥	64

TOOLS

Tools	Availability	Cost	Page
Kit	—	500¥	332, SR4A
Shop	8	5,000¥	332, SR4A
Facility	12	100,000¥	332, SR4A

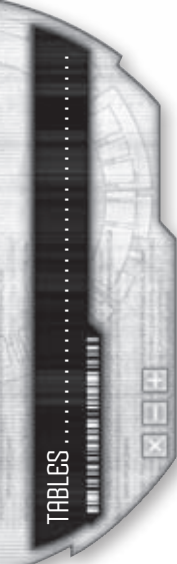
SECURITY DEVICES

Security Devices	Availability	Cost	Page
Barbed Wire (1 roll, 10 meters)	4	15¥	61
Concertina Wire (1 roll, 10 meters)	6	20¥	61
Electric Wire (10 meters)	6	10¥	61
Key Lock (Rating 1–6)	—	Rating x 10¥	335, SR4A
Laser Trip Beam			
Visible	4	25¥	61
Infrared	6	50¥	61
Maglock (Rating 1–6)	—	Rating x 100¥	335, SR4A
Keypad or Card-reader	—	+50¥	335, SR4A
Anti-Tamper Circuits (Rating 1–4)	—	+(Rating x 100¥)	335, SR4A
Biometric Reader (per reader)	+4	+200¥	335, SR4A
Monowire (1 meter)	10F	1,000¥	61
Pressure Mesh/Pads (10 square meters)	8	200¥	61
Proximity Wire (1 standard doorway)	10	500¥	62
Restraints			
Metal	—	20¥	335, SR4A
Plasteel	6R	50¥	335, SR4A
Plastic (per 10)	—	1¥	335, SR4A
Containment Manacles	6R	200¥	335, SR4A
Security Lighting			
Regular Lamps	—	25¥	62
Active Infrared	8	50¥	62
Ultraviolet	4	30¥	62

B&E GEAR

B&E Gear	Availability	Cost	Page
Autopicker (Rating 1–6)	8R	Rating x 200¥	335, SR4A
Cellular Glove Molder (Rating 1-3)	12F	Rating x 200¥	335, SR4A
Chisel	—	20¥	335, SR4A
Keycard Copier (Rating 1–6)	8F	Rating x 300¥	335, SR4A
Lockpick Set	6R	300¥	335, SR4A
Maglock Passkey (Rating 1–6)	(Rating x 3)F	Rating x 2,000¥	335, SR4A
Miniwelder	2	250¥	335, SR4A
Monofilament Chainsaw	4	300¥	335, SR4A
Sequencer (Rating 1–6)	(Rating x 3)F	Rating x 200¥	335, SR4A
Wire clippers	—	25¥	335, SR4A





Grapple Gun	Availability	Cost	Page
Grapple Gun	8R	500¥	337, SR4A
Catalyst Stick	8F	120¥	337, SR4A
Microwire	4	50¥ per 100 m	337, SR4A
Myomeric Rope	10	200¥ per 10 m	337, SR4A
Standard Rope	—	50¥ per 100 m	337, SR4A
Stealth Rope	8F	85¥ per 100 m	337, SR4A

BIOTECH

Biotech	Availability	Cost	Page
Biomonitor	—	300¥	337, SR4A
Disposable Syringe	4	10¥	337, SR4A
Medkit (Rating 1–6)	—	Rating x 100¥	337, SR4A
Medkit Supplies	—	50¥	337, SR4A

DocWagon Contract	Availability	Cost	Page
Basic	—	5,000¥ per year	337, SR4A
Gold	—	25,000¥ per year	337, SR4A
Platinum	—	50,000¥ per year	337, SR4A
Super-Platinum	—	100,000¥ per year	337, SR4A

Slap Patches	Availability	Cost	Page
Antidote Patch (Rating 1–6)	Rating	Rating x 50¥	338, SR4A
Stimulant Patch (Rating 1–6)	Rating x 2	Rating x 25¥	338, SR4A
Tranq Patch (Rating 1–10)	Rating x 2	Rating x 20¥	338, SR4A
Trauma Patch	2	500¥	338, SR4A

CHEMTECH

Chemtech	Availability	Cost	Page
Glue Sprayer	2	150¥	336, SR4A
Inhaler	2R	5¥	80
Mule Log	3R	50¥	80
Slap Patches	—	1¥	80
Thermite Burning Bar	16R	500¥	336, SR4A

Tools	Availability	Cost	Page
Chemistry Kit	—	500¥	79
Chemistry Shop	8R	5,000¥	79
Chemistry Facility	12R	100,000¥	79
Chemistry Microfac	16R	200,000¥	79

Drugs	Availability	Cost (per dose)	Page
Aisa	—	15¥	73
Betameth	3R	20¥	74
Betel	—	1¥	74
Bliss	3R	15¥	257, SR4A
Cram	2R	10¥	257, SR4A
Dopadrine	2	15¥	74
G3	—	5¥	74
eX	3R	10¥	74
Hurlg	—	5¥	75
Jazz	2R	75¥	257, SR4A
K-10	16F	900¥	75
Kamikaze	4R	100¥	258, SR4A



Drugs	Availability	Cost (per dose)	Page
Loco	4R	350¥	75
Long Haul	—	50¥	258, SR4A
Nitro	2R	50¥	258, SR4A
NoPaint	3	15¥	75
Novacoke	2R	10¥	258, SR4A
Oxygenated Fluorocarbons	—	2,000¥	75
Psyche	—	200¥	258, SR4A
Push	—	15¥	75
Red Mescaline	4R	50¥	75
Ripper	—	25¥	75
Slab	5R	150¥	76
Snuff	—	5¥	76
Woad	3R	15¥	76
Zen	4R	5¥	258, SR4A
Zero	2R	100¥	76

Awakened Drugs	Availability	Cost	Page
Crimson Orchid	4R	30¥	76
Deepweed	8F	400¥	257, SR4A
Galak	3R	25¥	76
Laés	10F	500¥	76
Leäl	8R	180¥	76
Overdrive	5R	150¥	77
Pixie Dust	6R	40¥	77
Trance	5R	120¥	77

Magical Compounds	Availability	Cost	Page
Animal Tongue	8R	1,000¥	77
Immortal Flower	14F	1,900¥	77
Little Smoke	12F	1,350¥	78
Rock Lizard Blood	8R	1,500¥	78
Sage	10R	1,300¥	88, Street Magic
Shade	8R	1,000¥	78
Spirit Strength	16F	2,800¥	88, Street Magic
Witches' Moss	10F	1,300¥	88, Street Magic
Wudu'aku	12R	1,150¥	78

Toxins (per dose)	Availability	Cost	Page
Arsenic	12R	120¥	83
Atropine	12R	700¥	83
Breathaker	8R	50¥	83
CS/Tear Gas	4R	20¥	255, SR4A
Cyanide	14F	450¥	84
Ekyelebenle Venom	16F	500¥	84
KE IV	8	10¥	84
Gamma-Scopolamine	14F	200¥	255, SR4A
Naga Venom	10F	800¥	84
Narcoject	8R	50¥	255, SR4A
Nausea Gas	6R	25¥	255, SR4A
Neuro-Stun	12R	60¥	255, SR4A
Nova Scorpion Venom	16F	1,000¥	84
Pepper Punch	—	5¥	255, SR4A
Ringu	24F	2,500¥	84
Seven-7	20F	1,000¥	255, SR4A
Warp	12F	550¥	84
White Star	18F	600¥	85
Ymir	20F	800¥	85

Compounds	Availability	Cost	Page
Acid	(Rating)R	Rating x 500¥	80
Adhesive	(Rating)	Rating x 5¥	80
Adhesive Solvent	(Rating)	Rating x 2.5¥	80
Alkahest	6F	100¥	80
Alkali	(Rating)R	Rating x 100¥	80
Antivenin	As venom	As venom ÷ 2	81
Artificial Skin	—	25¥	81
Blister Pack	—	15¥	81
Body Paint	—	10¥	82
Carcerands	3	50¥	82
Chemical Heater	—	4¥	82
CleenTac (per patch)	—	1¥	82
C-Squared	—	Rating x 15¥	82
DMSO	3	10¥	82
Dry Lubricant	—	2¥	82
Fingerprint Dust	4R	2¥	82
Flash Paper	2	10¥	82
Freeze Foam	(Rating)R	Rating x 4¥	82
Jackstop	4R	15¥	83
Luminol	4R	10¥	83
Olfactory Camouflage	—	10¥	83
Molotov Cocktail	—	30¥	83
Stain	3R	5¥	83

EXPLOSIVES

Explosives	Rating	AP	Availability	Cost	Page
Commercial	3	—	8R	100¥	325, SR4A
Bangalore Torpedo (per section)	6	1	16F	2,500¥	85
Binary Explosive (per kilogram*)	4-12	—	18F	Rating x 150¥	85
Detonating Cord (per meter)	8	-1	10R	25¥	85
Foam	4-15	—	12F	Rating x 100¥	325, SR4A
Linear Cutting Charge (per meter)	4-15	-5	14R	Rating x 200¥	85
Liquid Explosive (per kilogram)	4-15	—	16F	Rating x 125¥	85
Plastic	4-15	—	16F	Rating x 100¥	325, SR4A

* 0.5 kg of each part

Explosives, per kilogram	Rating	Availability	Cost	Page
Ammonium Nitrate	2	5	60¥	86
ANFO	3	6	70¥	86
Dynamite (4 sticks)	3	9R	80¥	86
Gunpowder	2	4	75¥	86
Nitroglycerine	6	10F	300¥	86
TNT	4	9F	200¥	87

Detonators	Availability	Cost	Page
Anti-Removal Device (Rating 1-6)	+(Rating)F	+(Rating x 25¥)	87
Blasting Cap	5R	10¥	87
Detonator Cap	8R	75¥	327, SR4A
Electrical Detonator	5R	20¥	87
Optical Detonator	7F	35¥	87
Pressure Detonator	10F	150¥	87
Pull Detonator	9F	60¥	87
Push Detonator	9F	60¥	87
Radio Detonator	8R	40¥	87
Shockwave Detonator	10F	Rating x 25¥	88
Timer Detonator	8F	35¥	88



Explosives Accessories	Avail	Cost	Page
Atomizer	6R	Rating x 300¥	88
Safety Fuse	6R	5¥ per meter	88

Explosives Accessories	Avail	Cost	Page
Exploser			
Electrical	8R	Rating x 250¥	88
Optical	9R	Rating x 150¥	88

Making Explosives	Threshold	Availability	Cost	Page
Ammonium Nitrate	8	3	40¥	95
ANFO	12	3	50¥	95
Binary Explosive	16	10R	Rating x 250¥	95
Commercial Explosive	12	5	50¥	95
Dynamite	12	6	50¥	95
Foam Explosive	16	6R	Rating x 200¥	95
Gunpowder	12	2	25¥	95
Liquid Explosive	16	8R	Rating x 225¥	95
Nitroglycerine	12	5	100¥	95
Plastic Explosive	12	6R	Rating x 150¥	95
TNT	12	5R	75¥	95

MANATECH

Manatech	Availability	Cost	Page
AMP	12	10,000¥	64
AMP FAB Refill	10	100¥	64
Astral Pigments	—	30¥	64
Awakened Ivy	(Force)R	Force x 150¥ per square meter	64; 126, <i>Street Magic</i>
Awakened Ivy Nutrients	(Force)R	Force x 2.5¥ per square meter	64
Biofiber	(Force x 3)R	Force x 100¥ per square meter	64; 264, <i>SR4A</i>
Biofiber Nutrients	(Force x 3)R	Force x 5¥ per square meter	64
Flourescing Astral Bacteria			65; 126, <i>Street Magic</i>
FAB I	10	50¥ per cubic meter	
FAB II	16R	Force x 50¥ per cubic meter	
FAB II-b	12R	3¥ per cubic meter	
FAB III	20F	Force x 15,000¥	
FAB Nutrients	10	1¥ per cubic meter	
Forensic Thaumaturgy Kit	2	500¥	65
GloMoss	(Force)R	Force x 25¥ per square meter	65; 126, <i>Street Magic</i>
GloWand	4R	60¥	65
Guardian Vines	(Force + 2)R	Force x 500¥ per square meter	65; 126, <i>Street Magic</i>
Guardian Vines, Black	(Force + 3)F	Force x 1,000¥ per square meter	65; 126, <i>Street Magic</i>
Haven Lily	(Force + 3)R	Force x 1,000¥ per square meter	65; 126, <i>Street Magic</i>
Leech Constructs	5	300¥	65
Leechband	6	450¥	65
Leech Solvent	5	30¥	66
Lucifer Lamp	10	150¥	66
Lucifer Lamp Bulbs	10	100¥ per hour (Max. 500 hours)	66
Magecuffs	5	1,000¥	66
Magemask	2R	200¥	66
Mage Sight Cable	8R	60¥ per meter	66
Mage Sight Goggles	12R	2,000¥	66; 332, <i>SR4A</i>
Manahazard Containment Device			66
Manacase	4R	200¥	66
Manacoffin	8R	1,200¥	67
Manasheath	6R	300¥	67
PocketMage Library (Rating 1–3)	3	Rating x 600¥	67
Quicksilver Camera	4	2,500¥	67
Manasensitive Film Plate	4	25¥	67
Wyrd Mantis Essence	6	600¥	67

Grenade	Damage	AP	Blast	Availability	Cost	Page
Esprit "Petite Brume"	—	—	5m Radius	12R	1,000¥	64



ODDS AND ENDS

Disguise	Availability	Cost	Page
Latex Face Mask	8	500¥	338, <i>SR4A</i>
Nanopaste Disguise			338, <i>SR4A</i>
Small Container	12	500¥	
Large container	16	1,000¥	

Parachutes	Availability	Cost	Page
Standard	6	500¥	59
Low Altitude	6	120¥	59
HALO	8	2,000¥	59

Odds and Ends	Availability	Cost	Page
Forensic Tools	8	per tool size (p. 322, <i>SR4</i>)	62
Glasscutter	4	10¥	62
Hypersonic Sound Beam	8	200¥	62
Inline Skates	—	100¥	62
Science Tools	8	per tool size (p. 322, <i>SR4</i>)	62
Smart Pack	4	500¥	62
Butt Pack	4	80¥	62
Smart Pouch System			62
Ammunition Pouch	8	25¥	
Ration Pouch (3-day supply)	8	50¥	
Smart Canteen (1 liter)	8	5¥	
Combat Load Vest	8	300¥	

VEHICLES AND DRONES

Personal Mobility Vehicles	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Daiatsu-Caterpillar Horseman	+1	10/20	80	1	4	4	1	4	12,000¥	107
with passenger module	0	5/20	75	1	6	4	1	6	+6,000¥	
with cargo module	-1	5/20	70	1	6	4	1	4	+3,000¥	
with advanced cargo module	+1	10/20	75	1	6	4	2	8	+5,000¥	
with drone module	0	10/20	75	1	6	4	2	8	+4,000¥	
Ares-Segway Terrier	+2	5/15	40	2	2	1	2	—	4,500¥	107

Bikes	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Dodge Scoot (Scooter)	+1	10/15	60	1	4	2	1	—	3,000¥	348, <i>SR4A</i>
Harley-Davidson Scorpion (Chopper)	+2	15/30	120	2	8	4	1	—	12,000¥	348, <i>SR4A</i>
Indian Pathfinder (Racing Bike)	+2	25/40	160	1	6	6	1	—	6,000¥	107
Suzuki Mirage (Racing Bike)	+2	20/50	200	1	6	4	1	—	6,500¥	348, <i>SR4A</i>
Thundercloud Contrail (Racing Bike)	+1	20/40	180	1	6	4	1	—	5,000¥	108
Evo Falcon (Off-Road Bike)	0	10/30	80	1	7	7	1	—	10,000¥	108
Yamaha Growler (Off-Road Bike)	+1	15/40	150	1	6	6	1	—	5,500¥	348, <i>SR4A</i>
Entertainment Systems Cyclops (Mono)	+3	15/25	100	1	4	2	1	—	6,500¥	108
Horizon Doble Revolution (Encl. Mono)	+3	15/25	120	1	6	6	2	4	8,000¥	108

Cars	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Chrysler-Nissan Jackrabbit (Subcompact)	0	15/35	120	1	8	2	1	—	10,500¥	109
Honda Spirit (Subcompact)	+1	10/20	80	1	8	6	1	—	10,000¥	348, <i>SR4A</i>
Hyundai Shin-Hyung (Sedan)	+2	20/45	160	1	10	5	1	—	17,000¥	109
Mercury Comet (Sedan)	0	15/30	110	2	10	6	1	—	14,000¥	348, <i>SR4A</i>
Rover 2068 (SUV)	+1	20/35	140	2	13	10	2	6	25,000¥	109
Mitsubishi Nightsky (Limousine)	-2	15/25	100	3	12	10	1	—	120,000¥	348, <i>SR4A</i>
Eurocar Westwind 3K (Sports Car)	+3	20/60	240	3	10	6	1	—	85,000¥	348, <i>SR4A</i>
Thundercloud Morgan (ATV)	0	15/30	120	1	8	4	1	—	7,500¥	109

Trucks	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Ares Roadmaster (Transport)	-1	10/30	120	2	16	16	2	4	48,000¥	109
GAZ P-179 (Pickup Truck)	-1	15/30	90	1	14	6	1	—	12,000¥	109
Tata Hotspur (Off-Road Racing Truck)	+1	20/50	200	1	16	10	2	8	60,000¥	109
Ford-Canada Buffalo (RV)	-2	10/20	80	2	16	10	2	—	55,000¥	110
GMC Bulldog Step-Van (Van)	0	5/10	90	2	16	8	1	—	35,000¥	349, SR4A
GMC Hermes Van (Delivery Van)	-1	5/10	100	2	17	6	2	8	45,000¥	110
Conestoga Vista (Bus)	-3	15/25	90	1	20	4	1	—	25,000¥	110
Nordkapp Zugmaschine (Traktor Trailer)	-1	15/30	110	2	18	8	1	—	90,000¥	110
with Trailer	-3	5/20	90	2	24	8	1	—	+20,000¥	110

Hovercraft	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
GMC Everglades (Hovercraft)	+1	10/20	120	2	14	6	1	4	25,500¥	349, SR4A
Mostran KVP-27T (Hovercraft)	+2	10/15	90	1	8	8	1	4	40,000¥	111

Watercraft	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
SeaDoo Bolt (Water Scooter)	+2	15/25	45	2	5	4	1	—	6,000¥	111
Blohm & Voss Spitzenreiter (Utility)	-1	10/20	40	1	16	2	2	—	22,000¥	111
Zemlya-Poltava Crest (Speedboat)	+2	10/30	80	1	12	6	1	8	35,000¥	111
Colorado Craft Sylph (Hydrofoil)	+3	15/40	100	2	8	4	1	4	40,000¥	111
Harland and Wolff Classique III (Yacht)	-1	10/25	35	2	24	8	2	12	235,000¥	111
MT Sea Nymph (Yacht)	-3	10/20	45	2	18	6	1	—	170,000¥	349, SR4A
SC Otter (Sport Cruiser)	+1	5/10	45	1	12	6	1	—	12,500¥	349, SR4A
Proteus Lamprey (Sea Sled)	0	10/15	35	1	6	4	1	—	14,000¥	112
Krasnay Sormova Partisan (Sentry Sub)	-1	5/15	40	2	20	15	2	16F	650,000¥	112
Vulkan Electronaut (Minisub)	0	5/10	30	2	12	10	2	10	158,000¥	349, SR4A

Gliders and FPMV	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Lockheed Sparrow (FPMV)	+1	15/40	90	3	4	2	1	12R	19,500¥	112
Artemis Industries Dawnglider (Glider)	0	10/20	60	2	6	2	1	16R	55,000¥	112
Moonlight Aerospace Phoenix (Glider)	+1	15/30	80	1	6	1	1	6	16,000¥	112

LAVs	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
MiG-67	+2	50/200	800	1	18	10	2	20F	950,000¥	112
Cascade Skraacha	0	40/160	600	1	16	14	2	12F	475,000¥	113

Winged Planes	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Hawker-Riddley Skytrain (Tilt-Wing)	0	30/120	550	2	30	4	2	16	1,500,000¥	113
Cessna C750 (Twin-Prop Airplane)	-1	20/90	340	2	18	4	—	8	164,000¥	349, SR4A
Piper Brat (Very Light Jet)	+1	30/150	650	3	18	6	2	16	1,000,000¥	113
Gulfstream Luxe V (Executive Jet)	+1	40/150	800	3	14	10	3	18	1,200,000¥	113
Renault-Fiat Fokker Tundra-9 (Amph. Jet)	-1	30/120	500	2	18	8	2	12	325,000¥	113

Rotorcraft	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Hughes Aerospace Emblem (Shuttle)	-1	15/50	300	2	18	6	2	14	640,000¥	114
Ares Dragon (Cargo Helicopter)	-1	10/40	260	3	22	8	—	12	495,000¥	349, SR4A
Hughes Stallion (Utility Helicopter)	-1	15/50	190	3	14	8	—	12	225,000¥	349, SR4A
Mitsubishi Karura (Autogyro)	0	10/30	100	2	12	6	2	14	200,000¥	114
Northrup Wasp (Autogyro)	0	15/30	130	2	10	6	—	12R	106,000¥	349, SR4A

VTOL/VSTOL	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
GMC Banshee (Thunderbird)	+1	50/250	1,000	2	20	18	—	24F	2,350,000¥	349, SR4A
Fed Boeing Commuter (Tilt-Wing Airplane)	-2	10/30	120	3	16	8	—	16R	320,000¥	349, SR4A

Zeppelin	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Luftschiffbau LZ-2065	-3	5/10	30	1	36	2	2	16	800,000¥	114



Military, Security Medical Craft	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Dodge Guardian (Police Motorcycle)	+2	20/35	100	2	8	10	2	8R	14,000¥	114
General Product COP (Police SUV)	+1	10/35	120	1	12	12	3	6R	18,000¥	114
Chrysler-Nissan Patrol-1 (Patrol Car)	+3	10/45	180	3	10	10	1	12R	22,700¥	349, SR4A
Lone Star Mod. Honda 3240 (Pursuit Car)	+2	20/50	220	2	9	6	1	14R	107,500¥	114
DocWagon SRT (Ambulance)	+1	20/40	150	2	14	10	2	12R	65,000¥	114
Lone Star Black Mariah (Prisoner Trans.)	-1	5/25	100	1	15	15	1	18R	55,000¥	115
Ares Citymaster (Riot Control Vehicle)	-1	5/30	120	3	16	20	3	20R	51,200¥	349, SR4A
GMC Beachcraft (Patrol Hovercraft)	+2	10/40	160	2	12	16	2	16R	63,000¥	349, SR4A
Surfstar Marine Seacop (Harbor Patrol)	0	10/20	60	1	14	14	2	12R	24,000¥	115
Celebrian Striker (Patrol Corvette)	-2	10/20	50	1	30	20	3	26F	2,200,000¥	115
USS Boston Class (Patrol Sub)	-2	5/15	70	2	30	20	3	30F	29,000,000¥	115
DocWagon CRT Helicopter (Medical)	0	25/60	340	3	20	10	2	20R	1,310,000¥	116
Northup Yellowjacket (Military Helic.)	0	15/30	130	2	10	8	2	12F	122,000¥	116
Aztechnology Aguilar-GX (Attack Helic.)	+1	15/60	400	2	16	16	2	20F	1,800,000¥	116
Federated-Boeing Eagle-C (Fight/Bomb)	+2	60/240	1200	3	20	12	3	26F	10,000,000¥	116

Microdrones	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Shiawase Kanmushi	+1	2/10	10	3	0	0	1	8	1,000¥	350, SR4A
S-B Microskimmer	+1	2/10	10	3	0	0	1	8	1,000¥	350, SR4A
Stonebrooke Smokecloud (Wh. Distr.)	+1	2/10	10	3	0	0	2	14R	1,500¥	116
Toyota MK-Centipede (Search & Rescue)	+1	2/10	10	3	0	1	1	4	1,000¥	116

Minidrones	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Ares Heimdall (Drone Missile)	+1	special	3000	3	1	1	2	14F	1,500¥	117
Bust-A-Move (Toy Walker Drone)	0	3/10	10	2	1	0	1	—	350¥	117
Cyberspace Designs Dragonfly (Hunt/Kill)	+1	3/15	30	3	1	1	2	12R	2,500¥	117
Ferret RPD-1X (Wheeled Perimeter)	0	10/20	60	3	1	2	3	8	3,000¥	118
Lone Star iBall	+1	3/15	15	3	1	0	2	6	1,500¥	350, SR4A
MCT Fly-Spy	+1	3/15	15	3	1	0	2	6	2,000¥	350, SR4A

Small Drones	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Ares Sentinel "R" Series (Rail Sentry)	0	5/10	40	3	2	6	2	4R	2,000¥	118
Atztechnology Armadillo (Aerial EW)	0	5/15	50	3	2	6	3	12F	20,000¥	118
Aztechnology Crawler	0	5/20	50	3	2	0	2	4	1,700¥	350, SR4A
Entertainment Systems Falcon (Aerial Pet)	+2	5/30	70	3	2	2	1	16	59,000¥	118
GMC Sandal (Wheeled Delivery)	0	10/25	60	2	2	4	2	4	3,500¥	119
Knight Errant P4 (Wheeled Pursuit)	+1	20/50	180	3	2	2	3	10R	8,000¥	119
Lockheed Optic-X	0	5/20	75	3	2	0	2	6	1,700¥	350, SR4A
Modified GMC Chariot (Disguised Combat)	0	10/25	40	3	2	2	2	8F	4,800¥	119
Transys Steed (Wheeled Personnel)	+1	10/20	40	3	2	2	3	—	4,000¥	120

Medium Drones	Hand	Accel	Speed	Pilot	Body	Armor	Sens	Avail	Cost	P
Evo Orderly (Med-Assitant Humanoid)	0	5/20	40	3	3	3	2	4	2,000¥	120
Federated-Boeing Kull (Aerial Rec/Supp)	+1	30/150	300	3	3	0	2	4	10,000¥	120
Ford LEED-1 (Aerial Law Enforcement)	0	5/20	80	3	3	6	3	6R	4,500¥	120
GM-Nissan Doberman	0	10/25	75	3	3	6	3	6	3,000¥	350, SR4A
MCT-Nissan Roto-drone	0	10/25	100	3	3	2	3	6	2,000¥	350, SR4A
Renraku Manservant-3 (Humanoid Walker)	0	5/15	15	3	3	0	2	—	2,500¥	121
Renraku Stormcloud	-3	5/10	25	3	3	2	3	6	2,600¥	350, SR4A

Heavy Drones	Hand	Accel	Speed	Pilot	Body	Armor	Sensor	Avail	Cost	P
Ares Auxilia Mk3 (Tracked Military)	-1	10/30	50	3	4	12	2	10F	8,000¥	121
C-D Dalmatian (Large)	0	15/40	120	3	4	2	3	9	2,200¥	350, SR4A
CrashCart AutoDoc (Large)	0	5/10	30	3	4	2	1	8R	4,000¥	350, SR4A
GTS Tower (LTA Carrier)	0	10/30	120	3	4	2	3	12	25,000¥	121
Lockheed Vulcan (Wheeled Maintenance)	-1	5/15	30	3	4	4	2	4	6,000¥	121
McDonnell-Douglas Nimrod (Aer. Combat)	+2	40/200	800	3	4	8	3	18F	75,000¥	121
Mesametric Beaver (Walker Construction)	-1	5/15	15	3	4	8	1	—	4,000¥	122
Saeder-Krupp Mk-17D Neptune (Recon)	-1	5/20	30	3	4	12	3	10	22,000¥	122
Saeder-Krupp Schildkröte (Hazmat)	-1	5/20	40	3	4	6	2	10	8,000¥	122
Steel Lynx (Large)	0	15/40	120	3	4	9	3	12R	5,000¥	350, SR4A
Wuxing Crimson Samurai (Centaroid)	+1	15/30	100	3	4	12	3	10R	9,500¥	123

Weapon Name	Damage	AP	Mode	Blast	Ammo	Avail.	Cost	Page
Ares Firelance Vehicle Laser	12P	-half	SS	—	100*	25F	400,000¥	123
Ares Fogger Glop Cannon	Special	—	SA	—	50(belt)	15R	10,000¥	123
Aztechnology Itzcóatl Gauss Cannon	18P	-10	SS	-2/m	50(belt)	30F	600,000¥	123
Fleche Hail Barrage Rocket Launcher	Rocket	Rocket	Special	Rocket	20	25F	20,000¥	123
GE Vigilant Light Autocannon	8P	-4	FA	—	200(belt)	15F	5,000¥	123
GE Vanquisher Heavy Autocannon	11P	-6	FA	—	200(belt)	20F	20,000¥	123
GM Light Cannon	13P	-6	SA	-1/m	50(belt)	18F	50,000¥	124
GM Heavy Cannon	17P	-8	SS	-1/m	50(belt)	22F	100,000¥	124
Lone Star FlashFlood Water Cannon	8S	-half	FA	—	200(belt)	10R	5,000¥	124
Shiawase Microwave Cannon	Special	-half	SS	—	100*	20R	25,000¥	124
SK Taurus Light Gauss Cannon	14P	-8	SS	-2/m	50(belt)	25F	200,000¥	124
Winter Systems Mercury Ship Laser	16P	-half	SS	—	1000*	30F	1,000,000¥	124

* This is the amount of power points the weapon has available if not supported by an external power source. If supported by such a source, its ammo capacity is limited only by the power output of that source.

Missile Type	Damage	AP	Blast	Avail	Cost	Page
Aztechnology Series 5 Iron Bomb	22P(f)	0	-2/m	12F	400¥	124
Cardeon Mark 78 Torpedo	16P	-4**	-2/m**	25F	4000 + (400 x Sensor Rating)¥	124
Esprit Corail Depth Charge	12P	-4**	-1/m**	10F	800¥	125
Mitsubishi-GM Outlaw	As Block	As Block	As Block	15F	1,000¥	125
Block I	16P	-2	20m Radius	25F	2,000 + (500 x Sensor Rating)¥	125
Block II	16P	-2	20m Radius	25F	8,000 + (500 x Sensor Rating)¥	125
Block III	18P	-2/-6*	-4/m	25F	4,000 + (600 x Sensor Rating)¥	125
Block IV	18P	-2/-6*	-4/m	28F	4,000 + (800 x Sensor Rating)¥	125
Block V (Fragmentation)	16P(f)	+3	-1/m	25F	4,000 + (500 x Sensor Rating)¥	125
Block V (HE)	16P	-2/-6*	-2/m	25F	4,000 + (500 x Sensor Rating)¥	125
Block VI	16P	-4**	-2/m**	25F	6,000 + (500 x Sensor Rating)¥	125
Mærsk Fiske Supercavitating Torpedo	12P	-4**	-2/m**	24F	10,000 + (500 x Sensor Rating)¥	125
Proteus AG Piranha Mini-Torpedo	8P	-4**	-2/m**	12F	1,000 + (400 x Sensor Rating)¥	125
Saab-Saaker AIM-27 Sparrow Hawk	22P	-2/-6*	-4/m	30F	8,000 + (500 x Sensor Rating)¥	125

* vs. people/vs. vehicles

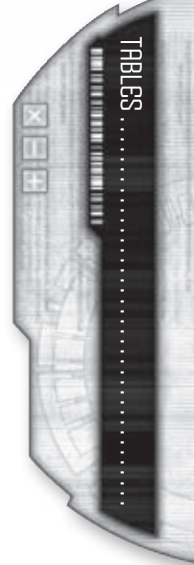
** The AP and Blast values given are meant for airborne explosions. The shockwave of undersea explosions travel much farther and have a much more dramatic effect on armor (see *Underwater Combat*, p. 171).

GEAR AND VEHICLE MODIFICATIONS

Desktop Forges	Availability	Cost
Small Desktop Forge	10R	15,000¥
Large Desktop Forge	16R	150,000¥

Vehicle Mod	Slots	Threshold	Tools	Cost	Avail	Special Skill	P
Additional Fuel Tank	1	8	Shop	1,000¥	4	—	131
Amenities							
Squatter	0	6	Shop	100¥	—	—	131
Middle	1	6	Shop	100¥	2	—	131
High	2	10	Shop	1,000¥	8	—	131
Luxury	4	20	Shop	10,000¥	16	—	131
Ammo Bins	1	4	Shop	200¥	6R	Armorer	131
Amphibious Operation							
Level 1	2	10	Shop	Body x 250¥	6	Nautical Mechanics	131
Level 2	4	20	Shop	Body x 1,000¥	12	Nautical Mechanics	131
Anti-Theft	2	20	Shop	Body x 200¥	6R	—	131
Armor							
Normal	1	Rating	Shop	Rating x 200¥	6R	Armorer	132
Concealed	2	Rating x 2	Shop	Rating x 1,000¥	12R	Armorer	132
Smart	2	Rating x 2	Shop	Rating x 2,000¥	16R	Armorer	132
Assembly Time Imprvmnt.	1	Body x 4	Facility	1,000¥	8	—	132
Ballast Tanks							
Level 1	1	16	Facility	Body x 2,000¥	8	—	133
Level 2	4	24	Facility	Body x 10,000¥	16	—	133
Chameleon Coating	2	10	Facility	Body x 1,000¥	12R	—	133
Complete Skinlink	1	8	Shop	5,000¥	8	Hardware	133
Drone Rack							
Mini	1	8	Kit	500¥	4	—	133
Small	2	10	Shop	1,000¥	4	—	133
Small Landing	3	20	Facility	5,000¥	10	—	133
Large	4	16	Shop	4,000¥	6	—	133
Large Landing	6	30	Facility	20,000¥	12	—	133
Multilaunch	5	20	Facility	10,000¥	16	—	134
Ducted Waterjet	2	10	Facility	Body x 200¥	6R	—	134
ECM	1	20	Shop	Rating x 1,000¥	12F	Hardware	134
Ejection Seats	1	10	Facility	500¥	8R	—	134
Engine Customization							
Speed	2	24	Facility	Speed x Body x 5¥	6	—	134
Acceleration	2	24	Facility	Accel x Body x 25¥	6	—	134
Enhanced Image Screens	1	16	Shop	Body x 100¥	10R	—	134
Extra Entry/Exit Points	1	8	Shop	5,000¥	8	—	134
Extreme Environment Mod	1	16	Shop	2,000¥	6	—	134
Flotation	4	24	Facility	Body x 2,000¥	12	—	134
Flying Fox Gliding System	3	20	Facility	Body x 3,500¥	16R	—	135
Fuzzy Logic	1	4	Kit	2,500¥	12R	Hardware	135
Gecko Tips	1	8	Shop	300¥	6	—	135
GridLink	1	4	Shop	750¥	4	Hardware	135
GridLink Override	1	10	Shop	2,000¥	8F	Hardware	135
Gun Port	1	4	Kit	500¥	6R	—	135
Gyro Link	1	8	Shop	5,000¥	12F	Hardware	135
Hovercraft Upgrade							
Rebuild	3	10	Shop	Body x 1,000¥	12	—	136
Add-on	4	16	Shop	Body x 2,000¥	12	—	136
Hydrofoil Capability	2	10	Facility	Body x 2,000¥	10	—	136
Improved Economy	1	24	Facility	Accel (Running) x Speed x 5	4	—	136

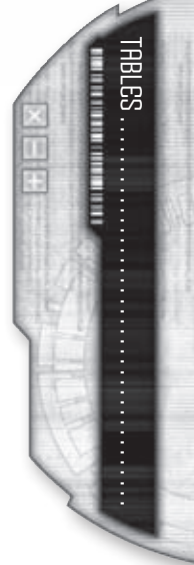
Vehicle Mod	Slots	Threshold	Tools	Cost	Avail	Special Skill	P
Improved Sensor Array	1	8	Shop	1,000¥	6	Hardware	136
Improved Suspension	1	8	Shop	Body x 5,000¥	4	—	136
Improved Takeoff and Landing							
Level 1	4	24	Facility	Body x 1,000¥	8	—	136
Level 2	6	36	Facility	Body x 5,000¥	16	—	136
Interior Cameras	1	8	Kit	Body x 100¥	6R	Hardware	137
Life Support							
Level 1	1	10	Shop	Body x 500¥	8	—	137
Level 2	3	24	Facility	Body x 2,000¥	12	—	137
Limited Maneuverability	+4	8	Shop	100¥	4	—	137
Lighter Than Air	1	Body x 6	Shop	Body x 400¥	6	—	137
Lock-On Countermeasures	1	20	Shop	5,000¥	10R	—	137
Manual Control Override							
Drive-by-Wire	1	4	Shop	500¥	2	—	138
Manual Controls	4	20	Facility	Body x 500¥	10	—	138
Secondary Controls	1	6	Shop	1,000¥	4	—	138
Mechanical Arm/Grapple							
Grapple	1	8	Shop	1,000¥	4	—	138
Full Arm	2	16	Facility	4,000¥	6	—	138
Metahuman Adjustment	— (1 for trolls)	4	Kit	500¥ per passenger	—	—	138
Missile Defense System	1	10	Shop	10,000¥	12R	Software	138
Motorcycle Gyro Stabilization	1	16	Facility	Body x 300¥	8	—	138
Multifuel Engine	1	20	Facility	Body x 1,000¥	12	—	138
Nitrous Injection	1	8	Kit	2,500¥	4	—	139
Off-Road Suspension	1	8	Shop	Vehicle Cost x 25%	4	—	139
Oil Slick Sprayer	1	10	Shop	500¥	8F	—	139
Passenger Protection	2	Rating x 4	Shop	Rating x 2,000¥	Rating x 2	—	139
Personal Armor	2	Rating x 2	Shop	Rating x 500¥	(Rating)R	Armorer	139
Pimped Ride							
Level 1	1	10	Shop	Body x 50¥	2	Artisan	139
Level 2	1	20	Shop	Body x 500¥+	8	Artisan	139
Rail Propulsion	— (perm.)/1 (temp.)	16	Facility	Body x 500¥	4	—	140
Ram Plate	1	8	Shop	Body x 250¥	6R	—	140
Reflective Hull	1	20	Shop	Body x 300¥	10	—	140
Removed Manual Controls	1	4	Shop	200¥	2	—	140
Retrans Unit	1	4	Kit	4,000¥	12	Hardware	140
Rigger Adaptation	1	6	Kit	2,500¥	4	Hardware	140
Rigger Cocoon							
Basic	1	6	Kit	1,500¥	8	—	140
Enhanced	2	10	Kit	4,000¥	14R	Hardware	140
Road Strip Ejector	1	10	Shop	800¥ + strips	12F	—	140
Rocket Booster	5	36	Facility	Body x 5,000¥	16F	—	141
Satellite Communication	1	6	Kit	500¥	4	Hardware	141
Searchlight	1	10	Kit	1,200¥	4	—	141
Self-Repair	1	20	Shop	Body x 1,500¥	16R	—	141
Sidcar	1	24	Shop	1,500¥	6	—	141
Signature Masking	Rating	Rating x 6	Shop	Rating x 2,000¥	14F	—	141
Smoke Projector	1	8	Shop	700¥	6R	—	141
Smuggling Compartment							
Normal	1	16	Facility	1,500¥	6F	Disguise	142
Shielded	1	20	Facility	3,000¥+	12F	Disguise	142
Special Armor Mod	1	12	Shop	Rating x 500¥	8	Armorer	142
Special Machinery	variable	variable	variable	variable	variable	variable	142
SunCell	1	16	Shop	Body x 500¥	6	Hardware	142
Termination System							
Basic	1	20	Shop	500¥	8R	Hardware	142
Enhanced	1	24	Shop	700¥ + gas	10R	Hardware	142
Self-Destruct	2	30	Shop	1,000¥	12F	Demolitions	142
Torpedo Launcher	1	8	Shop	2,000¥	12F	Armorer	143



Vehicle Mod	Slots	Threshold	Tools	Cost	Avail	Special Skill	P
Touch Sensors	1	16	Shop	Body x 500Y	8	Hardware	143
Tracked Vehicle	1 (perm.)/2 (temp.)	20	Facility	Body x 1,000Y	4	—	143
Turbocharger	1	10	Shop	Accel. (Running) x Body x 20Y	4	—	143
Unstable Structural Agility	4	24	Facility	Body x 5,000Y	12R	—	143
Valkyrie Module	2	6	Kit	2,000Y	10	Hardware	143
Vehicle Tag Eraser	1	8	Shop	Body x 250Y	6F	Hardware	144
Walker Mode	2	10	Shop	Body x 500Y	4	—	144
Winch							
Standard	1	10	Shop	600Y	2	—	144
Enhanced	2	16	Facility	5,000Y	8	—	144
Workshop	1	20	Facility	10,000Y	10	—	144
Workshop Forge	1	20	Facility	50,000Y	20R	Hardware	144
Weapon Mount							
Normal Size	1	6	Kit	1,500Y	8F	Armorer	145
Reinforced Size	2	10	Kit	4,000Y	10F	Armorer	145
External Visibility	—	—	—	—	—	—	145
Internal Visibility	+2	+6	Shop	+1,000Y	+2F	—	145
Concealed Visibility	+3	+10	Shop	+4,000Y	+4F	Disguise	145
Fixed Flexibility	—	—	—	—	—	—	145
Flexible Flexibility	+1	+6	Shop	+2,000Y	+2F	—	145
Turret Flexibility	+3	+16	Facility	+5,000Y	+6F	—	145
Heavy Turret Flexibility	+4	+24	Facility	+15,000Y	+8F	—	145
Manual Control	+1	—	—	—	—	—	145
Armored Control	+2	+10	Shop	+2,000Y	+2F	—	145
Remote Control	—	+6	Shop	+500Y	+2F	—	145

Weapon Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill	P
Additional Clip	2	20	Facility	Weapon Cost	10R	—	146
Advanced Safety							
Basic System	1	6	Kit	100Y	—	—	146
Immobilizer	1	6	Shop	200Y	6	—	146
Self-destruct	1	10	Shop	300Y	8F	Demolitions	146
Explosive Self-destruct	2	16	Facility	400Y	10F	Demolitions	146
Glue Trap	1	10	Shop	400Y	8	—	146
Spring Trigger Spike	1	8	Shop	300Y	8	—	146
Electro Shocker	1	8	Shop	500Y	8R	—	146
Pain Inducer	1	10	Shop	2,000Y	8R	—	146
Ammo Skip System	1	16	Shop	250Y	8R	—	147
Barrel Extension	1	20	Facility	Weapon Cost	8R	—	147
Barrel Reduction	1	6	Kit	20Y	4R	—	147
Bayonet Mount	1	4	Kit	20	2	—	147
Camera Upgrade	1	6	Kit	Enhancement Cost	6	Hardware	147
Camouflage Ghillie Shroud	1	10	Shop	100Y	4	—	147
Ceramic/Plasteel Components							
Level 1	1	16	Facility	Weapon Cost x 2	12F	—	147
Level 2	1	24	Facility	Weapon Cost x 3	16F	—	147
Level 3	1	40	Facility	Weapon Cost x 6	20F	—	147
Chameleon Coating	2	10	Shop	1,000Y	10R	—	148
Custom Look							
Level 1	1	8	Shop	100Y	2	Artisan	148
Level 2	1	16	Shop	1,000Y	8	Artisan	148
Easy Breakdown							
Manual	1	24	Shop	Weapon Cost	8R	Industrial Mechanic	148
Powered	2	30	Facility	Weapon Cost + 200Y	10R	Industrial Mechanic	148

Weapon Mod	Slots	Threshold	Tools	Cost	Availability	Special Skill	P
Electronic Firing	2	16	Facility	1,000¥	10R	—	148
Endoscope	1	8	Shop	300¥	8	—	148
Exchangeable Weapon Mod	as mod	+4	Shop	+50¥	+2	—	148
Extended Clip	1	4	Shop	500¥	4R	—	148
Drum	2	16	Facility	1,000¥	6R	—	148
Extreme Environment Mod							
Level 1	1	6	Shop	100¥	8R	—	148
Level 2	4	36	Facility	Weapon Cost x 3	16R	—	148
Firing Selection Change							
Small Mod	1	10	Shop	300¥	4R	—	148
Large Mod	4	40	Facility	Weapon Cost + 2,000¥	12F	—	148
Flashlight	1	6	Kit	Flashlight Cost	—	—	148
Folding Stock	1	4	Kit	30¥	2	—	148
Powered Folding Stock	1	8	Shop	100¥	6	—	148
Foregrip	1	8	Shop	50¥	—	—	148
Gas Vent 2	1	4	Shop	200¥	4R	—	148
Gas Vent 3	2	8	Shop	400¥	6R	—	148
Gecko Grip	1	10	Kit	100¥	6	—	149
Heavy Barrel	3	16	Facility	Weapon Cost	6R	—	149
High Velocity	2	30	Facility	Weapon Cost x 2	8R	—	149
Improved Range Finder	1	10	Kit	1,000¥	6	—	149
Increased Cylinder	1	10	Facility	500¥	4R	—	149
Internal Bipod	3	16	Shop	400¥	4	—	149
Laser Sight	1	4	Kit	100¥	2	—	150
Melee Hardening	1	16	Facility	300¥	4	—	150
Metahuman Customization	1	8	Shop	50¥	—	—	150
Personalized Grip	1	10	Kit	100¥	2	Artisan	150
Pilot Upgrade							
Rating 1–3	—	10	Kit	Rating x 1,000¥	(Rating x 3)R	Hardware	150
Rating 4–6	—	10	Kit	Rating x 2,500¥	(Rating x 3)R	Hardware	150
Powered Slide Mount	mount slot max + 1	8	Facility	3,500¥	8	—	150
Propulsion System							
Limping	2	16	Facility	3,000¥	10F	Automotive Mechanic	150
Crawling	5	24	Facility	10,000¥	14F	Automotive Mechanic	150
Flying	8	36	Facility	20,000¥	18F	Aeronautics Mechanic	150
Reduced weight	1	24	Facility	Weapon Cost	6	—	150
Safe Target System	1	6	Kit	200¥	4	Hardware	150
Silencer	2	10	Shop	400¥	8F	—	150
Sound Suppressor	3	16	Shop	600¥	12F	—	150
Revolver Silencer	4	24	Facility	2,500¥	16F	—	150
Thermal Suppressor	1	8	Shop	200¥	6F	—	150
Skinlink	1	6	Kit	50¥	6	—	150
Sling/Lanyard	—	4	Kit	10¥	—	—	150
Smartgun System	1	8	Shop	Weapon Cost	6R	—	150
Tracker	—	4	Kit	150¥	—	—	150
Trigger Removal	—	8	Kit	50¥	2	—	150
Underbarrel Weapon	3	20	Facility	As Underbarrel Weapon	As Underbarrel Weapon	—	150
Underbarrel Weight	2	6	Kit	25¥	6	—	151
Auto-adjusting Weight	4	10	Shop	150¥	10	—	151
Voice Activation/Response	1	6	Shop	50¥	2	Hardware	151





WEAPON RANGE TABLE

Range in Meters

	Short (+0)	Medium (-1)	Long (-2)	Extreme (-3)
Pistols				
Taser	0-5	6-10	11-15	16-20
Hold-out Pistol	0-5	6-15	16-30	31-50
Light Pistol	0-5	6-15	16-30	31-50
Heavy Pistol	0-5	6-20	21-40	41-60
Automatics				
Machine Pistol	0-5	6-15	16-30	31-50
SMG	0-10	11-40	41-80	81-150
Assault Rifle	0-50	51-150	151-350	351-550
Longarms				
Shotgun (flechette)	0-10	11-25	26-40	41-60
Shotgun (slug)	0-10	11-40	41-80	81-150
Sporting Rifle	0-100	101-250	251-500	501-750
Sniper Rifle	0-150	151-350	351-800	801-1,500
Heavy Weapons				
Light Machine Guns	0-75	76-200	201-400	401-800
Medium/Heavy Machine Gun	0-80	81-250	251-750	751-1,200
Assault Cannon	0-100	101-300	301-750	751-1,500
Grenade Launcher	5-50*	51-100	101-150	151-500
Missile Launcher	20-70*	71-150	151-450	451-1500
Mortar	150-300*	301-1,000	1,001-4,000	4,001-6,000
Ballista	20-100*	101-500	501-3,000	3,001-5,000
Ballistic Projectiles				
Bow	0-STR	To STR x 10	To STR x 30	To STR x 60
Light Crossbow	0-6	7-24	25-60	61-120
Medium Crossbow	0-9	10-36	37-90	91-150
Heavy Crossbow	0-15	16-45	46-120	121-180
Pistol Crossbow	0-5	6-15	16-30	31-50
Impact Projectiles				
Thrown Knife	0-STR	To STR x 2	To STR x 3	To STR x 5
Shuriken	0-STR	To STR x 2	To STR x 5	To STR x 7
Thrown Grenades				
Standard	0-STR x 2	To STR x 4	To STR x 6	To STR x 10
Aerodynamic	0-STR x 2	To STR x 4	To STR x 8	To STR x 15
Exotic Weapons				
Blowgun	0-BOD	To BOD x 2	To BOD x 3	To BOD x 4

* See Grenade Launcher Minimum Range, p. 155, *SR4A*

