

Science Fiction Gear Toolkit



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Sci-Fi Gear Toolkit

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Introduction

Designing a cool setting is often the dream of many GMs. You want something special, something you can call your own, and something that stands out from the crowded gaming store shelves.

To give you a helping hand in creating a sci-fi setting, we've written a series of Toolkits, which together cover all the main aspects of setting design.

This book is devoted to sci-fi gear. With it, you can introduce new forms of armor and weapons, starships, vehicles, cyberware, and mechs. There's even guidance on using time travel. Which bits you choose to use depends on the needs of your setting.

Several systems are included in this book for constructing certain technologies common to sci-fi games. The tables are not designed to calculate exact volumes of starships or their components, nor work out how every last drop of energy from a vehicle's power plant is allocated. They present a Fast! Furious! Fun! way of creating balanced items from scratch and with a minimal amount of time investment.

Other books in the Sci-Fi Toolkit series cover building a sci-fi setting from scratch, and populating it with all manner of creatures.

The Toolkits are not new rulebooks—everything is designed to be modular, in that you can pick and choose bits you like for your particular setting.

None of the new "rules" are written in stone either. Instead, think of them as guidelines and examples to help you design the setting you've always wanted.

Maybe all starships in your setting are built as characters rather than being simple vehicles, or perhaps power armor doesn't exist or requires a special Knowledge skill to use because of its rarity. If there is something in this book you think would work in your system if only it was slightly different, then make the change required.

Sidebars

You'll quickly notice that there are a lot of sidebars in this book. Some sidebars contain handy hints (such as possible ways to decide how fast faster-than-light capable starships actually move and in what time), whereas others contain advice on altering what we've presented.

Remember, this is a toolkit designed to help you shape your own setting. The rules in the sidebar are optional and are designed to be used as the basis for your own inventions.

If you want to use them as they are, then that's fine—but it's equally okay if you want to alter them.



Hello, boys and girls.

What you have in your sweaty hands is the second in a new series of Toolkits designed primarily for the GM. Each book covers one important aspect of a genre. In case you missed it on the cover, this book details sci-fi gear.

What does a toolkit do? Let me tell you what it doesn't do—it doesn't give you another rulebook.

Sure, it's got rules in, but they're optional with a capital "O." The aim of these toolkits is to make your life easier as a GM by giving you tools—remember that word, kiddies—to making your own setting as unique and exciting as anything my slaves produce.

They explore every aspect of a setting, and I mean every aspect. From designing a cool world to populating it with interesting cultures, from designing new weapons to cool artifacts, like magic and starships.

A lot of what's in these toolkits is advice rather than gospel. You get to pick and choose the bits you want for your setting and discard the rest.

And if you don't like what Jack has to say, change it!

We're giving you the tools to make kick-ass settings—if your game falls flat after reading this, then it's your own fault for not following my advice!

Now, get reading and go make Jack proud!

Technology Index

Sci-fi can cover everything from a near future game where aliens are invading the Earth to a universe-spanning game of galactic empires and rebellious allegiances.

Some settings have nothing more than experimental laser weapons or advanced combat rifles, whereas others have personal disintegrators, teleport belts, huge starships capable of destroying worlds, and armored mechs. And that doesn't even begin to cover the in-between stuff. What's common in one game may be, at best, Weird Science, in another.

To help differentiate what's common to your setting and what's advanced technology, we're going to use a Tech Index (TI). This isn't a new rule—it's just a useful convention.

There are four levels of TI, ranging from the mundane of modern Earth to true superscience. There's no reason why you can't mix and match these in a single setting, but to help you design new gear you should pick a default level.

There's no right or wrong TI for your setting. If you want mechs wandering around a TI 0 setting, as common vehicles, then that's fine. As we've said above, the TI is just a general guideline to help you build gear and vehicles.

If you have Weird Science in your game, you might want to allow characters to build devices one or more TI higher, perhaps representing experimental science or reverse engineered alien technology.

TI 0

This is Earth as we know it today, though with maybe a few minor enhancements. The vast majority of gear comes straight out of the core rules with little or no modification.

You might wish to allow experimental laser weapons or interplanetary starships (placing the setting at the dawn of mankind's exploration of the stars), but ships should be relatively slow, maybe even require hibernation pods for the crew, and certainly shouldn't sport huge weapon arrays. At best, there may be an antimissile suite to destroy small asteroids.

TI 1

At this level personal energy weapons are more common fare, though they are usually costly compared to ballistic weapons. Cyberware becomes available at this TI.

Starships are faster, taking only months or weeks to cross vast (but not unlimited) distances, and carry deadly weapons.

Items like power armor, portable plasma weapons, mechs, and grav lift engines are probably experimental (or Weird Science) and used only by elite military units. Teleporters, invisibility cloaks, and personal energy shields remain in the realm of Weird Science.

TI 2

Unless you're after a superscience setting, TI 2 is probably the highest level a setting will reach. Characters have access to powerful weapons and armor, though items like disintegrators and energy shields are usually Weird Science or so big they are only used on starships. Ballistic weapons are all but unheard of at this technological level.

Starships can travel between planets in only a few days and can carry an awesome array of weapons (though not usually ones powerful enough to destroy entire planets).

Some items, such as cloaking devices and teleporters may be common gear at this stage, depending on what you need to make your setting work.

TI 3

At this TI anything goes—personal disintegrators, teleport belts, and energy shields are common gear.

Starships cover vast distances in the blink of an eye, and are armed with weapons capable of shattering worlds in a single blast. Ships may even have been supplanted by vast teleport gates, capable of sending characters from world to world. In this setting, ships would be used mainly for system defenses.

Mundane Gear

Mundane gear includes armor, weapons, and equipment. Unlike other sections in this book, there are no tables for creating mundane equipment. Instead, there are guidelines on introducing new gear, as well as some examples.

Armor

During the Renaissance, the introduction of firearms made conventional armor all but useless. It was only in the late 20th century, when man-made fibers were used, that armor came back into fashion. As technology progresses, so these armors will in turn become redundant, and new forms will take their place.

When adding new armor to your setting, think about the type of weaponry commonly used. If conventional weapons remain in use, then ballistic armor is likely to exist. In a setting where lasers are popular, there's very likely to be a special armor designed to counter them.

Also give some thought to the environment. If the characters are expected to venture into the vacuum of space, then spacesuits are required.

Armor in most sci-fi settings comes in two forms—unpowered and powered. This section looks only at unpowered armor (for power armor, see pages 49–52). The example armors included here cover a range of Tech Indexes, starting at TI 1 and ending at TI 3.

Infantry Armor

Infantry armor comes in two varieties—light and medium. The heaviest armor, the infantry battlesuit, is already covered in the *Savage Worlds* rules.

Infantry armor comprises plates of tough ceramic between which is sandwiched a layer of ballistic cloth. Both suits come with a combat helmet, which has a 50% chance of protecting against head shots, a full breastplate, and upper arm/lower arm and thigh/shin plates. Like the helmet, the limb armor does not grant total coverage, and has only a 50% chance of protecting against called shots.

Portable Energy Shield

Portable energy shields are found usually only at high tech levels. The versions presented here are considered to be standard items—if you want them to be Weird Science, check out the chapter starting on page 58 instead.

There are several ways of handling energy shields in a setting can vary, so here's a few examples.

Fixed Protection: Shields provide a set amount of protection, typically +8, and require no recharging. In effect, they work as conventional armor. You could have variable levels of shield, covering a range of protection at differing costs.

Variable: The shield has a limited duration and provides a variable degree of protection. These work on the same basic principals as Weird Science, but are more powerful. A typical shield may have 50 Power Points. Every point used in a round provides +2 Armor, to a maximum of +20 (which drains 10 Power Points).

The wearer can alter the setting as a free action, but only on his action. The battery recharges one Power Point every 15 minutes.

Limits: These energy shields are designed to protect against fast moving objects, such as projectiles, or energy weapons, but have less effect against slower

weapons (such as melee weapons). They typically provide +2 protection against melee attacks, and +8 (or higher if you want) against guns. Conversely, there are shields that provide the opposite protection.

Circumvented: These shields react to a set range of impact by focusing energy to absorb the impact. Low yield attacks can slip “under” the shield, which doesn’t register the hit, whereas high damage attacks simply override the system. Rather than provide a flat Armor bonus, the shield stop all damage in a fixed range.

For instance, if the typical range is 6 to 16, damage of 5 or less or 17 or higher would inflict full damage, whereas everything in between is completely negated.

Laser Absorbing Armor

Laser absorbing armor is designed solely to counter laser weapons. It comprises a lightweight vest impregnated with crystals which absorb high intensity light. As such, it provides 6 points of Armor against laser weapons, but only 1 point against all other forms of attack.

Spacesuit

Spacesuits comprise of a helmet, full body suit, and removable gloves. When all the components are properly attached, the suit is airtight. Depending on the style of game, the helmet may allow full 360 degree vision (a bubble helmet), or a more limited field of view.

The helmet comes with a basic two-way radio with a range of 5 miles and a flashlight mounted on the upper surface. Again depending on the setting, it may contain nothing else or allow data to be displayed on the faceplate in the form of a Head Up Display. Common information might include air remaining and outside atmospheric composition and pressure.

In most settings, spacesuits provide between 8 and 24 hours of air. While using air tanks, the wearer is immune to airborne viruses and toxins.

The Same, But Also Different

The various construction guidelines used in this book are all very similar, but also slightly different. Prices, weights, effects, even weapon damage are not necessarily the same across the board.

This Toolkit aims to cover an extremely wide genre, with variable technology levels. The tables are all slightly different as an example of how easy it is to produce a wide range of varied results using similar core mechanics.

Sure, you can just pull the tables and examples straight off the page for your setting, but the main idea of the Toolkit is to get you thinking about your own setting. Do you want starships, mechs, and robots? How common are they? What technology index is required to make them? Do mechs have bigger guns or more armor, like vehicles?

It’s your setting—you decide what gets used and what gets altered or ignored.

Spacesuits are designed to protect against the rigors of space, which has minimal atmospheric pressure and extremes of temperature. For the latter, the suit’s temperature regulators provide +4 to Vigor rolls to resist the effects of heat and cold, while shielding grants the same bonus to resist radiation.

When dealing with pressure drops, such as through a suit puncture, there are two possible options you can use. The first is to allow adhesive patches to be used to seal the suit. Patches are covered on page 9.

Armor Table

Type	Armor	Weight*	Cost*	Notes
Light infantry armor	+2	8	\$300	See notes
Medium infantry armor	+4	12	\$600	See notes
Portable energy shield	Special	2	\$1K+	Covers full body; see notes
Laser absorbing armor	+1/+6	2	\$200	Covers torso only; see notes
Spacesuit	+1	10	\$300	Covers entire body; see notes
Spacesuit, armored	+3	12	\$500	Covers entire body; see notes

* In some settings, armor might be restricted to military personnel only.

The second option is to have the suit isolate the breach in a more drastic way. When a small on-board computer senses a dangerous leak (defined as a puncture caused by damage inflicting a wound on the wearer), it activates an emergency sealing system.

Crescent-shaped metal plates at the joints slice through flesh and bone to form an airtight seal, much like an iris-valve. The wearer loses a limb, but he doesn't die.

Damage that results in a Shaken result causes only a slight puncture, which is repaired by the suit's self-sealing coating. Only attacks which cause one or more wounds lead to depressurization.

The only difference between a regular spacesuit and an armored one is the protection it offers. An armored spacesuit is reinforced with ceramic plates. Such suits are common in mining operations on planets with a hazardous atmosphere.

Weapons

The type of weapons available in your setting is likely to depend on the technology level. A near-future game may still have ballistic weapons, but could also have laser weapons. It is less likely to have disintegrators and antimatter rifles than a far-future setting, however.

When designing new weapons, use the basic weapons in *Savage Worlds* as a guideline. Range isn't going to change much between ballistic and energy weapons, though in the case of the alter, damage may be slightly higher.

Here's some example hi-tech weapons you can use as a baseline. For more examples, check out the *Necessary Evil* and forthcoming *Slipstream* settings.

Antimatter Weapons

These powerful weapons don't usually make an appearance until late TI 2 or early TI 3. They fire a stream of antimatter particles, which vaporize "standard" matter on contact.

Flechette Weapons

Flechette weapons are the standard firearms of some hi-tech armies. They are lightweight and capable of rapid fire.

Flechettes are small metallic darts, magnetically propelled to supersonic speeds. Unlike conventional bullets they have no case, produce no muzzle flash, and there is little sound beyond a short duration, high-pitched whine. Their small size and weight allows magazines to carry more rounds than conventional ballistic weapons and with minimal protrusion.

Each magazine holds a micro battery along with the flechette rounds, negating the need for a separate power source. So long as there is a magazine fitted, the weapon always has enough power to fire. Flechette magazines are interchangeable between the SMG and assault rifle.

To reduce the risk of contamination by foreign particles, flechette magazines are hermetically sealed. On insertion the seal is breached, allowing the projectiles to be fed into the firing chamber.

Gyrojet

Gyrojet weapons can exist at TI 0 upward. They are ballistic weapons designed to be used in zero-g environments. When the trigger is pressed, the round is propelled down the barrel at a low velocity. Once clear, a secondary propellant fires, accelerating the round to traditional ballistic speeds.

Disintegrator Weapons

Disintegrators are probably the most-feared sci-fi weapons. Depending on the lethality you wish to introduce, these weapons can work in one of two ways.

The first is to treat them as conventional weapons, albeit with high damage. Wounds are inflicted, and healed, as normal.

The second is to actually have them disintegrate victims. One way of handling this is to rule that anyone Incapacitated by a disintegrator is disintegrated. No need to roll on the Knockout Blow Table. Victims just cease to exist (which makes the Hard to Kill and Harder to Kill Edges useless when dealing with these weapons). If this doesn't seem powerful enough, an alternative is to rule that a single wound causes the same effect.

Of course, with either of the deadlier versions you're likely to see your players get through a string of characters in rapid succession!

Hand Flamer

A hand flamer is just a small flamethrower. It comprises a long metal glove extending to the elbow, with fuel tanks spread along the length and a nozzle extending out over the top of the hand. The firing mechanism is located on the palm, requiring the firer to form a fist to activate the flame. It follows all the regular rules for flamethrowers.

Plasma Weapons

Plasma is superheated gas. These weapons are a cross between flamethrowers and conventional guns.



Ranged Weapon Table

Type	Range	Damage	ROF	Cost	Weight	Shots	Min Str	Notes
Tech Index 1								
Flechette pistol	12/24/48	2d6	1	\$200	2	30	—	AP 2; Semi-auto
Flechette SMG	12/24/48	2d6+1	3	\$400	4	60	—	AP 2; Auto
Flechette rifle	24/48/96	2d8+1	3	\$900	8	60	—	AP 2; Auto; 3RB
Gyrojet pistol	12/24/48	2d6	1	\$250	3	10	—	See notes
Gyrojet rifle	24/48/96	2d8	3	\$600	10	30	d6	See notes
Hand flamer	Cone	2d10	1	\$200	4	5	d6	See notes
Recoilless cannon	12/24/48	2d10	1	\$800	5	7	—	See notes
Rocket pistol	20/40/80	4d6	1	\$1000	10	6	d8	See notes; Medium Burst Template
Tech Index 2								
Plasma pistol	12/24/48	2d8	1	\$600	7	8	—	See notes
Plasma rifle	24/48/96	3d8	1	\$1400	16	24	d8	See notes
Tech Index 3								
Antimatter pistol	12/24/48	2d10	1	\$1000	4	7	—	See notes
Antimatter rifle	24/48/96	3d10	1	\$2600	12	30	d8	See notes
Disintegrator pistol	6/12/24	3d10	1	\$10K	3	6	—	See notes
Disintegrator rifle	12/24/48	5d10	1	\$30K	10	15	d6	See notes

Unlike a flamethrower, the fuel tank is stored in the weapon. When the trigger is depressed, the gas is heated and ejected as a small ball.

The versions presented here are low-powered but man-portable. They should be introduced around late TI 1 as infantry support weapons, with a rifle-only version weighing in excess of 40 pounds. As the TI increases, so they become lighter. The pistol and rifle versions come into effect somewhere in TI 2.

If you decide plasma weapons are common in your setting, you might wish to create vehicle-mounted versions.

Recoilless Cannon

First introduced at TI 1, the hand cannon is a large pistol with a 1" caliber. Powerful recoil dampers protect the firer from injury when firing. The weapon fires a standard ballistic round, and produces a deafening retort.

Rocket Pistol

The rocket pistol is an overly-large revolver, firing small rockets instead of conventional bullets. The warheads explode in a Medium Burst Template and count as Area Effect weapons.

Although incredibly powerful for a pistol, the weapon has a serious drawback—reloading each rocket takes one round.

Vibro Weapons

Vibro weapons are common in many sci-fi games. They are standard melee weapons capable of vibrating at immensely high speeds.

Rather than create a new set of weapons, you can handle vibro weapons by ruling that they inflict +2 damage compared to regular weapons of the same type (so a vibro dagger causes Str+3) and cost \$150 extra.

Gear

Gear is a blanket term covering personal equipment not covered above. A lot of standard sci-fi gear can be treated as standard gear found in *Savage Worlds* with little modification.

For instance, a futuristic laptop may weigh less and have far more processing power than a 21st century version, indeed it may even be worn about the wrist, but it's still just a laptop. Futuristic manacles may be made of superhard alloy, but they still perform the same function. Don't worry too much about changing prices either—such things tend to stay relevant to average income.

If you're playing in a conventional sci-fi settings, gear is likely to be common technology. If you're using *Weird Science*, you may want to check out the chapter starting on page 58 to see how you can use that system to create new gear, including drugs.

Adhesive Patches

Small squares made of the same material as spacesuits, adhesive patches are a quick puncture repair kit. One patch is required for each wound the wearer takes. As noted under spacesuits above, the suit's self-sealing skin repairs punctures caused by Shaken results.

Taking a patch from its storage packet and applying it is an action and takes an entire round. If the character wants to do it faster, he has to make an Agility roll.

Binoculars

As well as providing variable magnification between 8x and 64x, these advanced binoculars also provide a readout displaying distance to target in yards and compass direction.

The lenses are coated with a variable polymer film, which at the press of a button can rearrange its structure to provide Low Light or Infravision.

Credit Sticks

Money in the future may still be made of paper, metal, or plastic, or it might exist only in terms of credit. Regardless of the method, people still need to buy and sell.

A credit stick in its most basic form is a thin plastic rod serving the same purpose as a modern day credit card. The card is inserted into a reader, and a security number entered to credit or debit the stick. The stick itself is simply a tool for accessing the user's bank account.

At slightly higher tech levels, security may be through fingerprint scan, so the user holds the stick while inserting it into the machine, or DNA matching. In the latter case, a sample of the user's DNA is encoded into the stick. When he uses the stick, he places a finger in a DNA reader, which compares his DNA to what's in the stick.

At higher levels, credit sticks may be implanted into the palm or back of the hand, though truly advanced models may be placed under a fingernail. Rather than actually take goods to a checkout, the user simply picks up what he wants and leaves the store.

A network of sensors around the exit read computer chips in the items he is carrying and automatically debit his credit stick, which is read at the same time. If the user has no available credit, an alarm sounds and he is detained while the matter is investigated.

Credit sticks cost \$10 but unless you make a habit of losing it, one stick lasts a lifetime. The weight is negligible.

Headset Communicator

Comprising of a throat mike and ear piece, the headset can broadcast to a range of 5-miles. They can be operated hands-free and worn under clothing or armor.

Language Translator

In a universe full of aliens sharing no common language, the ability to understand and be understood is not to be ignored. Language translators can translate standard audio signals, as well as ultrahigh and ultra-



low frequencies, and languages based on smell, color, limb movements, touch, or pictorial representation. Translation is provided in text or audio form, as the user requires.

Each translator has two ratings—one for the amount of language chips it can store, and one for its translation skill. Two chips are always required—one for the user’s language, and one for the language he wishes to translate. Most advanced races sell language chips of their own language.

The base cost of the translator is \$200. This has a 2-chip capacity and a translation skill of d4. Extra chip capacity adds a further \$100, while each die in translation adds \$250, to a maximum of d12. Translators cannot translate unknown languages.

Map In A Box

The map in a box, more commonly known simply as a map box, resembles a 21st century laptop computer but is only a few millimeters thick. When opened, the upper section is a thin hologram display while the lower part has a keyboard and tracker.

Ultrathin storage chips containing detailed maps can be inserted into the device, though it can only hold one chip at a time. Map chips are available on most hi-tech worlds, or can be made with a successful Smarts roll using an orbital spacecraft’s sensors. Creating a chip in this manner takes one month.

Commercially available chips rarely show military installations or other sensitive areas. Privately made chips show whatever the creator mapped, so there is an active trade in black market chips of all manner of restricted information. Of course, the price for such a chip increases dramatically with the sensitivity of the data and the expense incurred in acquiring it.

By using the tracker and keyboard, the map can zoom to show the world as a globe or down to an area just a few yards square. Many worlds update their maps yearly, to show new constructions or changes in terrain brought about by tectonic activity. Some advanced worlds allow the map box to link to orbiting satellites, providing up to the minute changes as they occur in real time.

Motion Tracker

Handheld motion trackers become available at around TI 1. They detect movement, but have no ability to detect life. Thus, an object blowing in the wind registers as well as an alien advancing toward you. For this reason, they are best used indoors.

Motion trackers have an effective range of 20 yards, though signals can be detected up to 40 yards away with a successful Smarts roll.

Gear Table

Item	Cost	Weight
General Items		
Adhesive patches	\$20	1
Binoculars	\$250	4
Credit stick	\$10	—
Headset communicator	\$50	2
Language translator	\$200+	3
Language chip	\$50	—
Locator		
Map In A Box	\$300	1
Map Chips	\$50+	—
Motion tracker	\$400	3
Clothing		
Psionic shield, basic	\$2000	2
Psionic shield, advanced	\$6000	4

Motion trackers do not work through walls, but so long as there is some opening between the target and the sensor, they function well. A sealed room may be full of targets, but the sensor cannot register them. Open a door, and it works fine.

The tracker comes with a readout screen marked with numbered range bands and several controls to adjust the sensitivity to filter out small creatures, such as rats, and to account for atmospheric distortion. Moving objects appear as blips on the screen, which gives range and direction, accompanied by a pinging sound, which gets louder as the target nears the sensor.

The tracker only work in the user’s front arc, however—which leaves him open to attack from the flank or rear.

Military versions can be fitted as an attachment to the side of assault rifles and support weapons, allowing the operator to maintain full control of his weapons while simultaneously using the device.

Psionic Shield

Whether or not psionic ability exists in your game is a personal choice. If it does, then there may be psionic shielding devices to prevent unwanted psionic intrusion into one’s mind. The device presented here is TI 2. Earlier models are heavier and cost more.

A psionic shield is a metal skullcap that can be worn under a helmet or other headgear. It grants the benefits of the Arcane Resistance Edge. An advanced psionic shield is heavier and more expensive, but grants the Improved Arcane Resistance Edge.

Psionic shields do not stack with the Edge if the character has it already—only the highest bonuses applies.

Cybernetics

Cybernetic implants, also called cyberware in some settings, are popular in certain sci-fi genres (most notably cyberpunk).

This chapter looks at how you can use cyberware in your setting. Given that designing and constructing new cyberware would likely take years, require hundreds of millions of dollars of investment, and require a full-time staff of skilled scientists and technicians, no guidelines are included for players to construct their own cyberware. This is typically the activity of major corporations.

There are three easy ways of looking at cyberware—as a new Arcane Background, through an Edge, or as simple gear. All three methods are discussed below.

Arcane Background

This method introduces a new form of Arcane Background—Arcane Background (Cyberware).

Arcane Background (Cyberware)

Requirements: Novice.

Arcane Background (Cyberware) works in a method similar to superpowers in *Necessary Evil*. Characters receive 10 Power Points with which to buy new cyberware from those items listed later. No arcane skill roll is required. Cyberware works automatically unless a specific item says otherwise. This Arcane Background will not produce super-powered characters, nor should it—cyberware enhances a character, but does not make him into a hero with true superpowers.

We suggest that with this method there is no additional limit placed on the number of devices a

character can have installed. The use of Power Points automatically places a finite limit.

New Powers: Characters gain additional cyberware by taking the Power Points Edge and spending the points on new cyberware. The usual once per rank limit applies as normal.

Alternative Method

An alternative to using a new Arcane Background is simply to use the existing Weird Science Arcane Background and declare that the gizmos are cyberware implants.

This method is most suitable for a setting where cyberware is a novelty or a science practised only by a few “mad scientists.” All the usual rules for Weird Science would apply, meaning the devices have a limited use and take time to recharge.

It is suggested that *boost/lower trait* be limited to a specific attribute or skill each time it is taken. For instance, if a character has *boost Strength* (enhanced muscles), he cannot use the same gizmo to improve his Agility, Smarts, Piloting, Shooting, or whatever. Each time he wants to use the power for a different trait, he must purchase it as a new power.

Edge

In this method, characters wishing to buy cyberware must take an Edge. An example Cyberware Edge is shown below. Whether the Edge can be taken at every advancement or just once per rank depends on how much cyberware you want in your game. You may also wish to place additional limits on how much cyberware can be installed (see Limits, p.12).

Cyberware

Requirements: Novice

Each time this Edge is taken the character gains a new piece of cyberware. The character must meet the requirements of the cyberware device, but there is no monetary charge or installation procedure. Unless otherwise stated, cybernetic devices always function.

Gear

The third option is to allow characters to buy cyberware as regular gear. In this case, they must pay a monetary price. Unless you want to allow characters unlimited cyberware, it is suggested you place a limit on how much they can install.

The costs in the example cyberware below assume it is reasonably common. If you make cyberware more exclusive or rarer in your setting, simply increase the price accordingly.

Installing Cyberware

Characters buying cyberware can either have a professional install it for an extra fee, say 25% of the cyberware's cost, or do it themselves to save money.

Once a character has acquired the implant, a hospital lab and a successful Knowledge (Medicine) roll is needed to implant the device into another character (a hero cannot implant cyberware into his own body!).

The roll is modified by the enhancement's Cyberware Modifier (the number in parentheses after its title, which also affects the recipient's Cyberware Limit if the implant succeeds), and the facility modifier of the lab used for the surgery (this is the same as the lab's Healing roll modifier).

If the roll fails, the body rejects the implant and forever will (no retries). If the result of the Knowledge roll is a 1 (regardless of the result of the Wild Die), the character attempting the implant has made a tragic mistake during the procedure. The intended recipient gains no benefit from the implant, but gains a permanent injury (roll randomly) as a reminder of the disastrous surgery.

If the roll is successful, the body accepts the implant and it is now usable.

Removing an Implant

Some characters may have second thoughts after getting a cyberware implant. They may want to reduce their chance of permanent psychosis (if you use that option), or they might simply want a different

implant—cyberware is often a fashionable item in cyberpunk settings, and fashions quickly change!

Removing an implant requires a hospital or lab and a successful Knowledge (Medicine) roll modified by the implant's listed Cyberware Modifier and the lab's modifier as above.

A success removes the implant. On a failure, the patient takes 2d6 damage (ignoring any armor) and the cyberware is not removed.

Limits

In some settings, the amount of cyberware a character can place in his body may be strictly limited. You can do this by requiring characters to buy an Edge once per rank, or by imposing a limit on how much the character can take before he begins going insane or suffers catastrophic rejection (or some other such problem).

For the latter method, it is suggested the Cyberware Limit be the character's Spirit or Vigor die. Spirit covers willpower and self-identity, and having a body full of cyberware endangers the human spirit, whereas Vigor represents how much stress the character's body can take from the implants.

Overload

If a character exceeds his Limit, there is a chance of mental or physical overload. Here's two suggestions, but you should take the opportunity to make your own rules to suit your vision of how cyberware works in your setting. Maybe a device goes haywire, works sporadically, or the latest implant simply stops functioning.

Pain

The character must make a Spirit or Vigor roll (depending on what sets his Limit) with a penalty equal to the difference between his Limit and the total of all the Cyberware Modifiers of all his implants.

If the roll is failed, he suffers a number of Fatigue levels equal to the difference between his Limit and the total of the Cyberware Modifiers of all implants he has installed. This penalty remains until the implant total is reduced to his Limit or lower. And yes, this can lead to Death!

Mental Trauma

The character must make a Spirit or Vigor roll, depending on the attribute used to set the Limit. If he fails, he must roll on the table below, adding the difference between his Limit and current total of all

installed Cyberware Modifiers. The penalty is removed only when the implant cost has been reduced to equal or lower than the Limit.

1d20 Effect

1–6 Minor Hindrance: The character gains a Minor Hindrance linked to his mental state (such as Cautious or Phobia).

7–11 Major Hindrance: The character gains a Major Hindrance.

12–17 Minor Mental Overload: The hero's mind is constantly overloaded by signals from his cyberware. He suffers a -1 penalty to all trait rolls.

18–20 Major Mental Overload: The hero suffers a -2 penalty to all trait rolls.

21+ Permanent Psychosis: The character has become psychotic. If he rolls a 1 for any trait roll, regardless of Wild Die, he immediately begins attacking the closest character (ally or foe) in a homicidal rage. Treat the character as being Berserk.

Example Cyberware

A sample of typical cyberware follows. The list is not exhaustive by any means and you should use it as a template for designing your own cyberware. Each piece of cyberware is usable by all three methods presented above, and thus has a variety of requirements or limits.

The number in parenthesis after the Cyberware name is the Cyberware Modifier. This is used to modify the difficulty of implanting the cyberware and also if you choose to limit the use of cyberware in your setting (as above).

Requirements: If you are using the Edge system of taking cyberware, this is the minimum rank the character must be to choose this particular cyberware enhancement.

Power Points: This is the cost for the Arcane Background method.

Cost: The monetary value if you allow cyberware to be bought as gear.

Effect: What the cyberware does.

Adrenal Surge (2)

Requirements: Seasoned

Power Points: 1

Cost: \$2500

Effect: The character's adrenal gland has been surgically augmented. He receives +2 to recover from being Shaken. This stacks with the Combat Reflexes Edge.

Attribute Boost (2/step)

Requirements: Novice

Power Points: 2/step

Cost: \$3000/step

Effect: One of the character's attributes has been augmented with cyberware. Each time this cyberware is chosen, an attribute may be increased by one die step to a maximum of d12+2.

You may wish to impose a limit of say 2 steps per attribute, or allow the characters do perform truly amazing acts by having no limit on how high an attribute may go.

Bone Blade (2)

Requirements: Novice

Power Points: 1

Cost: \$2000

Effect: The character has had a plastic blade surgically grafted to his bone. By flexing his hand, the blade extends along the forearm, protruding from the top of the wrist. The blade does Str+2 damage.

The weapon cannot be disarmed, but it can be broken (Toughness 5). A broken blade cannot be repaired—it must be replaced. This costs 50% of the price of installing a new blade.

In games where cyberware is gained from Edges or Power Points, the character should be pay the cost, but does not have to buy the cyberware anew.

Boosted Immunity (1)

Requirements: Novice

Power Points: 1

Cost: \$3000

Effect: The character's lymph nodes have been boosted. He receives a +4 bonus to resist the effects of disease or poison.

Combat Awareness (2)

Requirements: Variable

Power Points: 1/rank

Cost: \$2000/rank

Effect: Whether it involves neural surgery, musculature alteration, or simply adding a chip into the brain, the character may take one Combat Edge ignoring all requirements except the requirement of other Edges. The Edge benefits do not stack with the same Edge if the character has it already.

In a game where the characters buy cyberware through Edges, you may wish to limit this by having the character also meet the rank requirement. The advantage over buying the Edge normally is not having to meet trait requirements.

Cyber Senses

Where are the devices for enhanced vision and hearing? They're hidden under Skill Chip, of course!

By increasing his Notice skill, a character gains a bonus to all his senses at once. This has been done simply for ease.

If you want to create new devices specifically for sight or hearing, perhaps magnifying vision to 4x or 8x, altering hearing to pick up higher or lower frequency sounds, and maybe even allowing the character to Track by smell as well, then that's your choice.

In a setting where cyberware plays a big part, it is probably best to greatly expand this list, adding some bonuses to the different senses.

If you opt to use an expanded method, you should not allow Notice to be augmented as a base skill using Skill Chips. Given the choice, a flat die increase is often more attractive than a bonus to just one aspect, even if it does allow for telescopic vision.

For example, a character may take Level Headed without needing d8 Smarts. He could not take the Improved version unless he had Level Headed already. Whether or not he must be Seasoned to take the cyberware depends on the rules of your setting.

Some minor work may be required to take certain Edges. For instance, a character wanting to take Trademark Weapon might have a nontransferable cyberlink installed into one particular weapon.

It is suggested characters give this cyberware a unique name every time it is taken. For instance, taking Nerves of Steel might involve a piece of cyberware called a Densensitizer, or Pain Blocker. While it doesn't change the game mechanics, it does add a bit of flavor.

Communicator (1)

Requirements: Novice

Power Points: 1

Cost: \$300

Effect: A small radio has been built into the character's skull. It has a range of 5-miles and can communicate with standard radio equipment.

Face Changer (2)

Requirements: Seasoned

Power Points: 3

Cost: \$6,000

Effect: The muscles and bones in the characters face have been replaced with a synthetic substance which can alter shape through electrical stimuli. The character may alter his facial features. Each change takes 5 minutes and requires a Smarts roll. The character may raise or lower his Charisma (if he wishes) by 1 point per success and raise. The new face remains until the character decides to switch back.

Altering the facial features to those of a specific person requires a raise on the Smarts roll. This cyberware does not alter voice patterns, eye color, hair pattern or color, or body shape/mass, but there's nothing stopping you creating one that does.

Gills (1)

Requirements: Novice

Power Points: 1

Cost: \$1500

Effect: The addition of gills allows the recipient to breathe underwater without difficulty. He also gains a +2 bonus to resist airborne poisons and diseases, but is no benefit against contact or ingested poisons.

Fast Healing (1)

Requirements: Novice

Power Points: 1

Cost: \$2500

Effect: Simple nanobots have been introduced into the character's body. All natural healing rolls are made at +2. This stacks with the Fast Healer Edge.

Leg Enhancement (1)

Requirements: Novice

Power Points: 1

Cost: \$1500

Effect: The character gains +2 Pace and increases his running die by one step (maximum of d12). He also increases his jumping distances by 1".

Mule (2)

Requirements: Novice

Power Points: 2

Cost: \$2500

Effect: The character's skeleton has been strengthened, allowing him to carry 8x his Strength. If he has the Brawny Edge as well, it increases to 10x Strength.

Nanobot Autodoc (4)

Requirements: Veteran

Power Points: 6

Cost: \$8,000

Effect: A small computer linked to the character's nervous system automatically releases nanobots if the hero is wounded. The nanobots have a Healing skill of d8. Healing takes 10 minutes as per usual.

An advanced version, which might cure otherwise permanent injuries may be available in your game. If so, charging 10 Power Points, \$15,000, or a Modifier of 5 would not be unreasonable for such a lifesaver.

Pistol Implant (2)

Requirements: Novice

Power Points: 2

Cost: \$3000

Effect: A small pistol has been installed in the character's arm and wrist. It should be treated as a Ruger 0.22 (see *Savage Worlds*) in all respects. Reloading is achieved by removing a flap of fake skin and manually inserting individual rounds. Because of the weapons subdermal placement, it cannot be detected unless the character is given a very thorough search. It can be picked up via a metal detector, but in some settings the gun may be made entirely of plastic and fire plastic darts.

Depending on your setting, you may wish to allow small laser pistols to be installed.

Second Brain (2)

Requirements: Seasoned

Power Points: 2

Cost: \$6000

Effect: A second brain, in the form of a small computer, has been placed in the character's skull. The character's Wild Die for Smarts and Smarts-linked skill rolls increases by one step (usually to a d8).

Skill Chip (1)

Requirements: Novice

Power Points: 1

Cost: \$500

Effect: The character has a skill boost chip inserted into his brain, giving him a +1 die bonus to a single skill to a maximum of d12+1 or a new skill at d4. The character must decide which when the implant is taken. He may increase these skills as normal.

If for any reason the implant is removed, the character loses the bonus. If he elected to take a skill at d4 and has spent experience points increasing it, he loses one die but not the entire skill.

Subdermal Armor (1/point)

Requirements: Novice

Power Points: 1/point

Cost: \$1000/point

Effect: Armor plates have been placed under the character's skin. Each time this is taken, the character gains +1 Armor. The bonus from subdermal armor stacks with any armor the character wears.

Whether or not the armor is visible beneath the skin depends on how advanced cyberware is in your setting. In its infancy, it might give the character a rather angular appearance, but at higher levels it might be a thin but ultra-durable weave placed just beneath the skin.

Thermal Vision (1)

Requirements: Novice

Power Points: 1

Cost: \$500

Effect: The character halves all penalties for bad lighting (round down) when attacking living targets. The bonus may also apply to targeting vehicles and robots if they produce a large heat signature.

Getting Weird

The cyberware presented here is fairly mundane, easily concealable gear, but it doesn't have to be.

You could use the rules to create steampunk cyberware, powered by great pistons and gears. The rules could even be used in a pulp or fantasy setting to add a weird element.

Another alternative is to allow more exotic cyberware, such as extra limbs. The ability to fly (perhaps with fold-out wings or built in rockets or antigravity engines), or the ability to walk through walls by having the character's molecules phase out of sync with the mundane world.

Unless these are common items, the various costs (Modifier, Requirements, Power Points, and so on) should be set quite high.

You might even allow a character to have Arcane Background (Psionics), or perhaps just a single arcane power, by use of cyberware.

Cyberspace

Cyberspace is commonly found within the sci-fi sub-genre of cyberpunk. It's a landscape of computer programs, data highways, and deadly anti-intrusion software. Entering cyberspace allows a character to search for specific data files (typically high-risk, high-value, high-security ones), override security systems, and perform other nefarious tasks.

Tools of the Trade

To enter cyberspace, the character needs some form of computer. In your setting they might be called decks, rigs, terminals, laptops, hackpods, or such like. Whatever name you use, the rig needs programs, which create an artificial persona for the user to explore cyberspace.

Creating A Rig & Persona

Presented here are guidelines for creating a rig and persona from scratch. We've also included some examples you can use straight off the page if you just want to get hacking!

A rig has only a single statistic—Program Limit, which begins at 5. This is the maximum number of dice the persona program can have across all its traits in excess of its starting levels. A bare rig comes with a basic persona program, which uses no program space (it's hardwired) and gives the persona a d4 in all its traits.

Once Program Limit is assigned, it cannot be altered later. If the character wants a better rig later on, he has to buy a new one.

Next you need to buy persona programs. The example rigs come with a fixed set for convenience,

but the user can exchange programs as he sees fit to the maximum of his rig's Program Limit.

Persona Attributes

Personas have five attributes, exactly like characters. A rig comes with a basic persona package, with a d4 in each attribute.

Each persona attribute is a separate program. Each die type over the basic d4 costs money and fills up space in the rig's Program Limit. For attributes, each die type (or bonus after d12) fills one program slot.

Persona Skills

As for skills, personas use only five—Fighting, Investigation, Lockpicking, Notice, and Stealth. As with attributes, every rig comes with a default persona program with a d4 in every skill.

Fighting is used for defending against (and attacking) security programs. Investigation is used to search through data stores. Lockpicking covers cracking security on data stores, as well as manipulating systems linked to the real world (such as alarms). Notice is needed to detect what sort of node the character is currently in, as well as detecting "wandering" security programs. Stealth is used to slip past security nodes without raising the alarm. There's more on nodes and security programs later.

Each persona skill is a separate program. Each die type over the basic d4 costs money and fills up space in the rig's Program Limit, as shown on the table on page 18.

Unlike with regular character, a persona's skills **cannot** exceed the linked attribute—either the rig can run the software or it can't.

Persona Edges

Personas can be assigned Edges in the same way as a character, but without needing to meet the requirements, except where another Edge is required. In this case, the rig must be running both the “basic” and “improved” Edges. See the table on page 18 for a list of available Edges.

Edges count toward the Program Limit, and take up space equal to their Rank plus 1 per requirement, excluding other Edges.

For example, the Sweep Edge uses 3 slots—one for Novice, one for the Strength requirement, and one for the Fighting requirement.

Improved Sweep requires 3 slots because Sweep has to be running and a further 3 because of its Veteran Rank. The Sweep requirement is already costed and does not require an additional memory space.

Appearance

What does a persona look like in cyberspace? Anything the user wants it to be. Some users present an idealized image of how they’d like to look. Others pick mythical beasts or celebrities. Some choose more abstract appearance, like a ball of swirling light, a cube, a giant hand, and so on.

Appearance does not affect a persona’s traits in any way, nor does it use program slots. Once a persona’s appearance has been chosen, it can be altered while the persona is “live.” Next time it is booted up, the user can simply choose a new appearance.

Limits

Although a persona can have traits at any level up to a d12, the effective maximum is the user’s Knowledge (Rigging) skill. If the user has a d6 skill, for example, his persona can only function at a d6, regardless of its own traits. This does not stop the character buying a d8 or higher program, however, in preparation for when he improves his Knowledge (Rigging) skill.

Multiple Programs

A rig can only run one of each program at a time and each program works only at its listed level. A character can own more than one type of program, however, deciding before he enters cyberspace which version he’ll be running.

Why do this? Well, not all cyberspace areas are the same. A character entering an area heavily-guarded by security programs but with only minimal data

Extra Features

If cyberspace is going to play a big part in your setting, you might want to add some new features to the system presented here.

For instance, you might wish to add Intimidation and Taunt skill programs. These could be used against security programs.

Persuasion and Streetwise could be used to interrogate nodes about the rest of the cyberspace system the persona is exploring. A data store might not know much about the security nodes, but it might know where the data file the persona is searching for is located.

If you’re going to add these “social” skills, you may also wish to allow Charisma-affecting Edges, such as Attractive and Charismatic. Even if the persona looks like a lump of jelly, the programs inhabiting cyberspace aren’t going to hold that against him.

Be creative, and adventures in cyberspace can be as interesting as regular adventures.

encryption might want to use Fighting d10 but only Lockpicking d6.

While this serves admirably in his current mission, it will be of little use when he needs to crack a complex data node protected by minimal strength security programs. By having multiple copies of the same software at different levels, the user can mix and match as he sees fit.

Programs cannot be exchanged once the persona is in cyberspace. To change programs, the rig must be shutdown. Doing this “kills” an active persona.

Wild Card or Extra?

Persona function as Wild Cards in all respects but use the character’s bennies. However, once they are Incapacitated they are destroyed, and the user has a chance of suffering injury from the backlash. Check out the notes on Cyberspace Combat later

Cheap Costs

You’ll notice that the costs of rigs are low in comparison to other gizmos in this book. That’s

Cyberspace Rig Construction

Type	Cost	Program Space	Notes
Basic rig	\$50	—	Rigs have a base Program Limit of 5. Each level costs an extra \$20. No maximum.
Attributes			
d6	\$50	1	
d8	\$200	2	
d10	\$500	3	
d12	\$1000	4	
Fighting			
d6	\$5	1	Cannot exceed link attribute.
d8	\$15	2	Cannot exceed link attribute.
d10	\$50	3	Cannot exceed link attribute.
d12	\$100	4	Cannot exceed link attribute.
Investigation			
d6	\$15	1	Cannot exceed link attribute.
d8	\$50	2	Cannot exceed link attribute.
d10	\$100	3	Cannot exceed link attribute.
d12	\$250	4	Cannot exceed link attribute.
Lockpicking			
d6	\$20	1	Cannot exceed link attribute.
d8	\$60	2	Cannot exceed link attribute.
d10	\$200	3	Cannot exceed link attribute.
d12	\$400	4	Cannot exceed link attribute.
Notice			
d6	\$5	1	Cannot exceed link attribute.
d8	\$15	2	Cannot exceed link attribute.
d10	\$50	3	Cannot exceed link attribute.
d12	\$100	4	Cannot exceed link attribute.
Stealth			
d6	\$10	1	Cannot exceed link attribute.
d8	\$40	2	Cannot exceed link attribute.
d10	\$100	3	Cannot exceed link attribute.
d12	\$250	4	Cannot exceed link attribute.
Edges			
Alertness	\$50	1	+2 to Notice rolls.
Block	\$50	3	+1 Parry.
Improved Block	\$150	3	+2 Parry.
Fleet Footed	\$25	2	+2 Pace and d10 running die instead of d6.
Frenzy	\$50	3	One extra attack per round at -2 penalty to all attacks.
Improved Frenzy	\$150	3	One extra attack per round at no penalty.
Level Headed	\$200	3	Draw 2 action cards and keep the best.
Improved Level Head	\$400	2	Draw 3 action cards and keep the best.
Nerves of Steel	\$30	3	Ignore 1 level of wound penalties.
Improved Nerves	\$75	1	Ignore 2 levels of wound penalties.
Quick	\$50	1	Discard card of 5 or lower for a new card.
Sweep	\$75	3	Attack all adjacent foes at -2 penalty.
Improved Sweep	\$125	3	Attack all adjacent foes at no penalty.

deliberate. If you're going to allow adventures in cyberspace, a starting character should be able to own a basic rig with enough power to give him a fighting chance.

As he earns more money, he can buy a better rig and purchase more powerful persona programs.

Example Rigs

Here's a few example rigs. The rigs come complete with a persona software package, allowing the buyer to pick it and go to work. The rig's Program Limit lists the total memory slots available, followed by the number left after the basic programs are installed.

Bare Rig

A bare rig, with absolutely no improvements, has the following statistics. Only the extremely brave or foolish enter a cyberspace zone with this piece of kit.

Cost: \$50; **Program Limit:** 5/5

Persona Attributes: Agility d4; Smarts d4; Spirit d4; Strength d4; Vigor d4

Persona Skills: Fighting d4, Investigation d4, Lockpicking d4, Notice d4, Stealth d4

Persona Edges: None

Newboy-101

The Newboy, as the name states, is a low-cost, entry level rig containing everything a novice rigger needs to get started.

Cost: \$455; **Program Limit:** 10/0

Persona Attributes: Agility d6; Smarts d6; Spirit d6; Strength d6; Vigor d6

Persona Skills: Fighting d6; Investigation d6; Lockpicking d6; Notice d6; Stealth d6

Persona Edges: None.

Intruder

The Intruder is near entry-level rig, focusing on data decryption and searching.

Cost: \$930; **Program Limit:** 15/1

Persona Attributes: Agility d8; Smarts d8; Spirit d6; Strength d6; Vigor d6

Persona Skills: Fighting d6; Investigation d8; Lockpicking d8; Notice d6; Stealth d6

Persona Edges: None.

Combat Master

The Combat Master is another basic rig, but this one is designed to overcome security programs.

Cost: \$825; **Program Limit:** 13/0

Persona Attributes: Agility d6; Smarts d6; Spirit d6; Strength d8; Vigor d8

Persona Skills: Fighting d8, Investigation d6, Lockpicking d6, Notice d6, Stealth d6

Persona Edges: None.

All Rounder

The All Rounder is a generalist rig, but one far more capable than any of the models listed above.

Cost: \$1530; **Program Limit:** 20/0

Persona Attributes: Agility d8; Smarts d8; Spirit d8; Strength d8; Vigor d8

Persona Skills: Fighting d8, Investigation d8, Lockpicking d8, Notice d8, Stealth d8

Persona Edges: None.

Combat Master Deluxe

The CMD is an improved version of the basic Combat Master rig. It is most often used in joint entries into cyberspace, with the user acting as bodyguard for the primary snooper.

Cost: \$2535; **Program Limit:** 28/0

Persona Attributes: Agility d10; Smarts d6; Spirit d8; Strength d10; Vigor d10

Persona Skills: Fighting d10, Investigation d4, Lockpicking d4, Notice d6, Stealth d8

Persona Edges: Block, Frenzy, Nerves of Steel, Quick.

Snoop Master

The Snoop Master is designed to crack high encryption data and system nodes.

Cost: \$3655; **Program Limit:** 28/0

Persona Attributes: Agility d12; Smarts d12; Spirit d6; Strength d6; Vigor d8

Persona Skills: Fighting d6, Investigation d12, Lockpicking d12, Notice d12, Stealth d8

Persona Edges: Alertness.

The Governor

The Governor is a high-end generic rig.

Cost: \$3550; **Program Limit:** 30/0

Persona Attributes: Agility d10; Smarts d10; Spirit d10; Strength d10; Vigor d10

Persona Skills: Fighting d10, Investigation d10, Lockpicking d10, Notice d10, Stealth d10

Persona Edges: None

The Senator, the next model up, has a d12 in all traits, has a Program Limit of 40, and costs \$6850. The top-of-the-range President is better still!

Exploring Cyberspace

So now the character has a rig, he's going to want to begin exploring cyberspace. What can he expect to find there?

Cyberspace can be as colorful and expansive as you wish. Vast avenues may be bordered by the glowing edifices of corporate "buildings," while message programs zip to and fro carrying e-mails along glowing telecommunication lines pulsing with energy.

Since we're only providing a taster of how you can use cyberspace, we're going to concentrate on the real meat—individual zones.

What Do You See?

What does the user see in cyberspace? A link from his rig attached to his right temple allows him to see cyberspace from the perspective of his persona.

He can opt to have a first-person view through the persona's "eyes" or an external view as if he were standing above and behind the persona.

The persona is controlled through the rig's keyboard. Although in reality the user is writing subroutines to control his persona, he sees it as a live-action show.

For instance, a spectator would see the user typing commands to move the persona or rapidly writing an

anti-security program to defend against attack, but the user himself sees his persona moving and ducking out of the way of a fearsome creature. It's like a video game, although one in which the graphics are vividly colored and the action potentially deadly.

Group Exploration

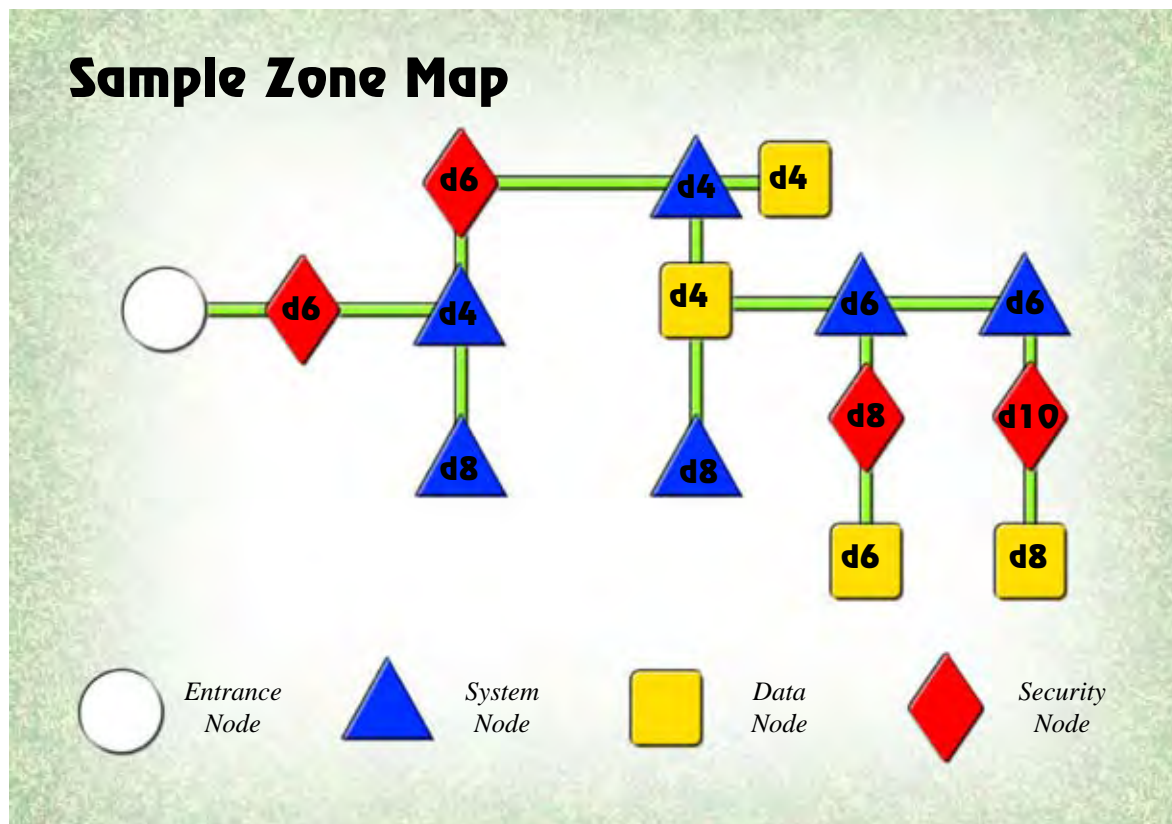
Cyberspace is usually visited by individuals. However, by linking their rigs together, multiple users can enter cyberspace as a group, a bit like an adventuring party.

Only two basic rules apply to group adventures. First, the limit to the number of decks that can be linked is the number of dice in the highest Smarts rating among the various personas (d4 is 1, d6 is 2, and so on). If four characters wish to link rigs, one of their personas must have a d10 (4 die) in Smarts.

Individual Zones

Individual zones represent the computer network, or at least a part of it, within a particular building. For instance, the security cameras in a bank might be part of a cyberspace zone.

To allow characters to explore cyberspace, it's best to think of zones as small "dungeon" in a fantasy setting. There's an entrance node, one or more security nodes (guardrooms), data stores (treasure chambers),



system nodes (workshops), and data tunnels (corridors). In order to explore these nodes, you'll need to create a small map of how they interlink.

How many of these nodes exist within a particular zone and what they contain is ultimately up to you, but here's a few suggestions you can use as a starting point.

Node Identification

A newly entered node appears black. When a persona enters a node he must make a Notice roll to identify the type of node.

On a success, the persona correctly identifies the node and relays the information back to the user. The node then turns the appropriate color. With a failure, the persona fails to recognize the node. Normally this is of little concern, but it becomes important in a security node (see below).

Unless otherwise stated, the persona can keep trying to identify a node by interrogating it. However, if he rolls a 1 on his Notice roll (regardless of Wild Die), security is alerted by his interrogation and a security program from the nearest security node comes to investigate.



Entrance Node

Entrance nodes are symbolized on the cyberspace zone map by a circle. Most zones should have only a single entrance node. Few entrance nodes are protected but there is usually a security node along one of the data tunnels leading from it. Entrance nodes are automatically identifiable by their color. They are brilliant white.

Security Nodes

Security nodes exist to stop intruders getting to sensitive data or system nodes. Security nodes have a Notice die. The higher the rating, the more secure the node.

Once a character has checked to identify the node once, he must make a Stealth roll opposed by the node's Notice. If the persona failed his identification roll, he suffers a -4 penalty to his Stealth roll. Security

nodes count usually as "active" guards, but those in redundant systems may be "inactive."

With a success, the persona can advance through the node undetected along whatever data tunnel leads from it. On a failure, the persona has been detected and the node dispatches a security program to handle the matter.

Security nodes, once identified, are bright red. Mark them on your zone map with a diamond shape and the die type of the node's Notice skill. This allows you to quickly identify the type of node and die required without wading through your notes.

Security programs are more often called Intrusion Countermeasure Electronic, or ICE for short. We'll deal with ICE in more detail soon.

Once a security program is activated, it heads for the nearest persona and engages in combat. Security programs can chase a persona through the various nodes

Extra Stuff

As mentioned earlier, you might want to create a software suite to handle weapons in cyberspace. Here's one possible way of doing it.

Create a series of programs giving damage bonuses from +1 to +5. Each bonus requires a program slot. Costs are \$50 per bonus point. Of course, if you're allowing personas to use weapons, you'll want to give ICE the same opportunity. Damage bonuses don't have to be tied to the ICE's rank. There's nothing to stop you have a low-level ICE with a d4 Strength doing +2 or +3 damage.

If you want to introduce Shooting, treat it as Fighting for program usage and costs as far as die types go. You can either fix range and damage, or make it variable, as with Fighting damage.

For example, the base range might be 3/6/12 and the damage 2d6. The next level up might increase range to 6/12/24 and damage to 2d8. You could also split range and damage into separate programs as well.

Data Nodes

Many times it is the data node that a persona is searching for. These represent the zone's "hard drives," containing all files relevant to the individual system, and maybe some hidden files as well.

For instance, data nodes in a bank might contain personnel files, client accounts, and such like. In general, the more valuable the data, the better the protection.

Data nodes aren't protected by security within the node itself (that is usually found adjacent), but the data is usually encrypted. The encryption software continually changes the code, and is given a security rating as a die type. The higher the die, the harder the code.

The persona must make a Lockpicking roll opposed by the node's rating die to access the data. With a success, the persona can now read all the data (see below). With a failure, the code changed too quick and the persona must try again. If the Lockpicking roll is a 1, regardless of Wild Die, the intrusion has been detected and the nearest security node sends a program to investigate.

Once the data is accessible, the persona must make an Investigation roll to find what he is looking for among all the dross. Although a success is all that is required, additional raises may give more information from cross-referencing files. Again, if the die roll is a 1 (regardless of Wild Die), an alert has been sounded and security come to investigate.

Data nodes are marked on the map with a yellow square containing the die type of their security rating.

Data Tunnels

Data tunnels are the pathways linking nodes and are always green. Wandering security programs are never found in tunnels. Travel between nodes appears to take a few seconds or minutes from the persona's point of view, but it really takes only a few picoseconds.

System Node

System nodes are nodes which link to a physical system in the real world. This might be a building's security cameras, fire sprinklers, automatic doors, and such like. Each system node controls only a single system, however.

In many cases system nodes can be ignored. Unless there is a wandering security program (more on that later), the node can be crossed without problem.

Of course, gaining control of the system node, and therefore the system it controls, may be the persona's objective. System nodes have a die type representing their resistance to interference.

To override the security protocols, the persona must make a Lockpicking roll opposed by the node's die. With a success, the user now controls the system the node operates. If the node controlled the air conditioning, for example, the user can now turn it up, down, or off as he wishes. With a failure, the code changed too quick and the persona must try again. If the Lockpicking roll is a 1, regardless of Wild Die, the intrusion has been detected and the nearest security node sends a program to investigate.

Wandering Security Programs

Some zone have an extra layer of security above and beyond the security nodes an intruder must bypass—wandering security programs.

To simulate the use of these guards, draw a card from the action deck whenever a node is entered. Draw even if a persona quickly shoots down a tunnel and then returns to the same node. Time has little meaning in cyberspace and computers work at speeds far in excess of the human brain.

The one exception to this rule is the entrance node—this is never guarded.

In a low security zone, a black deuce means the node has a security program patrolling there. In a medium security zone any black face card means trouble. For a high security zone any black card means the node is guarded. If you want an ultra-high security zone, any card except a Joker means a security program present in the node!

Wandering security programs are always of the same type as that which the nearest node despatches.

Cyberspace Combat

Combat in cyberspace works a lot like combat in the real world, with a few minor differences.

Melee or Ranged?

Personas only have a Fighting skill, so all combat is melee combat. If you want to introduce Shooting as a skill in your setting, have a look at the Extra Stuff sidebar on the previous page.

Distances

Even when all combat is melee combat, it can be important to know distances between targets. Assume that a node measures a number of inches across as its die type. The shape of the node is as per the descriptions above. Tunnels are always 2" wide, 1d12" in length, and follow the path as laid out in your zone map (so they may have a corner or two).

Weapons

While a persona can wield a weapon, such as a monstrosity-sized sword, or even a gun, it doesn't really exist in cyberspace. All damage is based purely on the persona's Strength. Again, you might want to create weapon programs which allow the persona to do extra damage

If you do decide to introduce them for hacking personas, the same rules apply to security programs. If a lowly cyber thief can afford this sort of aggressive software, you can bet the corporations protect themselves the same way!

Combat Rounds

Combat in cyberspace is truly fast. Computers work in fractions of seconds, not in whole seconds. However, for convenience, and to keep things moving the Fast! Furious! Fun! way, assume that one round in cyberspace takes one second in the real world.

Damage

Damage in cyberspace works pretty much as normal, too. Security programs are usually Extras, and are destroyed when they take a wound. Personas have Wound Levels like regular characters and suffer wound penalties. They are automatically destroyed when they reach Incapacitated—don't roll on the Knockout Blow or Injury Tables.

When the persona is destroyed, there is a chance of the user taking damage from the security program. For each wound which would normally have sent the persona to the Knockout Blow Table, the user suffers a die of damage from electrical feedback frying his brain. This is compared to his Vigor as normal, but ignores armor (even helmets).

The die type depends on the security program that destroyed the persona and can be found under the Feedback Special Ability below.

For example, an injured persona suffers 4 wounds. Not only does this destroy the persona, but the user also suffers 4 dice of damage. If the persona had already suffered 1, 2, or 3 wounds, the user would still suffer 4 dice damage.

Alarms

If the persona wins the combat, the security program has been silenced before it can send an alarm. However, if the persona is destroyed, the security program raises the alarm. Every security node immediately releases a number of programs equal to half its die type.

The alarms are also activated in the real world, and security is informed not only that there is an intruder, but also which entrance node was used. Since most zones can only be entered with a direct feed, rather than through a modem, the guards have a very good idea of where to find the hacker.

Tricks

Tricks work in the usual way. If you allow personas to use Intimidation and Taunt skills, so do the programs they face in cyberspace.

Pulling the Plug

The user may voluntarily pull the plug on a persona engaged in combat. Doing so takes an action for both the user and his persona. A persona on Hold can interrupt to pull the plug.

The user suffers a number of d4 damage rolled against his base Toughness (armor doesn't help). Damage is calculated by counting the number of nodes the persona is from the entrance node plus one (the

entrance node itself). Use the shortest route. So, if a persona was four nodes away from the entrance, the user would suffer 5d4 damage.

Why variable damage? The deeper the user is in cyberspace, the more dangerous it is to suddenly pull the plug. Pulling the plug is usually done out of desperation as the last resort.

A user cannot pull the plug to avoid damage from a successful blow to his persona. Once the Fighting roll succeeds, damage is automatic. The same applies if the persona is destroyed—the user cannot pull the plug to avoid feedback damage. Of course, you might want to create a new Edge that allows the user to pull the plug before feedback damage is rolled, but that's up to you. We'll look at creating new Edges in the *Sci-Fi World Builder Toolkit*.

Outside of combat, a user can spend an action to send the proper powerdown protocols. This causes no damage and can be done anywhere in the zone.

Making ICE

Creating an ICE program is very simple. They have five attributes, exactly like characters, and four skills—Fighting, Intimidation, Notice, and Stealth. All the traits have a die type equal to the level of the security node which spawned them. If you want to mix up the traits a little, such as having giving a d4 security node ICE an Intimidation of d6 or higher, there's nothing stopping you.

Feedback

ICE have a single special ability—Feedback. This details the die type caused to the user if his persona is destroyed. Again, it's easiest to assume it is the same type as the ICE's security node.

Sample ICE

The following are standard ICE programs for various different node strengths. Feel free to modify these basic stats depending on the nature of the organization deploying the ICE and the information they are protecting.

D4 Node ICE

Attributes: Agility d4, Smarts d4, Spirit d4, Strength d4, Vigor d4

Skills: Fighting d4, Investigation d4, Notice d4, Stealth d4

Pace: 4; **Parry:** 4; **Toughness:** 4

Special Abilities:

* Feedback: If the ICE destroys a persona, the real world character suffers a number of d4 damage equal to the wounds caused by the "killing" blow.

D6 Node ICE

Attributes: Agility d6, Smarts d6, Spirit d6, Strength d6, Vigor d6

Skills: Fighting d6, Investigation d6, Notice d6, Stealth d6

Pace: 5; **Parry:** 5; **Toughness:** 5

Special Abilities:

* Feedback: If the ICE destroys a persona, the real world character suffers a number of d6 damage equal to the wounds caused by the "killing" blow.

D8 Node ICE

Attributes: Agility d8, Smarts d8, Spirit d8, Strength d8, Vigor d8

Skills: Fighting d8, Investigation d8, Notice d8, Stealth d8

Pace: 6; **Parry:** 6; **Toughness:** 6

Special Abilities:

* Feedback: If the ICE destroys a persona, the real world character suffers a number of d8 damage equal to the wounds caused by the "killing" blow.

D10 Node ICE

Attributes: Agility d10, Smarts d10, Spirit d10, Strength d10, Vigor d10

Skills: Fighting d10, Investigation d10, Notice d10, Stealth d10

Pace: 7; **Parry:** 7; **Toughness:** 7

Special Abilities:

* Feedback: If the ICE destroys a persona, the real world character suffers a number of d10 damage equal to the wounds caused by the "killing" blow.

D12 Node ICE

Attributes: Agility d12, Smarts d12, Spirit d12, Strength d12, Vigor d12

Skills: Fighting d12, Investigation d12, Notice d12, Stealth d12

Pace: 8; **Parry:** 8; **Toughness:** 8

Special Abilities:

* Feedback: If the ICE destroys a persona, the real world character suffers a number of d12 damage equal to the wounds caused by the "killing" blow.

Final Note

This has been a quick guide to cyberspace and gives a basic overview. If it's a big part of your setting, use what's here to build on. You might want to consider ICE with different functions, for instance tracker software that follows personas and traces their real-world locations (by adding a Track skill to the ICE), or bugging software that leaves a tracer on the hacker's deck to alert ICE every time a persona crosses a node (represented by a new Special Ability). Then of course, the hackers will need evasion software

Starships

Whether you call them starships, spaceships, or space exploration vessels, these vehicles are usually a fundamental part of any sci-fi setting. Unless your setting has dimensional portals on every planet, getting around the universe requires a ship.

Of course, not every sci-fi game actually needs starships—a setting where modern federal agents investigate strange happenings can still be sci-fi, but they're unlikely to go off on space voyages.

There are two ways to view starships, from a construction point of view—make them up as you need, or design them from scratch using a simple construction system. In this chapter, we're going to take a look at both methods. At the end of the chapter, you'll find a selection of starships to help you get started.

As You Need Method The Drawback

Part of the fun of the *Savage Worlds* rules is that you don't need complex tables to build any type of vehicle—all you require is a little imagination and a few weapon and accessory chart suitable for your setting. We've provided samples of the latter to help you out.

So how do you design a starship with this method? Simple—just give it what you think it needs to fulfill its role. Take a look at the sample starships in *Savage Worlds* as a reference. None of them were created using any construction rules—the designers simply took a basic concept and turned it into a set of game stats.

Let's imagine you want to build the fastest freighter in the galaxy. You don't need to worry about its size, dimensions, output or anything like

that, just concentrate on the basic vehicle stats. First, it needs an Acceleration. A fighter has 200, while a corvette has 100. Since we want it to be fast (able to outrun customs ships), we'll give it an Acc of 140.

Our freighter isn't a battleship but we want it to be fairly sturdy, so we'll give it a Toughness of 35 (20).

A freighter needs cargo space. The exact volume or mass capacity of the hold is irrelevant to the game, so we'll say it has 20 cargo spaces.

Last we need weapons.

Again, we're not interested in building a warship, but a pair of laser cannons and a missile launcher seems fair. As for Notes, it's obviously a spacecraft and we'll add Atmospheric so it can land on planets.

Knocking together a ship takes only a few minutes and you aren't limited by things like space or energy constraints. This can, however, also be a drawback, especially from a player point of view.

Imagine if your group gets hold of a starship, or even wants to design one from scratch. What weapons can it carry? Can the engines be upgraded, and if so by how much? Can fighters be carried in the hold? How many crew does it need?

One way to overcome this situation is simply to say that existing vessels can't be modified—every ounce of space and power is already in use. As for designing new ships, you can let the players come up with a design spec using existing ships as a guide, and then modify it accordingly. Alternately, they can tell you what they want in game terms, and you can

FTL

How fast and how far can an FTL-capable ship move in a given time period? That depends on what you need to make your setting work. Here's some suggestions:

- As far and as fast as you want. With this method, exact distances and timeframes are meaningless. The ship arrives when you say it does to suit the adventure.
- A number of lightyears per month, week, day, or hour equal to the ship's Acceleration or some fraction thereof.
- Divide your galactic map into squares of no exact measurement. Each time period the ship can move a certain number of squares. Unless you have a big map, you might want to use the ship's Acc divided by 50 (rounded down).
- Fixed distance/time. Maybe hyperspace doesn't conform to the normal laws of physics and all ships take the same time to go the same distance.
- Limited by time. Ships travel one lightyear per hour, to a maximum of the ship's Acc. After this the engines must be allowed to cool or discharge for a similar timeframe.

do the building, assigning a suitable cost and crew requirement.

Of course, creating a ship from scratch, especially a one-off design, is likely to take years of game time, what with architectural plans and actual construction. Maybe ship building firms refuse to do it.

Perhaps the easiest way to handle this is simply to create enough ships that the characters won't want to make their own design. Allow them to exchange weapons and maybe swap some weapons for extra cargo, but don't get bogged down in details.

As GM, you have the final say on what can and can't be done with starships—the same goes for costs as well.

Construction Method

The construction method is a more in-depth look at building starships.

It's still designed to be Fast! Furious! and Fun!, but it allows you to build balanced vessels quickly. It doesn't go into exact space and energy requirements, however.

These are generic guidelines—if you want a more complex starship design system, then feel free to create one. We've given you the basics.

Concept

No one in their right mind would build a ship and then decide what to use it for. Before you start actually designing your ship, decide what its role will be. This will help you choose the elements that make up a ship.

For instance, an anti-pirate interceptor needs to be relatively fast, have enough armor and weapons to handle most common threats, and maybe needs space for a marine boarding party, but it is unlikely to need a powerful FTL drive or a huge cargo bay. True combat ships, on the other hand, often sacrifice speed for superior armor and firepower.

Size

All ships are measured in vague terms rather than specific volume or mass. Choose a category from the Size Table (p.35). This details the vessel's base speed, whether or not it is FTL-capable, base Toughness and Armor, the number of spaces, the base crew size, and the cost.

Size: The size of a ship is relevant to other ships, not to individual people. The usual Size modifiers apply in ship-to-ship combat.

Acc/Top Speed: The listed Acceleration is for ship-to-ship scale in space.

Toughness and Armor: These work as normal.

Spaces: Each space is an undefined measurement used for placing weaponry, marines, smaller vessels, and so on. Spaces not used on weapons and other add-ons become cargo spaces.

Crew: The crew number includes the basic staff required to run the ship, and includes bridge crew, engineers, medics, supply officers, and such like. It does not include gunners or vehicle maintenance staff. Space for basic crew is already covered in the base costs and spaces available.

As well as a sleeping area, it includes washrooms, showers, recreational facilities, kitchens, food stores, and everything else required to live in space for prolonged periods.

Cost: The cost is listed in thousands (\$K), millions (\$M) or billions (\$B) of whatever currency you use in your setting.

Modifications

The stats on the Size Table are the ship's basic levels. Additional modifications can be made, as shown on the Modification table (p.35). These are basic mods—if you

wanted, you could create stats for things like advanced medical suites, holding cells, and so on.

Armor: Extra Armor can be fitted to the ship but must be done in whole spaces. Armor can be increased to a maximum of 50% of the vessel's base Armor. A ship's base Armor is part of its superstructure—it can't be decreased.

Cold Storage: Also known as freezers, cold berths, and hibernation pods, these are special suites designed to safeguard the crew from aging (and cabin-fever) during long voyages.

In a near-future setting, starships may not be able to travel at speeds exceeding the speed of light, thus requiring the crew to sleep during the majority of the voyage. In a higher tech setting, cold storage can be used in emergencies or even to ferry poorer passengers from world to world.

Crew: For convenience, each weapon requires as many crewmembers as the number of spaces it fills if the weapons are to be fired simultaneously. A fighter, for example, has multiple weapons, but only one may be fired each round as there is only one crewman.

Ship-carried vehicles, such as fighters or dropships, require two crew per vehicle, accounting for the pilot as well as mechanics or additional bridge staff. No additional space is required for extra crew as the weapon and vehicle space include the crewmembers' quarters.

Marines: Each space allocated to marines allows for 10 soldiers and their living space.

Ship: Ships of Medium Size or over can carry smaller vessels, such as fighters, shuttles, dropships, or service tugs. The space requirement assumes one launch bay per ship.

Speed: The base Acceleration of a ship can be increased or decreased by a maximum of 50% of the base . When increasing, more powerful engines are installed and so take up more space. Each 10 point reduction in Acceleration increases the number of available spaces by 1. This assumes the ship simply carries extra weight, and no cost saving is made. Remember, we're trying to keep this Fast! Furious! Fun!

Vehicular Notes

Some of the standard Vehicular Notes can be applied to starships as well with no modification. A list is provided on page 35. Note, these modifications don't use spaces, but they do cost money.

Weapons

Unless you're running a modern day sci-fi game, starships are likely to pack weapons. A list of generic weapons is included on page 36. You needn't use every

weapon in your setting just because the TI says it is available.

Bombs: Bombs are designed to be dropped onto targets and affect an area rather than individual targets. The pilot places as many templates on the battlefield as he wishes, to the maximum of his yield, and then makes a single Piloting roll. If successful, the bombs explodes on target. With a failure, the bombing run is off-target—the bombs deviate by 2d10" in a d12 direction, read as a clockface. All the bombs move the same distance and direction.

Bombs can be used in space combat, but only by Small craft, such as fighters, and against targets that are Large or greater in size.

In order to successfully bomb another ship, the pilot must maneuver his ship to be within 100". He must then make a Piloting roll, modified for Unstable Platform, Fast Targets, and Size as normal.

Starships can carry more than one payload of bombs and yet have only a single bomb bay. Every spare load takes up 1 space, but only one batch may be fired each round. Bombs only reload when the

Weapon Arrays

The starship weapons list assumes that weapons are individual pieces and fired independently. If you want to have them linked to fire in units, say as a dual energy cannon or quad mass driver, here's a quick and easy solution.

All weapons must be of the same specific type, only cannons may be linked, and no more than four weapons can be grouped into a single array.

Linked weapons share fire support computers and power systems, so they don't take up quite as much room as normal. Add the total spaces together, then halve the result.

Reduce the crew required by half as well as fewer gunners are needed.

Damage increases by one die type per weapon in the array, with no maximum.

AP remains unaltered. The weapons are striking a more concentrated area, but each weapon is no more powerful than if it were fired alone.

Lastly, one Shooting roll is required to fire the linked array. Either they all hit, or they all miss.



launcher is empty. Make a note of how many reloads the ship is carrying on the Vehicle Sheet.

Chaff/Flare Launcher: Chaff/flare launchers fire small canisters, which explode at a pre-programmed range, releasing a cloud of metal ribbons and flares to fool enemy missiles.

Using a chaff/flare launcher requires a Shooting roll, modified by the range of the missile it is trying to fool. Don't add modifiers for the missile's speed or size—the chaff/flare only has to get close, not hit the missile.

If successful, the pilot has a +2 bonus to his Evade roll that round. Firing multiple chaff/flare canisters provides a cumulative bonus, but each launcher may only fire one canister per round.

EMP Missile: An EMP missile is designed to cause a temporary blackout aboard a target vessel by frying its electronics. Roll damage as normal, but apply it only to the ship's base Toughness (ignoring Armor).

A Shaken result fries the electronics until the crew makes a group Repair roll. During this time, the ship cannot perform maneuvers (other than flying straight) or fire its weapons. For each "wound"

inflicted, the crew must wait one additional round before they can attempt a Repair roll.

Additional EMP damage inflicted before the system is repaired simply increases the delay by one round per Shaken and wound result.

Energy Cannon: This is a generic term covering everything from the ubiquitous laser cannons popular in sci-fi to more exotic x-ray or meson cannons.

Gravity Cannon: Gravity cannons work by temporarily increasing gravity in a localized area. They cause no damage to ships, but instead affect the crew. Damage is nonlethal and the crew receive no protection from the ship's Armor.

Gravity cannons take up space depending on the largest vessel they can affect. Each category requires 2 spaces to be devoted to the weapon. For example, a medium ship could affect a gargantuan vessel, such as a battleship, by allocating 10 spaces to this weapon. When you write up the ship, make a note of the maximum vessel it can affect.

Missiles: Missiles work as per the *Savage Worlds* rules. Each missile launcher contains four warheads and firing multiple warheads at the same target does not incur a multi-action penalty.

Starships may also carry spare missiles. A single space can accommodate 8 missiles. Reloading is effectively instant, allowing missiles to be fired each round. Missiles only reload when the launcher is empty. Make a note of how many spare missiles the ship is carrying on the Vehicle Sheet.

Ruin Maker Bombs: Each one demolishes a 5 square mile area, destroying most everything but ultra-hardened targets. These powerful weapons cannot be used in space.

Spinal Mounts: As the name implies, spinal mounts run down the core of a ship. Unlike most other weapons, they can only fire in the direction the ship is facing. In your setting a spinal mount may fire a huge, solid projectile, a laser, an energy wave, or even a gravity pulse.

Tractor Beam: Tractor beams are designed to ensnare other vessels and prevent them from escaping by preventing their engines from functioning correctly.

Damage is rolled against the ship's base Toughness (ignoring Armor). For each "wound" inflicted, the

target's base Acc is reduced by one-quarter (rounded down) so long as the hold is maintained. Multiple tractor beams produce cumulative effects.

Each round, the target may make a Piloting roll opposed by the attacker's Shooting to escape the tractor beam. If the pilot can move behind a large intervening object, such as a ship at least one size category larger than his own vessel, the lock is automatically broken (and does not affect the intervening object).

If he rolls a 1 on his Piloting roll (ignoring the Wild Die), he has overstressed his engines. Treat this as an Engine Critical Hit (but do not inflict an actual wound on the ship). One roll must be made for each tractor beam locked onto the ship, but this does not incur a multi-action penalty.

Tractor beams take up space depending on the largest vessel they can affect. Each category requires 2 spaces to be devoted to the weapon. For example, a large ship could affect a huge vessel, such as a cruiser, by allocating 8 spaces to this weapon. When you write up the ship, make a note of the maximum vessel it can affect.

For example, a battlecruiser with two tractor beams is attacking a medium freighter. The first tractor beam inflicts two "wounds" and reduces the freighter's Acc by 50%. If the second tractor beam inflicts a "wound," the freighter's Acc is reduced by three-quarter's of its base. In this case, it would be reduced by 150×0.75 , or 112.

If the freighter pilot wants to escape, he must make two Piloting rolls, one against each gunner. If he breaks the first gunner's lock but not the second, his Acc is only down by 25%.

Optional Extras

Optional extras go beyond mundane ship systems and whether or not you allow them in your game depends solely on the style. A gritty, hard sci-fi game is unlikely to have cloaking devices or teleporters, but a more space opera or distant future setting might.

The table on page 36 details the costs, spaces, and suggested TI requirements. Descriptions of individual systems are given below.

You'll notice the costs are given as a variable. How costly these items are depends on how common they are in your game. If every ship has them as a standard feature, you might want to reduce the cost by a factor of ten or twenty.

Cloaking Device: A cloaking device makes a ship invisible to both optical and electronic sensor detection.

For every 2 spaces of cloaking device, rolls made to detect or attack the ship suffer a cumulative -1 penalty, to a maximum of -4.

If a cloaked ship fires, it has momentarily revealed its presence. Rolls to detect or attack it suffer only half the usual penalty (rounded down) until its next initiative card. Depending on your setting, cloaked ships may not actually be able fire or even alter course.

Deflector Screen: Deflector screens are energy barriers designed to deflect incoming attacks. For every space dedicated to a deflector screen, attackers must subtract 1 from any Shooting rolls directed at the ship. This penalty also applies to Piloting rolls to get a missile lock.

Energy Shield: Ships in your setting may rely on energy shields rather than physical armor plating. If you plan on using energy shields, you should reduce the standard Armor value of a ship to 4.

Each space devoted to energy shields gives the vessel 5 points of Armor. A starship may spend no more than 50% of its available spaces on energy shields.

Teleporter: Teleporters work by turning physical objects into an energy wave, blasting them through space, and then reconstituting them at the destination.

The game mechanics are identical to the *teleport* power (see *Savage Worlds*). Each teleporter can transport 6 average size humans or 3 tons of cargo.

The exact range of a teleporter is variable with your setting. Some settings may only allow them for ship-to-ship encounters, with a maximum range of just 400". Others might allow ship-to-surface teleportation over hundreds or even thousands of miles.

Computers

The above rules assume that every starship comes complete with everything it needs to operate, and that includes a computer. However, if you want the computer to be more useful, here's a simple set of guidelines.

First, you need to buy a specific type of computer. Take a look at the Computer Table below. All computers cost money, require space, and have a finite amount of storage. Certain ships also require a minimum level of computer if they are to fly.

Second, you need to install computer software. The table covers a set of sample packages, how much memory in the computer they use, the cost, and lastly notes on what the software does.

Storage: The storage capacity represents how many levels of programs the computer can run simultaneously. Additional programs may be kept in storage and swapped with programs currently in memory. This requires a Smarts roll to implement.

Transferring programs is not quick. Each level of program removed and added takes one round.

A ship cannot run part of a program—if the whole program does not fit in the storage space available, the software will not run. To get around this, crews often purchase different levels of the same program, allowing them to mix and match to suit specific situations.

Software Conflicts: The Assist software packages are designed to augment the skills of human (or alien) operatives—not the computer itself. Thus, a computer cannot run Auto-Pilot and gain a bonus from Pilot Assist.

Sample Starships

The rest of this chapter is taken up with example starships created using the construction method. Some costs have been rounded, especially when dealing when the price runs into billions.

They can be used straight off the page, modified by tinkering with the weapons, or simply as templates on which to base your own designs.

Bomber

An atmospheric bomber capable of carrying a total of 6 bombs. Bombers are used to destroy or soften ground targets before an infantry assault.

Acc/Top Speed: 200/1200; **Climb:** 50; **Toughness:** 14 (4); **Crew:** 1; **Size:** Small; **Cost:** \$4.85M

Notes: Atmospheric, Spacecraft

Weapons:

- Medium bombs (no spares)
- Large bombs (no spares)

Space Superiority Fighter

A standard space fighter designed to protect capital ships or fly short-range patrols.

Acc/Top Speed: 200/1200; **Climb:** 50; **Toughness:** 14 (4); **Crew:** 1; **Size:** Small; **Cost:** \$3.95M

Notes: Atmospheric, Spacecraft

Weapons:

- Mass driver 20mm cannon (unlimited ammo)
- Light missile battery (no spares)
- 2x Light torpedoes (no spares)

Dropship

Dropships are used to carry infantry to a planet's surface. Because the passengers require no living space for the short flight to the surface, 30 can be carried in each space at no cost.

Acc/Top Speed: 200/1200; **Climb:** 50; **Toughness:** 14 (4); **Crew:** 1; **Size:** Small; **Cost:** \$1.45

Notes: Atmospheric, Marines (60), Spacecraft

Computer Table

Type	Cost	Space	Storage	Notes
Model 1	\$2M	1	4	
Model 2	\$5M	2	6	Minimum for a Large ship
Model 3	\$12M	3	8	Minimum for a Huge ship
Model 4	\$30M	5	10	Minimum for a Gargantuan ship
Model 5	\$50M	7	12	

Software Packages

Type	Storage	Cost	Notes
Auto-Evade	2/level	\$2M/level	Each level of program (max 4) gives attackers a -1 penalty to Shooting rolls and Piloting rolls to lock missiles.
Auto-Fire	2/level	\$3M/level	Each level grants the computer one extra die type in Shooting. The computer can fire as many guns as its model number each round without incurring a multi-action penalty.
Auto-Pilot	2/level	\$2M/level	Each level grants the computer one extra die type in Piloting.
FTL Navigation	1	\$500K	Required for FTL travel.
Gunnery Assist	2/level	\$1M/level	Each level of program grants a +1 bonus to Shooting rolls.
Library Data	1/level	\$1M/level	Each level grants the computer one extra die type in Common Knowledge.
Medical Assist	1/level	\$500K/level	Each level of program grants a +1 bonus to Healing rolls.
Pilot Assist	1/level	\$500K/level	Each level of program grants a +1 bonus to Piloting rolls.
Repair Assist	1/level	\$500K/level	Each level of program grants a +1 bonus to Repair rolls.

Weapons:

- Chaff/flare launcher
- Mass driver 20mm cannon (unlimited ammo)

Small Freighter

Typically owned by independent merchants or small freight companies, these vessels are often poorly armed unless operating in spacelanes known to be haunted by pirates.

Acc/Top Speed: 150/FTL; **Climb:** 35; **Toughness:** 27 (12); **Crew:** 6; **Size:** Medium; **Cost:** \$10.45M

Notes: Atmospheric, Cargo Bay (7 spaces + 2 spaces of concealed cargo), Spacecraft

Weapons:

- Light missile battery (no reloads)

Anti-Pirate Frigate

Operated by planetary governments and charged with stopping (and catching) pirates, the AP Frigate carries disruptive as well as offensive weaponry. Frigates most often work in wings of four, using their tractor beams to prevent their quarry from escaping.

Acc/Top Speed: 150/FTL; **Climb:** —; **Toughness:** 27 (12); **Crew:** 18; **Size:** Medium; **Cost:** \$15M

Notes: Marines (20), Spacecraft

Weapons:

- Tractor beam (Large)
- Light missile battery (no reloads)
- Pulse energy cannon or EMP missile battery)

Blockade Runner

Blockade runners are designed to carry small amounts of cargo or passengers through blockades. As such, they are armed with defensive weaponry and as fast as any standard fighter. Some versions are coated with Stealth Paint at an extra cost of \$100M.

Acc/Top Speed: 200/FTL; **Climb:** 50; **Toughness:** 27 (12); **Crew:** 7; **Size:** Medium; **Cost:** \$60.35M

Notes: Atmospheric, Cargo Bay (3 spaces), Spacecraft, Speed (+50)

Weapons:

- 2x Advanced AMCM

Hospital Ship

Hospital ships are flying hospitals. They may be run by the military or by civilian outfits. Each hospital bay takes 1 space, can accommodate 5 patients, provides +1 to Healing rolls (on top of the usual +2 bonus), and has a staff of 3, with a cost of \$10M.

Acc/Top Speed: 100/FTL; **Climb:** —; **Toughness:** 40 (20); **Crew:** 40; **Size:** Large; **Cost:** \$222M

Handling

The concept of Handling was first introduced in *50 Fathoms* for sailing ships, but there's no reason you can't use it for starships if you want.

Basically, Handling is a modifier, either positive or negative, to a pilot's Piloting roll. It represents how maneuverable a ship is.

If you want to use Handling, you'll need to make a few small changes to the system we've presented.

First, every ship starts with a base Handling score. Small ships have +1, Medium +0, Large -1, Huge -2, and Gargantuan -3. Big ships don't turn fast.

Second, Handling can be improved by adding maneuvering thrusters. For each +1 Handling, a ship must devote 2 spaces per size category to thrusters and pay \$2 per space.

For example, a Huge ships wanting to increase its Handling by +1 uses 8 spaces (4 level of Size x 2) and adds \$16M to its total cost. As you can see, it takes a lot to improve a big ship's Handling, but it has more spaces to start with.

Notes: Caro Bay (2 spaces), Hospital Bays (8), Spacecraft

Weapons:

- 2x Dropship (each fitted with two hospital bays in place of the passenger seating)
- 2x Advanced AMCM

Research Ship

Research ships are mobile laboratories. Each lab takes two spaces, is devoted to one Knowledge skill, and costs \$20M. They require a crew of 3 each.

Acc/Top Speed: 100/FTL; **Climb:** —; **Toughness:** 40 (20); **Crew:** 29; **Size:** Large; **Cost:** \$213M

Notes: Cargo Bay (4 spaces), Labs (5—Knowledges: Chemistry, Biology, Botany, Zoology, Xenobiology), Spacecraft

Weapons:

- Dropship (this version has one of the spaces converted to a small lab at a cost of \$10M and the other has a sample holding bay at a cost of \$1M)
- 2x Basic AMCM

Passenger Liner

Passenger liners are the cruise ships of the future, transporting large numbers of passengers between the stars. Passengers are carried at 10/space, but with a charge of \$5M to represent the extra luxury and facilities. Also, two extra crew are required per 10 passengers.

The military version of this ship (the Troop Carrier) carries 290 marines, four standard dropships, has a crew of 71, and costs \$510M.

Acc/Top Speed: 75/FTL; **Climb:** —; **Toughness:** 55 (30); **Crew:** 107; **Size:** Huge; **Cost:** \$636M

Notes: Cargo bay (11 spaces), Cold Storage (50), Passengers (250), Spacecraft

Weapons:

- 5x Advanced AMCM
- Luxury dropship (carries 30 passengers in comfortable seating. The dropship costs is increased by \$1M per 10 passengers to represent the comfort)

Pirate Corvette

Piracy is as rife in most sci-fi settings as it was during the days of sailing ships of Earth. Most pirate vessels carry a mixture of offensive and disruptive armaments, aiming to capture or cripple ships rather than blow them, and their valuable cargo, to atoms.

This particular version is a pirate corvette, a larger-than-normal pirate ship carrying a pair of fighters for additional firepower, and likely serves as the core vessel in a pirate fleet.

Acc/Top Speed: 100/FTL; **Climb:** —; **Toughness:** 40 (20); **Crew:** 25; **Size:** Large; **Cost:** \$114M

Notes: Caro Bay (5 spaces), Spacecraft

Weapons:

- 2x Fighters
- 1x EMP missile battery (no reloads)
- Tractor beam (Large)
- 2x Mass driver 20mm cannon (unlimited ammo)
- 2x Basic AMCM

Fleet Carrier

Carrier are capable of launching swarms of fighters. They are poorly armed, relying instead on support vessels to hold off enemy attacks. The tractor beams are primarily used to rescue damaged craft.

Acc/Top Speed: 50/FTL; **Climb:** —; **Toughness:** 70 (40); **Crew:** 200; **Size:** Gargantuan; **Cost:** \$2B

Notes: Spacecraft

Weapons:

- 40x Fighters
- 10x Advanced AMCM

Behind the Scenes

While the starship construction guidelines allow you to build a wide variety of vessels, there are some questions which should be addressed.

- Are all ships of the same size category the same size?

Well, no. A fighter, for instance, is a small one or two-man craft. The fact that a dropship is also Small does not mean it shares a similar size. After all, a dropship can carry 60 people in full battle dress.

The categories are a general indication of size—not exact comparisons.

- Are ships of the next highest category double the size of the ones below?

Again, no. Were this the case, a carrier would be only 16 times as big as a fighter! As a rough guideline, assume each ship is five to ten times larger than the category below. Using these measurements, a carrier would be between 3000 and 10,000 times bigger than a fighter.

- Are weapons really that cheap?

Balancing a Fast! Furious! Fun! construction system requires a few loopholes, of which weapons are one. If you make weaponry expensive, smaller vessels suffer. Too cheap, and larger vessels don't really notice the addition of a few million dollars worth of hardware.

In most settings, characters are likely to use medium or large ships—as such, the costs are weighted around these vessels.

If you want to change the costs, or even add new weapons, then do it.

- The weapon range seems low?

Were starship combat ever to become a reality, chances are ships would conduct operations at tens of thousands of miles. Without drastically scaling down the 1 inch = 2 yards measurement, you'd need a table the size of several football pitches. As such, the ranges represent a usable measurement.

- 3x Tractor beams (Small)
- 4x Light missile battery (no reloads)

Light Cruiser

Light cruisers are the poorer cousins of battleships. Though faster, they carry less armament. They are often used to protect capital ships.

Acc/Top Speed: 100/FTL; **Climb:** —; **Toughness:** 40 (20); **Crew:** 28; **Size:** Large; **Cost:** \$1.11B

Notes: Marines (20), Spacecraft

Weapons:

- Light spinal mount
- 3x Advanced AMCM
- 4x Light missile battery (no reloads)
- 2x Heavy torpedoes
- 2x Mass driver 20mm cannon (unlimited ammo)

Battleship

Battleships are the most powerful vessels in space (bar unique vehicles) and pack enough firepower to tackle entire enemy fleets on their own.

Acc/Top Speed: 50/FTL; **Climb:** —; **Toughness:** 70 (40); **Crew:** 170; **Size:** Gargantuan; **Cost:** \$4B

Notes: Marines (200), Spacecraft

Weapons:

- 15x Mass driver 20mm cannon (unlimited ammo)
- 5x Fighters
- Heavy spinal mount
- 5x Advanced AMCM
- 10x Heavy missile battery (80 spare missiles)
- 10x Ruin Maker bombs (can launch all 10 in one round)

Anti-Fighter Destroyer

This vessel serves in an escort role and protects larger capital ships from fighter attacks with its multiple mass drivers.

Acc/Top Speed: 100/FTL; **Climb:** —; **Toughness:** 40 (20); **Crew:** 30; **Size:** Large; **Cost:** \$102M

Notes: Spacecraft

Weapons:

- 10x Mass driver 20mm cannon (unlimited ammo)
- 5x Mass driver 50mm cannon (unlimited ammo)

Heavy Freighter

Heavy freighters are designed to carry bulk cargoes and are normally owned by megacorporations. They

have minimal firepower, but carry an array of missile countermeasures.

They carry no gunners, requiring the crew to double-up when needed.

Acc/Top Speed: 75/FTL; **Climb:** —; **Toughness:** 55 (30); **Crew:** 50; **Size:** Huge; **Cost:** \$506

Notes: Cargo (40 spaces), Spacecraft

Weapons:

- 5x Advanced ACM
- 5x Mass driver 20mm cannon (unlimited ammo)

System Defence Destroyer

The SDD is designed to protect a planet or solar system. It has no FTL capacity, which gives it an additional 50% spaces than a standard craft of its size.

Acc/Top Speed: 150; **Climb:** —; **Toughness:** 27 (12); **Crew:** 14; **Size:** Medium; **Cost:** \$26.5M

Notes: Spacecraft

Weapons:

- 4x Light missile batteries (no reloads)

Converting

Can you convert ships from other settings or from the movies. Yep. It won't be a perfect match, but it'll be quick and simple.

Let's say you want to design the fastest freighter in the galaxy. It's called a light freighter, so we'll pick a Medium hull. Should be enough room for what we want.

The ship is supposedly the fastest ship around, but that was only in hyperspace. We'll leave the standard unchanged, and just rule that all hyperspace journies take half the usual time.

Let's look at the guns next. It has two sets of guns, each with four barrels firing laser pulses. A pulse laser has a ROF of 2, so to simulate the film ship we'll have an array of two guns per battery. While we still have a ROF of 2, we're effectively firing four guns per battery. This uses a total of 4 spaces and leaves us six for cargo. Or more likely four for cargo and 2 for smuggling.

As for crew, the film version only has two. It also can't fire all the guns and leave a bridge crew. So, we'll rule that the ship needs a minimum of 2, but actually requires 5 for full function (includes a dedicated engineer).

- 4x Heavy torpedoes (no reloads)
- 5x Mass driver 20mm cannon (unlimited ammo)

Salvager

Salvage craft operate primarily as rescue vehicles. Some are used to scavenge derelicts and wrecks. Some vessels opt for a smaller tractor beam, using the space saved to fit a shuttle bay.

Acc/Top Speed: 100/FTL; **Climb:** —; **Toughness:** 40 (20); **Crew:** 20; **Size:** Large; **Cost:** \$110M

Notes: Cargo Bay (10 spaces), Spacecraft

Weapons:

- Tractor beam (Gargantuan)

Interdiction Frigate

Based heavily on the salvage vehicle, interdiction frigates are fitted with a revolutionary new form of tractor beam. Rather than affecting the propulsion engines, the tractors inhibit the use of a starship's FTL drive. If the damage inflicts even a single wound, the target may not use his FTL engine until he has broken free of the beam. The main tractor beam is capable of slowing down a fleet carrier or battleship.

The ship is usually deployed as part of a strike force as they are vulnerable to attack.

Acc/Top Speed: 100/FTL; **Climb:** —; **Toughness:** 40 (20); **Crew:** 20; **Size:** Large; **Cost:** \$120M

Notes: Spacecraft

Weapons:

- Tractor beam (Gargantuan)
- Tractor beam (Large)
- Tractor beam (Medium)

Missile Frigate

Missile frigates are deployed in battle fleets as light support craft. Although their missiles can inflict upon a medium capital ship, the frigate carries no other weapons capable of damaging even a light capital ship.

Acc/Top Speed: 100/FTL; **Climb:** —; **Toughness:** 40 (20); **Crew:** 24; **Size:** Large; **Cost:** \$112.2M

Notes: Spacecraft

Weapons:

- 6x Light missile battery (24 spare missiles)
- 3x Heavy battery (24 spare missiles)
- 2x Mass driver 20mm cannon (unlimited ammo)



Size

Size	Acc/TS	Toughness	Armor	Spaces	Crew	Cost	Notes
Small	200/1200	10	4	4	1	\$0.5M	
Medium	150/FTL	15	12	10	5	\$10M	Can carry Small ships
Large	100/FTL	20	20	20	10	\$100M	Can carry Small ships
Huge	75/FTL	25	30	50	50	\$500M	Can carry Small or Medium ships
Gargantuan	50/FTL	30	40	100	100	\$2B	Can carry Small or Medium ships

Modifications

Type	Cost	Space Used	Notes
Armor	\$2M*	+3 Armor/space	Cost is per base Space of the ship. Maximum increase is 50%
Cold Storage Crew	\$500K —	1/10 berths Included in weapon	Cost is per 10 berths +1 crew required per point of weapon space and +2 crew per size level of each vehicle carried. This includes crew quarters
Marines Ships	\$1M As ship	+10 marines/space 2 (Small) or 4 (Medium)	Includes quarters, armories, and so on
Speed	\$10M*	+10 Speed/space	Maximum increase is 50%. Speed can also be decreased, but no money is saved.

* Per base Space of the ship. For example, if you want to add +6 Armor to a large ship, the cost is \$2M x 2 x 20 = \$80M. Increasing Acc by 10 would cost \$200M.

Starship Notes

Type	Cost	Notes
AMCM Atmospheric	See Weapons \$350K	Only Small and Medium ships can be Atmospheric. Atmospheric craft have a Climb rate equal to one-quarter of their Acceleration (rounded down).
Fixed Gun	—	Usually applies only to fighter weapons and spinal mounts
Heavy Armor	—	All ships have Heavy Armor
Heavy Weapon	—	All starship weapons are Heavy Weapons
Improved Stabilizer	\$10M*	
Spacecraft	—	All starships are Spacecraft
Stealth Paint	\$10M**	The penalty applies to Piloting rolls made to target missiles
Stabilizer	\$5M*	

* Per space the weapon uses.

** Per base Space of the ship. For example, if you want to Stealth Paint to a gargantuan ship, the cost is \$10M x 100, or \$1 billion.

Optional Extras

Type	Cost	Spaces	Notes
Cloaking Device	\$100M+	2	See notes
Deflector Shield	\$30M+	1	See notes
Energy Shield	\$20M/5 Armor	1/5 Armor	See notes
Teleporter	\$100M+	4	See notes

Starship Weapons

Type	Range	Damage	ROF	Spaces	Cost	Notes
Cannons						
Disintegrator	75/150/300	5d10	1	4	\$50M	AP 40
Energy cannon (beam)	100/200/400	4d6	1	1	\$1M	AP 6
Energy cannon (pulse)	100/200/400	3d6	2	1	\$1M	AP 6
Gravity cannon	75/150/300	2d6+1	1	2*	\$20M	See notes
Mass driver (20mm)	50/100/200	3d8	3	1	\$100K	AP 4
Mass driver (50mm)	75/150/300	4d8	2	2	\$250k	AP 8
Mass driver (100mm)	100/200/400	6d8	1	3	\$500K	AP 15
Tractor beam	30/60/120	4d6	1	2*	\$1M*	See notes
Missiles						
EMP missile battery	200/400/800	3d6	1-4	1	\$1M	See notes
Light missile battery	200/400/800	4d6	1-4	1	\$1M	AP 6
Heavy missile battery	200/400/800	6d6	1-4	2	\$2M	AP 12
Torpedoes						
Light torpedo	150/300/600	4d10	1	1	\$1M	AP 140
Heavy torpedo	200/400/800	6d10	1	1	\$3M	AP 200
Spinal Mounts						
Light spinal mount	500/1k/2k	6d10	1/3r	7	\$1B	AP 30; See notes
Heavy spinal mount	1k/2k/4k	10d10	1/5r	10	\$2B	AP 50; See notes
Anti-Missile Counter Measures						
Basic AMCM	200/400/800	3d6	3	1	\$500K	See <i>Savage Worlds</i>
Advanced AMCM	200/400/800	3d6	6	1	\$1M	See <i>Savage Worlds</i>
Chaff/flare launcher	200/400/800	—	1	1	\$500K	See notes
Dropped Ordnance						
Small bombs	Atmospheric	3d8	8	2	\$2M	AP 20; Small Burst Template; See notes
Medium bombs	Atmospheric	4d8	4	2	\$2M	AP 40; Medium Burst Template; See notes
Large bombs	Atmospheric	5d8	2	2	\$2M	AP 80; Large Burst Template; See notes
Ruin Maker bombs	Orbital	Special	1	2	\$5M	See notes

* per size category of the maximum ship the weapon can affect.

Vehicles

Unless you've gone for an ultra-high tech world where everyone gets around with grav belts, you're likely to use vehicles in your game. In an action game, rather than a space exploration setting, most of the vehicles the characters encounter are probably armed and dangerous.

As with starships, you can throw together vehicles without any guidelines, simply listing Top Speed, Armor, weapons, and such like to fit the vehicle's purpose. If you want to produce a balanced set of vehicles, perhaps for use in a more militaristic setting, we've given you a simple construction system.

At the end of the chapter is a selection of vehicles suitable for most sci-fi settings. You might want to swap weapons (or other modifications) for those specific to your setting, but you can use them as a guide on which to base your own creations.

As You Need Method

Take a quick look at the vehicles, futuristic and modern, in *Savage Worlds*. Do you see any set pattern of who the various components were put together? No? That's because no construction system was used. The same is true of the various vehicles in existing and current *Savage Settings* as well.

Often the best vehicles are those constructed using common sense and imagination. To build a vehicle using this method you simply need to think about what the vehicle does, then put down some stats, using what already exists as a rough guideline.

If you want a tank with six massive laser cannons, then build one. Realistically it's likely to be slow, and maybe even poorly armored, but never forget you're building for a roleplaying game, and such

considerations should always be secondary to what you need to run a cool game the way you want to run it.

Construction Method

While this system produces workable vehicles, it is not going to allow you to produce any vehicle you can imagine. As with any construction rules, there are limitations. The guidelines here are usable straight from the page, but they won't suit every setting. Use what we've given you as a tool for making your own rules.

All vehicles have four key components—a chassis, a form of locomotion, modifications, and weapons. You'll find appropriate tables on pages 41 and 42.

Chassis

For ease we've broken vehicles down into three categories—light, medium, and heavy. Since we're after a Fast! Furious! Fun! system, we'll ignore trivial things like exact measurements and weight.

Every vehicle has a base Toughness dependent on its chassis size and can hold a number of spaces worth of gear. Spaces are an imaginary unit used solely for placing items in vehicles. Don't start fretting about cubic yards or whether the suspension can support the weight.

The number of crew required to operate the vehicle is also listed. A light vehicle requires a driver/gunner, medium vehicles have a driver/gunner and commander, and heavy vehicles require a commander, driver, and gunner. Additional crewmembers, usually gunners, may be assigned as required.

Locomotion

A vehicle without any form of locomotion isn't going to get very far. Vehicles can have one of four types of locomotion. Three are already covered in *Savage Worlds*.

Grav Lift: Capable of lifting a craft to a maximum ceiling of 6 yards (3"), they negate penalties for rough terrain and water with one limitation—hills. In order to function, the vehicle must remain within 15% of horizontal. Passing over hills is next-to impossible and requires a Driving roll at -6!

Of course, if you want to remove any limits on grav vehicles then do so. These guidelines assume the technology is not yet perfected (around TI 1).

Modifications

Modifications are extra fittings designed to give a vehicle an edge in certain situations. Unless otherwise stated, a vehicle can only have one of each type. All modifications work exactly as per the **Vehicles** section of *Savage Worlds* unless noted below.

Heavy Armor: Each space dedicated to Armor provides 20 points. These must be spread between the three areas of a vehicle—the front, sides, and rear. For these purposes, the sides count as a single location. You don't need to assign armor to each side separately.

Sloped Armor: If a vehicle is going to be outfitted with sloped armor, use the relevant Sloped Armor entry rather than Heavy Armor entry to determine cost and spaces.

Stealth Shielding: This functions as Stealth Paint, but involves heat dampening, radar scrambling, and other such electronic countermeasures.

Weapons

Depending on your setting, you may have advanced conventional weapons, such as railguns, or futuristic lasers. You may even have both coexisting on the same vehicle.

Regardless of how many gunners the vehicle has, each weapon may only be fired once per round.

Heavy Flamethrower: A heavy flamethrower can either fire a Cone Template or be arced to land in a Small Burst Template anywhere within range. This is treated just like any other area effect attack, though targets still get a chance to dodge out of the area of effect (flamethrowers fire far slower than other projectiles).

Laser Cannon: To operate they require power. As such, if the vehicle's engine is destroyed (or even switched off), the weapon cannot be fired.

Railgun: Railguns magnetically propel a shaped warhead, which is usually nonexplosive, to super

sonic speeds. As with lasers, railguns require power to operate.

Spare Ammo

Every weapon, with the exception of lasers, comes with a finite amount of ammo. For each extra space, a vehicle may carry an additional load of ammo. This is assumed to be linked to an autofeeder—when one load is empty, the autofeeder automatically switches to the next one in line with no discernible delay.

Critical Hits

Internal combustion engines have been replaced by small fusion reactors in most sci-fi settings. At your discretion, a vehicle taking a Wrecked Critical Hit explodes for 3d10 damage in a Medium Burst Template.

Any crew must make an Agility roll at -2 (plus any multi-action penalty if other actions have been taken in the round) to clamber out and leap to safety. Those who fail their roll are caught inside when the vehicle explodes.

Example Vehicles

All the vehicles below were created using the construction system. Although most are military vehicles, cost is listed as a guideline.

Two Strike

The Two Strike is a low-budget tank destroyer designed for quick hit and run attacks. It has no staying power in a prolonged engagement.

Chassis: Light; **Acc/Top Speed:** 20/40; **Toughness:** 32/22/22 (20/10/10); **Crew:** 1; **Cost:** \$3.25M

Notes: Advanced Sensors, Four Wheel Drive, Heavy Armor, Night Vision

Weapons:

- 2x 9cm AT missile

Centurion APC

A first-generation grav APC, the Centurion is designed to get troops to the battlefield quickly and safely. It's autocannon is of little use against tanks, but can be effective against lighter vehicles.

Chassis: Medium; **Acc/Top Speed:** 6/24; **Toughness:** 40/35/30 (25/20/15); **Crew:** 2+8; **Cost:** \$12.8M

Notes: Grav Lift, Heavy Armor, Stabilizer

Weapons:

- 40mm autocannon (200 rounds)

Annihilator Heavy Tank

Aptly named, the Annihilator is a main battle tank packing a fearsome main gun. Its heavy armor results in a somewhat low speed.

Chassis: Heavy; **Acc/Top Speed:** 6/18;

Toughness: 128/98/68 (110/80/50);

Crew: 3; **Cost:** \$20.85M

Notes: Heavy Armor, Improved Stabilizer, Night Vision, Tracked

Weapons:

- 80mm railgun (30 rounds)
- 30mm autocannon (500 rounds)

Peacemaker Medium

Tank

The Peacemaker mounts two 30mm railguns—one in a turret and the other fixed facing forward. The Peacemaker II replaces the twin cannons with a single 40mm railgun. Despite halving its firepower, it is capable of destroying heavier vehicles.

Chassis: Medium; **Acc/Top Speed:** 8/24;

Toughness: 85/55/35 (70/40/30); **Crew:** 2; **Cost:** \$9.3M

Notes: Fixed Gun, Heavy Armor, Night Vision, Stabilizer, Tracked

Weapons:

- 2x 30mm railguns (100 rounds each)
- Flechette chain gun pintle-mounted (2000 rounds)

Fireflash Heavy Tank

The Fireflash is a heavy grav tank armed with two powerful laser cannons. It has relatively light front armor, but is faster than most tracked MBTs.

Chassis: Heavy; **Acc/Top Speed:** 8/32; **Toughness:** 108/78/48 (80/50/30); **Crew:** 3; **Cost:** \$45.55M

Notes: Grav Lift, Night Vision, Stabilizer

Weapons:

- 100MW laser cannon
- 20MW laser cannon

Quick Death Heavy Tank

Perhaps the near ultimate tank killer, the Quick Death carries two 80mm railguns in an over-under dual-turret system as well as an autocannon.

Chassis: Large; **Acc/Top Speed:** 4/16; **Toughness:** 138/58/58 (120/40/40); **Crew:** 4; **Cost:** \$28.25M



Notes: Grav Lift, Heavy Armor, Night Vision, Stabilizer

Weapons:

- 2x 80mm railguns (30 rounds each)
- 20mm autocannon coaxial on the top turret (2000 rounds)

Gladius Medium Tank

A lightly armored grav tank, the Gladius carries a 45mm railgun for dealing with tanks and two 30mm autocannons for lighter vehicles. It has poor side and rear armor and a low top speed.

Chassis: Medium; **Acc/Top Speed:** 4/16; **Toughness:** 85/40/40 (70/25/25); **Crew:** 2; **Cost:** \$16.95M

Notes: Grav Lift, Heavy Armor, Night Vision, Stabilizer

Weapons:

- 45mm railgun (70 rounds)
- 2x 30mm autocannons (500 rounds each)

Sawtooth ISV

The Sawtooth Infantry Support Vehicle is assigned to provide close support for advancing infantry, most often in an urban environment. Three additional gunners allow every flechette chain gun to be manned simultaneously.

Chassis: Medium; **Acc/Top Speed:** 4/12; **Toughness:** 55/35/35 (40/20/20); **Crew:** 5; **Cost:** \$6.9M

Notes: Heavy Armor, Night Vision, Tracked

Weapons:

- Heavy flamethrower (20 rounds)
- 3x Flechette chain guns (2000 rounds each)

Hunter Light Tank

Designed as an APC killer, the Hunter carries a main gun capable of destroying MBTs if it scores a flank or rear hit. One reason for its low cost is the lack of off-road locomotion, forcing the Hunter to avoid difficult terrain lest it become an easy target.

Chassis: Light; **Acc/Top Speed:** 20/40; **Toughness:** 32/22/22 (20/10/10); **Crew:** 2; **Cost:** \$4.2M

Notes: Heavy Armor, Night Vision, Stabilizer

Weapons:

- 45mm railgun (70 rounds)
- Flechette chain gun pintle-mounted (2000 rounds)

Assassin Light Tank

The Assassin is an experimental stealth tank, designed to sneak up on larger vehicles' weaker sides, hit hard them with its 60mm railgun, then retreat to safety before it is detected.

Chassis: Light; **Acc/Top Speed:** 10/20; **Toughness:** 32/22/22 (20/10/10); **Crew:** 1; **Cost:** \$5.7M

Notes: Advanced Stealth Technology, Four Wheel Drive, Heavy Armor, Stealth Shielding

Weapons:

- 60mm railgun (50 rounds)

Grav Cargo Carrier

Grav carriers are large platforms with a small control area set off to one side. They are use to carry passengers and cargo. Passengers sit in fold-up seats, which can be stored away to provide cargo space. Because they are not armed military vehicles, they require only a single operator.

Chassis: Medium; **Acc/Top Speed:** 4/16; **Toughness:** 14 (2); **Crew:** 1+11; **Cost:** \$13.27

Notes: Grav Lift, Light Armor, Night Vision, Passengers. Can carry 0.5 tons of cargo in each passenger space.

Infiltrator Scout Vehicle

The Infiltrator is a highly advanced scout vehicle packed with an array of passive sensors. It carries no weapons and just one crewmember. As well as basic scouting duties, it is often used by forward observers.

Chassis: Light; **Acc/Top Speed:** +20/+40; **Toughness:** 22/17/17 (10/5/5); **Crew:** 1; **Cost:** \$5.55

Notes: Advanced Sensors, Advanced Stealth Technology, Four Wheel Drive, Heavy Armor, Infrared Night Vision, Night Vision, Stealth Shielding

Low-Top Heavy Tank

The Low-Top is an experimental heavy tank. Despite having less armor than a conventional tank, the Low-Top (also known less affectionately as the Pizza Slice because of its unique shape) relies on enemy weapons bouncing off the heavily sloped armor.

Chassis: Heavy; **Acc/Top Speed:** 4/16; **Toughness:** 88/52/50 (70/34/32); **Crew:** 3; **Cost:** \$38.15

Notes: Grav Lift, Improved Stabilizer, Night Vision, Sloped Armor (-4)

Weapons:

- 80mm railgun (30 rounds)
- 40mm autocannon (200 rounds)

Hellfire Mobile Missile Battery

The Hellfire is a slow-moving vehicle with a rear missile compartment protected by "beetle shell" armor, which folds out to reveal the deadly payload. When the missile bay is exposed, the flank and rear Armor are treated as half their usual value.

Chassis: Medium; **Acc/Top Speed:** 4/12; **Toughness:** 45/30/30 (30/15/15); **Crew:** 2; **Cost:** \$7.85

Notes: Advanced Sensors, Heavy Armor, Night Vision, Tracked

Weapons:

- 6x 9cm AT missile (no reloads)
- 5x 6cm AT missile (no reloads)

Raider Light Tank

The Raider, as its name implies, is designed to conduct hit-and-run attacks. It relies on its very high speed to protect it from attacks. The front and rear armor are of the same thickness, which gives it equal protection when advancing toward and retreating from its objective. Although called a tank, the Raider is technically an armored car.

The Raider II variant replaces the railgun with twin 30mm autocannons. While less useful against medium or heavy tanks, it is perfect for attacking supply dumps and other rear-echelon targets.

Chassis: Light; **Acc/Top Speed:** 25/50; **Toughness:** 27/22/17 (15/10/15); **Crew:** 1; **Cost:** \$4.2

Notes: Four Wheel Drive, Heavy Armor, Stabilizer

Weapons:

- 45mm railgun (70 rounds)

Armored Limousine

Designed to protect VIPs from small arms fire and tracking sensors, the armored limousine can carry 5 passengers in extravagant comfort (\$2M for the interior features alone!). The addition of Night Vision allows the vehicle to drive in darkness without using headlights in the event the chauffeur (nobody drives themselves about in one of these cars) is forced to take evasive action at night.

The limo has 1 space remaining. Some versions use this to provide an extra passenger space, or as cargo

for excessive quantities of alcohol, while other—more serious-minded—owners choose to fit the car with a fixed autocannon for clearing vehicles out of the way.

Chassis: Light; **Acc/Top Speed:** 20/40; **Toughness:** 12 (3); **Crew:** 1+5; **Cost:** \$4.88

Notes: Night Vision, Normal Wheeled, Stealth Shielding



Vehicular Weapons

Type	Range	Damage	Space	ROF	Shots	Cost	Notes
20mm autocannon	50/100/200	3d8	1	3	1000	\$250K	AP 2
30mm autocannon	50/100/200	3d8	1	3	500	\$500K	AP 4
40mm autocannon	75/150/300	4d8	2	3	200	\$1M	AP 6
30mm railgun	50/100/200	3d8	1	1	100	\$500K	AP 35
45mm railgun	70/140/280	3d8	2	1	70	\$1M	AP 60
60mm railgun	100/200/400	4d8	4	1	50	\$2M	AP 75
80mm railgun	120/240/480	5d8	6	1	30	\$4M	AP 120
Flechette chain gun	30/60/90	2d8+1	1	6	2000	\$150K	AP 2
Heavy flamethrower	Cone or 40	2d10	2	1	20	\$200K	As Vehicular Flamethrower
6cm AT missile	100/200/400	3d10	1	1	1	\$100K	AP 40
9cm AT missile	100/200/400	4d10	1	1	1	\$200K	AP 65
20MW Laser Cannon	75/150/300	3d6+2	1	3	—	\$2M	AP 10
50MW Laser Cannon	100/200/400	4d8	3	2	—	\$5M	AP 60
100MW Laser Cannon	150/300/600	5d10	5	1	—	\$10M	AP 100

Vehicle Chassis

Type	Toughness	Cost	Spaces	Crew	Notes
Light	12	\$2M	10	1	Large compared to a human
Medium	15	\$5M	20	2	Large compared to a human
Heavy	18	\$8M	40	3	Huge compared to a human

Vehicle Transmission

Type	Cost*	Spaces**	Acc/TS	Notes
Four Wheel Drive	\$100K	1	+5/+10	Treat each inch of difficult terrain as 1.5" instead of 2"
Grav Lift	\$1M	2	+2/+8	Ignore difficult terrain modifiers and can fly over obstacles
Normal Wheeled	\$50K	1	+10/+20	
Tracked	\$300K	2	+2/+6	Can climb over small obstacles; Treat each inch of difficult terrain as 1.5" instead of 2"

** Cost is per space. ** Every space per size category gives the bonus listed in the TS column. For instance, a heavy grav vehicle requires 6 spaces for each 8" of Top Speed*

Vehicle Modifications

Type	Cost	Spaces	Notes
Advanced Sensors	\$300K	1	+2 to Notice rolls and rolls to get missile lock.
Advanced Stealth Tech	\$1M*	1*	-4 to spot the vehicle visually
Amphibious	\$1M	2	Can enter water without flooding or capsizing. Half Acc/Top Speed while in water.
Extra Crew	—	2	Space is per additional crewmember
Fixed Gun	—	—	One or more weapons cannot rotate.
Heavy Armor	\$100K/space	1/20	See notes
Improved Stabilizer	\$1M	2	Negates all penalties for moving vehicle.
Infrared Night Vision	\$250K	1	Halves darkness penalties for heat-producing targets (round down)
Light Armor	\$10K/point	—	Max of +3. Cannot be combined with Heavy or Sloped Armor.
Night Vision	\$250K	1	Eliminates Dim and Dark lighting penalties.
Passengers	—	1	Space requirement is per passenger.
Sloped Armor (-1)	\$150K/space	1/15	Heavy Armor.
Sloped Armor (-2)	\$300K/space	1/12	Heavy Armor.
Sloped Armor (-3)	\$450K/space	1/10	Heavy Armor.
Sloped Armor (-4)	\$700K/space	1/8	Heavy Armor.
Stealth Shielding	\$500K*	1*	-4 to spot the vehicle with sensors.
Stabilizer	\$500K	1	Reduces penalty for moving vehicles to -1.

** Per size category of the vehicle.*



Mechs

Mechanoid warriors, called mechs for short, usually become available around TI 2, when technology has improved enough to allow relatively stable bipedal constructs and the miniaturization of powerful weapons.

Mechs are, at heart, vehicles, albeit bipedal ones. Since not every setting uses them, we've separated them from regular ground vehicles.

As with vehicles and starships, you can either create them as you see fit or use a basic construction system. We've given you notes on both.

At the end you'll find a sample of pre-built mechs ready for instant use.

As You Need

As always, you can create mechs as you need them, following no set pattern of construction and arming and armoring them to suit the purpose for which they were designed.

Again, common sense and imagination are your best tools, though using a set of weapon and modification tables can help give you ideas. See page 48 for details.

Focus on the mech's purpose, then assign it mods and weapons to suit. A scout mech is likely to be small, fast, lightly armored and armed. Its role is to reconnoiter ahead of the main army and, more importantly, report valuable data.

On the other hand, a mech built purely to destroy as many rival mechs as possible is probably going to sacrifice speed for a devastating array of weapons and heavy armor.

As with other As You Need vehicles, problems may arise if the players want something you haven't

created in advance. Maybe they want a mech designed to provide long range rocket support. In this case, it's best if you ask them to list what they want, in general terms rather than actual game mechanics, and then build it for them. They have the choice of accepting your design or refusing.

If you intend on making mechs a core part of your setting, using some construction rules allows players to build the mech they want and keep the game balanced.

Mech Construction

Using a set of construction rules (either these or your own) enables you to maintain balance. The one we've presented here is relatively straightforward—just pick a chassis type, then add modifications (which include armor and locomotive power), then add your choice of weapons.

Chassis

For simplicity, mechs come in just three types—light, medium, and heavy. The basic chassis includes the skeleton, a full-functioning cockpit (complete with basic sensors and a 50-mile radio), an a power supply. It does not include armor, nor does it include a locomotive power source. The costs make the assumption that mechs are commonplace. If they are not, you should increase the price to reflect their scarcity.

For simplicity, every mech is described solely in terms of spaces, rather than specific weights. Each space is an undefined area into which modifications and weapons can be placed.

Modifications

Depending on its chassis size, a mech can hold a number of modifications. These are shown on the table on page 48. Descriptions follow below.

Advanced Sensors: Each cockpit may be fitted with advanced sensors, granting the crewmember a +2 bonus to Notice rolls and to get a missile lock.

Armor: Each space devoted to armor increases the Armor by +5. A maximum of half a mech's total spaces may be allocated to Armor.

Double Cockpit: The mech has a second cockpit fitted out as a gunner's station. It contains no piloting controls. A gunner may fire any of the mech's weapons with one exception—an individual weapon may only be fired once per round, no matter how many crew are in the mech.

Ejection System: An ejection system can be fitted for each cockpit. As an action, either crewmember may eject their cockpit, which is propelled upward on small rockets before descending on a parachute. The cockpit travels a d6" in a d12 direction (read as a clockface), landing on the second round after ejecting. Needless to say, mech pilots are pretty vulnerable once out of their machines, and escape and evasion is the order of the day!

If the mech suffers a Wrecked Critical Hit, the crew must make an agility roll at -2 (plus any other multi-action penalties for actions already taken) to eject before the mech explodes.

Emission Baffles: The mech is fitted with heat baffles and electronic signature masks, granting it +4 Stealth against electronic sensors, but not against the naked eye. Three spaces per size category must be spent for baffles to be installed. Rolls to get a missile lock are also subject to a -4 penalty.

Fire Extinguisher: Each round the mech is on fire roll a d6. On a 1-4 the fire is extinguished.

Grasping Hands: The mech's hands resemble those of a human, allowing it to pick objects up. The mech has a Strength of d12+4 for a light mech, d12+6 for medium, and d12+8 for large.

Locomotion: Mechs move on legs. Every 2 spaces per size category give the mech a Top Speed of +10, starting at zero. The mech's Acceleration is equal to one-sixth of its Top Speed, rounded down.

Rocket Pack: Small rocket boosters in the legs allow the mech to jump 2d6" horizontally or 1d6" vertically. A jumping mech may perform death from above and pop up attacks.

If combined with a melee attack, the mech adds a bonus equal to its size category to its Strength at the end of the jump (+1 for light, +2 for medium, and +3 for heavy). The victim can see it coming though, so each +1 added to damage is subtracted from the attack roll.

Jump-capable mechs can hide behind cover, rise, attack, and then descend again—usually before the stunned enemy can react. This maneuver simply allows the pilot to ascend above an obstacle and then descend again in the same move, so that he's only vulnerable to opponents with Hold actions. It takes a Piloting roll (not driving) to ascend and fire in time to descend again. If failed, the craft simply stays at its firing altitude after firing or fails to fire before descending—pilot's choice.

Stabilizer/Improved Stabilizer: The addition of a stabilizer affects all weapons, regardless of whether they are being operated by a pilot or a pilot and gunner. You do not need one per weapon.

Weapons

Mechs can carry a wide array of weapons, from miniguns up to guided missiles.

Autocannon: Mech autocannons fire magnetically propelled slugs. Although not possessed of great range, they have a fast rate of fire.

Blister Pack: A blister pack is a collection of small warheads designed to fire in a single mass. Their lack of armor penetration makes them poorly suited for use against mechs or vehicles, but perfect against infantry.

When launched place 9 Small Burst Templates on the map anywhere within range arranged as a square of 3 by 3 with the entire collection of templates placed exactly over the target. If the Shooting roll is a success, the rockets explode on target. On a failure, every template is moved 2d6" in a d12 direction (read as a clockface).

If the templates move back toward the launcher, the maximum distance they can be moved is half the distance between the intended target and the mech, as usual.

Heavy Flamer: A heavy flamer can either fire a Cone Template or be arced to land in a Small Burst Template anywhere within 30". This is treated just like any other area effect attack, though targets still get a chance to dodge out of the area of effect (flamethrowers fire far slower than other projectiles).

Laser Cannon: Lasers draw power from their own power source, and may continue firing if the mech's engine is disabled.

Missile: Missiles work as per the *Savage Worlds* rules, though the firer swaps his Driving skill for Piloting when trying to get a lock.

Rocket Pack: Available in short range, medium range, and long range varieties. When launched, the character places as many Medium Burst Templates as he wishes up to the launcher capacity on the battlefield. All templates must touch at least one other template.



Roll for every rocket separately. For each attack roll that fails, the template moves 2d10" in a d12 direction, read like a clockface.

As with blister packs, a template forced back toward the firer may only move a maximum of half the gap.

Spare Ammo

A mech can carry spare ammo for its weapons if it sacrifices space.

A complete spare load of ammo requires 1 space. Just as with vehicles, ammo is fed to the weapon via an autoloader—as soon as one magazine is empty, the weapon automatically begins using the next magazine in line.

Many mech designers favor more guns over space given up for additional ammo, but it's a question of preference.

Linked Fire

Mechs often carry more than one weapon of the same type. Identical weapons may be fired as a group, to a maximum of 4 weapons, without incurring a multi-action penalty. The attacker may choose to fire all or just some of the guns, but must declare before the attack roll is made.

All the weapons must be fired at the same target and with the same rate of fire. The attacker rolls a single Shooting roll for each weapon, adding +1 for each additional weapon in the link. Damage is calculated as normal but with an extra die per weapon. Armor Penetration remains unchanged regardless of how many weapons are fired.

A Shredder mech has eight 20mm autocannons installed, but only four may be fired in a link. If the pilot choose to open fire with four at the same target, he would roll a Shooting single die per ROF with a +3 bonus. His damage would be 3d8 (base) + 3d8 (one die for each additional weapon), or 6d8 in total. The AP remains unchanged at AP 4 regardless of the additional weapons.

If he fired ROF 3, he would make three Shooting rolls as normal, but each gun would use 9 rounds of ammo.



Mechs in Combat

There are a few special rules needed to account for combat between mechs and between mechs and infantry.

Critical Hits

Mechs are powered by small fusion reactors, and any carry explosive ammo. A mech taking a Wrecked Critical Hit explodes for 3d10 damage in a Medium Burst Template. The mech is completely destroyed in the explosion.

Size

Light mechs count as Large targets with regard to infantry, medium mechs are Huge, and heavy mechs are Gargantuan. It is thus much easier for a

lone soldier to hit a mech than it is for a mech to hit a lone soldier.

Stomping

Mechs can crush infantry (and other individuals) underfoot as an action. The pilot makes a Driving roll rather than a Fighting roll against the target's Parry. If successful, a light mech causes d12+4 damage, a medium mech does d12+6, and a heavy mech does d12+10. Gunners in a dual cockpit may not make stomping attacks since they have no piloting controls.

Example Mechs

Detailed below are a series of sample mechs. You can use these as they are, switch the weaponry around or add additional modifications to create your own mechs, or just use these for inspiration.

Roadrunner Scout

Small, lightly armored, and fast, the Roadrunner is a basic scout mech. It has an impressive sensor array, but no staying power in a fight.

Chassis: Light; **Acc/Top Speed:** 15/90; **Toughness:** 22 (10); **Crew:** 1; **Cost:** \$6.7M

Notes: Advanced Sensors, Heavy Armor

Weapons:

- 2x Autocannon 20mm (500 rounds each)

Diablo Incendiary

Equipped with two heavy flamers, the Diablo is aptly named. Enemy mechs without a fire extinguisher are well advised to avoid entering within flamer range.

Chassis: Medium; **Acc/Top Speed:** 8/50; **Toughness:** 30 (15); **Crew:** 1; **Cost:** \$9.75M

Notes: Fire Extinguisher, Heavy Armor

Weapons:

- 2x Autocannon 20mm (500 rounds each)
- 2x Heavy Flamer (10 rounds each)

Sniper

The Sniper was meant to be the great equalizer in mech warfare—a light mech capable of picking off larger mechs from a safe distance.

While faster than most heavy mechs, it is expensive and easily destroyed if ambushed by a heavier opponent.

Chassis: Light; **Acc/Top Speed:** 10/60; **Toughness:** 22 (10); **Crew:** 1; **Cost:** \$8.2M

Notes: Heavy Armor, Improved Stabilizer

Weapons:

- Laser cannon (50 rounds)

Arquebus

Named after an early blackpowder weapon, the Arquebus is a walking rocket platform. It has limited use in a prolonged fight, but a carefully aimed salvo can quickly smash larger mechs.

Chassis: Medium; **Acc/Top Speed:** 6/40; **Toughness:** 40 (25); **Crew:** 1; **Cost:** \$10M

Notes: Heavy Armor

Weapons:

- 4x Long Range Rocket Packs (4 rounds each)
- 4x Missile

Tank Buster

The tank buster is designed to smash other mechs as quickly as possible. Despite a lack of gunnery computers, its powerful cannons can quickly turn the heaviest mech to scrap.

Chassis: Medium; **Acc/Top Speed:** 6/40; **Toughness:** 35 (20); **Crew:** 1; **Cost:** \$10.2M

Notes: Heavy Armor

Weapons:

- 2x Smoothbore 88mm (15 rounds each)

Jackrabbit

The Jackrabbit is a jump-capable mech. It is often used to conduct pop-up attacks, rising from behind cover to fire a linked blast from its cannons, then descending before it can be targeted. Its big weakness is a severe lack of armor.

Chassis: Medium; **Acc/Top Speed:** 6/30; **Toughness:** 30 (15); **Crew:** 1; **Cost:** \$10M

Notes: Heavy Armor, Rocket Pack

Weapons:

- 3x Smoothbore 75mm (30 rounds each)

Punchdrunk

The Punchdrunk has a single 88mm cannon for smashing heavy mechs, and a 40mm and 30mm autocannon for despatching smaller foes. It has enough armor to protect it from most non-dedicated mech busters, making it a good all-rounder in a mech battle.

Chassis: Heavy; **Acc/Top Speed:** 5/30; **Toughness:** 48 (30); **Crew:** 1; **Cost:** \$13.8M

Notes: Heavy Armor

Weapons:

- 2x Autocannon 40mm (150 rounds)
- Smoothbore 88mm (15 rounds)

Skirmisher

Also known as the Baby Shredder, the Skirmisher combines good speed with moderate armor and four autocannons, most often fired as a linked set.

Chassis: Light; **Acc/Top Speed:** 11/70; **Toughness:** 32 (20); **Crew:** 1; **Cost:** \$6.2M

Notes: Heavy Armor

Weapons:

- 4x Autocannon 20mm (500 rounds each)

Striker

The Striker may not be much use in a stand-up fight, but it is deadly at long range. Its advanced sensors and deadly payload of eight missiles make it an even match against heavy mechs.

Chassis: Medium; **Acc/Top Speed:** 6/40; **Toughness:** 35 (20); **Crew:** 1; **Cost:** \$10.3M

Notes: Advanced Sensors, Heavy Armor

Weapons:

- 8x Missiles (no reloads)

Shredder

The Shredder is the next step up from the Tankbuster. Although slightly slower, it carries more armor. The smoothbores have been traded in to provide the Shredder with eight 20mm autocannons.

The usual tactic is for the pilot and gunner to each fire four as a link. Despite this awesome firepower, the Shredder remains vulnerable to long range weapons. Even with its heavy armor, a single lucky hit can knock it out before it can enter effective range, making a stealthy approach the best tactic for Shredder pilots.

Chassis: Heavy; **Acc/Top Speed:** 6/40; **Toughness:** 48 (30); **Crew:** 2; **Cost:** \$14.5M

Notes: Double Cockpit, Heavy Armor

Weapons:

- 8x Autocannon 20mm (500 rounds each)
- 1x Missile

Ninja

The Ninja is one of the few mechs with emission baffles. It is primarily deployed for ambushes or when poor weather limits the effectiveness of visual sighting. It is also effective against missile-carrying mechs, though it must close the range quickly to bring its weapons to bear as it suffers from weak armor.

Chassis: Medium; **Acc/Top Speed:** 5/30; **Toughness:** 30 (15); **Crew:** 1; **Cost:** \$11.6M

Notes: Emission Baffles, Heavy Armor, Stabilizer

Weapons:

- Smoothbore 88mm (15 rounds)

Better Mechs

Compare the mechs in this chapter to the tanks in the vehicle chapter and you'll see that a tank would win out over a mech in any stand-up battle.

The mech guidelines make the assumption that mechs have replaced conventional vehicles as the ultimate battlefield weapon. If you want to bring them to a more equal footing, it doesn't require much work.

First, replace the Mech Weapon table with the Vehicle Weapon Table. You might want to change the costs to suit your setting, but the other stats need not be altered.

Second, give mechs more armor. The quickest way is simply to increase the amount of armor a mech gets for each space. Vehicles get 20 points, but these have to be divided over three areas. Increasing the value to 10/space doubles the listed armor, while increasing it to 15 triples the listed values.

As with everything else in the Toolkits series, what's listed here are guidelines and suggestions. What's right for your game is up to you to decide.

Kangaroo

The Kangaroo is a light jump-capable mech. Its smaller autocannons give it only limited damage-causing potential against heavier mechs, but it can use its rocket pack to conduct hit-and-run style attacks.

Chassis: Light; **Acc/Top Speed:** 10/60; **Toughness:** 27 (15); **Crew:** 1; **Cost:** \$6.3M

Notes: Rocket Pack

Weapons:

- 2x Autocannon 20 mm (500 rounds each)

Talos

Named after the legendary bronze statue of Greek myth, the Talos is slow but heavily armored. The smoothbores are usually fired as a linked set for maximum effectiveness.

Chassis: Heavy; **Acc/Top Speed:** 3/20; **Toughness:** 78 (60); **Crew:** 1; **Cost:** \$14M

Notes: Heavy Armor

Weapons:

- 4 x Smoothbore 75mm (30 rounds each)

Mech Chassis

Type	Toughness	Cost	Spaces	Notes
Light	12	\$4M	15	Large compared to a human
Medium	15	\$7M	22	Huge compared to a human
Heavy	18	\$10M	30	Gargantuan compared to a human

Mech Modifications

Type	Cost	Spaces	Notes
Advanced Sensors	\$500K	2	+2 to Notice rolls.
Armor	\$100K/space	1 per 5	Each space used gives +5 Armor; Heavy Armor.
Double Cockpit	\$600K	3	Allows for a gunner; See notes.
Ejection System	\$100K	1	See notes.
Emission Baffles	\$250K/space	3*	-4 to detect the mech with electronic sensors; See notes.
Fire Extinguisher	\$50K	1	See notes
Grasping Hands	\$800K	2	See notes.
Improved Stabilizer	\$2M	2	Negates penalties for moving vehicles.
Locomotion	\$200K/space	1*	Each space grants +10 Top Speed; See notes.
Rocket Pack	\$600K/space	2*	See notes.
Stabilizer	\$1M	1	Reduces penalties for moving vehicles to -1.

* Per size category. For example, a heavy mech requires 9 spaces to fit emission baffles. Every 3 spaces devoted to locomotion gives +10 Top Speed.

Mech Weapons

Type	Range	Damage	ROF	Cost	Shots	Spaces	Notes
Autocannon 20mm	50/100/200	3d8	3	\$100K	500	1	AP 4
Autocannon 30mm	50/100/200	3d8	3	\$200K	300	3	AP 6
Autocannon 40mm	75/150/300	4d8	3	\$400K	150	5	AP 8
Blister Pack	35/50/100	2d6+1	9	\$150K	1	1	See notes
Heavy Flamer	Cone or 30	2d10	1	\$100K	10	3	See notes
Laser Cannon	150/300/600	3d8	1	\$800K	50	5	AP 10
Minigun	30/60/120	2d8	6	\$50K	1000	1	AP 2
Missile	100/200/400	3d10	1	\$100K	1	1	AP 40
Rocket Pack (LR)	100/200/400	3d6	1-4	\$200K	4	2	AP 4; Medium Burst Template
Rocket Pack (MR)	75/150/300	3d6	1-6	\$200K	6	2	AP 4; Medium Burst Template
Rocket Pack (SR)	50/100/200	3d6	1-8	\$200K	8	2	AP 4; Medium Burst Template
Smoothbore 75mm	75/150/300	4d10	1	\$300K	30	3	AP 12
Smoothbore 88mm	50/100/200	4d10	1	\$600K	15	5	AP 22

Power Armor

Power armor suits already exist in *Savage Worlds*, but this chapter looks at expanding them. The standard suits work fine for most settings—the guidelines here are for GMs who want to make power armor more important to their game. If you want to use expanded power armor, these notes replace those in the rulebook.

Building Power Armor

Constructing power armor works in much the same way we've tackled other things, and involves three steps—picking a chassis, adding modifications, and adding weapons (if any).

Chassis

Power armor comes in three basic types—light, medium, and heavy. See p.52 for details of cost, weight, and so on.

All three types protect the entire body, have audio sensors on the ears, and visual sensors feeding back to a screen inside the helmet. They are hermetically sealed, providing air from oxygen tanks concealed in the rear, and are powered by long-life batteries, each lasting 72-hours. Recharging from a special recharging unit takes 6 hours. Every suit contains a comm-unit with a 5-mile range.

The weight of the armor is negligible to the wearer, as the servos allow him easy movement. However, it does become important when moving over weak surfaces, such as ice or wooden floorboards.

Modifications

Each type of power armor can accommodate a fixed number of modifications. These are listed on the Modification Table (p.52). Note that some modifications require more than one modification slot. Unless otherwise stated, each modification may be fitted only once.

At your discretion, modifications may be detachable, allowing the user to customize his armor to suit specific situations, so the suit becomes an exoskeleton that can be equipped for particular purposes.

Descriptions of the modifications are given below.

Armor Panels: Additional panels can be added to provide enhanced protection.

Autodoc: The autodoc comprises a small computer linked to the character via a network of sensors inside the suit. Whenever the character is wounded, the autodoc makes a healing roll, with a Healing skill of d8. Each roll still takes 10 minutes as normal.

The autodoc also pumps the wearer full of stimulants, granting him +2 to recover from being Shaken.

Chameleon Circuitry: The skin of the suit is covered in a thin layer of special paint. A small computer contained in the chest plate monitors the surrounding terrain through sensors and alters the coloration of the armor's skin to match the background.

Arm Servos/Improved Arm Servos: The suit is fitted with powerful arm servos, which increase the wearer's Strength. The two systems are not compatible and cannot be fitted to the same suit.

Enhanced Comm-Unit: The comm-unit has been increased to a range of 500-miles. It also contains six channels for communicating with different targets in privacy, and a built-in scrambler.

Enhanced Power Unit: The suit's batteries last 144-hours (6-days) but take 10-hours to recharge.

Enhanced Sensors: The suit has enhanced audio and visual sensors, as well as 10x magnified vision.

Flechette Packs: Flechette packs comprise dozens of small plastic blocks, each holding a nest of sharpened steel spikes linked to an explosive charge.

When activated (an action), the packs explode in a Medium Burst Template around the armor. Everything inside the template suffers 2d6 damage. Multiple flechette packs can be fired simultaneously, though damage is rolled separately. Once used, new flechette packs must be reattached (taking 30 minutes).

Jump Rockets: Jump rockets greatly increase the wearer's jumping distances. Depending on the wearer's preference, the rockets can be mounted in the feet or as a backpack.

Leg Servos: Powerful leg servos increase the wearer's Pace by 2 and increase his running die by one step.

Magnetic Grapples: The soles of the suit can be fitted with powerful magnets, allowing the wearer to walk up metal surfaces. Marines use them in boarding actions, leaping onto the enemy ship's hull, then moving along the surface to place breaching charges in strategic areas.

Mule Pack: By reinforcing the chassis in strategic places, the mod allows the wearer to carry 8x his Strength. If the suit also has arm servos, use the character's modified Strength as the base.

Propulsion Jets: There are two types of propulsion jet—space and underwater. The wearer must decide which version he is installing. In the correct environment, propulsion jets allow the character to move at 6" (either by "flying" in space or being propelled underwater). The jets provide no benefits outside their correct environment.

Self Sealing: Popular with space marines, the suit reacts to sudden depressurization, such as if punctured by a weapon, and fills the hole with a fast-hardening sealant. The wearer suffers no ill-effects from depressurization.

Stealth Circuits: Heat baffles, radar scramblers, and ultrasonic baffles are fitted to the suit, rendering it hard to detect through electronic means.

Targeting Computer: The computer compensates for movement, range, wind, and such like, granting the firer a bonus to his Shooting rolls. The basic and improved versions cannot be used in the same armor.

Ultrasonics: Ultrasonic sensors allow the wearer to ignore all penalties for poor lighting. The computer projects a 3D ultrasound image on the wearer's screen.

Weapon Mount: The suit has a weapon mount situated on one or both shoulders.

Weapons

As well as carrying conventional weapons, power armor wearers can also use shoulder-mounted weapons (if the armor has the right modification). See the table on p.52 for details. Each weapon fills one weapon mount.

Flamethrower: In addition to taking damage, everyone affected by the flamethrower has a chance of catching fire (typically 1-in-6).

Flechette MG: Flechettes are small metal darts propelled by electromagnets in the gun's barrel. They are lighter than conventional bullets—allowing more to be carried—and have a greater range.

Foam Gun: Foam guns are used primarily by law enforcement agents. Each shot lands to fill a Medium Burst Template with a quick-setting sticky goo.

Characters caught in the goo suffers a -2 penalty to Pace and skills linked to Agility and Strength. If the firer scored a raise, the targets are fully constrained. They cannot move or use any such skills.

Each following round, victims may make a Strength or Agility roll with a -2 penalty, or -4 on a raise, to break free. Other characters may also attempt to free the trapped person by making a Strength roll at -2.

If after 3 rounds the victim is not free, the foam sets hard, trapping him and preventing all further attempts at escape.

Rockets Packs: There are two standard types available—long range and short range. Despite carrying the same yield, the long range rockets contain more fuel and are physically larger.

Sample Power Armor

Here's some sample power armor suits to get you started. As always, feel free to make adjustments.

Cargo Lifter

Not all power armor is used solely for warfare. Cargo lifter armor is used by military logistics troops to move supplies. Heavy weapon crews also favor it, as it allows them to carry extra ammo.

Chassis: Light; **Weight:** 120; **Armor:** +10; **Cost:** \$820K

Notes: Improved Arm Servos, Mule Pack.

Nightwalker

The standard-issue battle suit for sentries at night. The flechette MG is favored because it produces minimal noise and zero muzzle flash.

Chassis: Medium; **Weight:** 163; **Armor:** +12; **Cost:** \$749K

Notes: Enhanced Comm-Unit, Enhanced Sensors, Ultrasonics, Weapon Mount (flechette MG)

Riot Armor

Riot armor is worn by both law enforcement and military units involved in quelling public disturbances.

Chassis: Light; **Weight:** 110; **Armor:** +10; **Cost:** \$395K

Notes: Enhanced Sensors, Weapon Mount (foam gun).

Porcupine

Designed to be employed against large numbers of lightly armored infantry, the Porcupine certainly lives up to its name. The favored tactic is to leap into a crowd of enemy, fire off a flechette pack, then repeat the process

Chassis: Medium; **Weight:** 175; **Armor:** +12; **Cost:** \$620K

Notes: 4x Flechette Pack, Jump Rockets

Infantry Assault Suit

The IAS is worn by shock troops entering hard fights under intense conditions. Close support troops often swap the minigun for a grenade launcher or rocket pack, to increase the firepower of the squad.

Chassis: Heavy; **Weight:** 272; **Armor:** +16; **Cost:** \$1.635M

Notes: Arm Servos, Armor Panels (+2), Autodoc, Enhanced Power Unit, Targeting Computer, Weapon Mount (minigun)

Marine Space Boarding

Armor

Used by space marines in boarding actions against enemy ships.

Chassis: Medium; **Weight:** 180; **Armor:** +12; **Cost:** \$780K

Notes: Magnetic Grapples, Propulsion Jets (space), Self Sealing, Weapon Mount (laser cannon).

Scout Armor

Scout armor is worn for reconnaissance and infiltration missions.

Chassis: Light; **Weight:** 104; **Armor:** +10; **Cost:** \$850K

Notes: Chameleon Circuitry, Enhanced Sensors, Stealth Circuits.

Longstride

Longstride armor is favored by combat medics because it allows them to cross the battlefield faster than in other power armor.

Chassis: Light; **Weight:** 110; **Armor:** +10; **Cost:** \$600K

Notes: Jump Rockets, Leg Servos.

Cleanser

Cleanser armor is designed for street-fighting, specifically house clearing.

Chassis: Medium; **Weight:** 129; **Armor:** +12; **Cost:** \$580K



Power Armor Chassis

Type	Armor	Weight	Cost	Mods	Notes
Light	+10	100	\$300K	3	Covers entire body
Medium	+12	150	\$500K	5	Covers entire body
Heavy	+14	220	\$800K	8	Covers entire body

Power Armor Modifications

Type	Cost	Spaces	Weight	Notes
Arm Servos	\$250K	1	5	Increase Strength by one die type; See notes
Improved Arm Servos	\$500K	2	10	Increase Strength by two die types; See notes.
Armor Panels	\$25K	1	10	+1 Armor per panel (no limit to how many can be added).
Autodoc	\$125K	1	4	d8 Healing roll every time the wearer is wounded; +2 to recover from being Shaken; See notes.
Chameleon Circuitry	\$200K	1	1	+4 to Stealth rolls vs people, but not against sensors.
Enhanced Comm-unit	\$50K	1	3	Increase comm range to 500-miles.
Enhanced Sensors	\$50K	1	1	+2 to Notice rolls.
Enhanced Power Unit	\$150K	1	5	Increase battery life to one week; See notes.
Flechette Pack	\$5K	1	5	See notes
Jump Rockets	\$100K	1	5	Allows the wearer to jump 2d6" horizontally or 1d6" vertically.
Leg Servos	\$200K	1	5	Increase Pace by +2 and running die by one step.
Magnetic Grapples	\$10K	1	2	See notes.
Mule Pack	\$20K	1	10	Increase carrying capacity to 8x Strength; See notes.
Propulsion Jets	\$80K	1	8	See notes
Self Sealing	\$30K	1	5	See notes.
Stealth Circuits	\$300K	1	2	+4 to Stealth against sensors, but not vs people.
Targeting Computer	\$200K	1	2	+1 to Shooting rolls; See notes.
Imp. Targeting Comp	\$350K	2	4	+2 to Shooting rolls; See notes.
Ultrasonics	\$75K	1	2	Ignore all penalties for poor lighting.
Weapon Mount	\$10K	2	1	Maximum of 2.

Power Armor Weapons

Type	Range	Damage	ROF	Weight	Cost	Shots	Notes
Flamethrower	Cone	2d10	1	10	\$25K	10	Ignores all non-sealed armor.
Flechette MG	40/80/160	2d8+1	4	6	\$64K	300	AP 4
Foam Gun	15/30/60	—	1	8	\$35K	10	See notes
Grenade Launcher	30/60/120	4d6	1	12	\$30K	10	AP 2; Medium Burst Template
Laser Cannon	50/100/200	3d8	1	14	\$150K	30	AP 6
Minigun	30/60/120	2d8	6	15	\$50K	200	AP 2
LR Rocket Pack	100/200/400	3d6	1-4	12	\$30K	4	AP 2; Medium Burst Template
SR Rocket Pack	50/100/200	3d6	1-6	9	\$30K	6	AP 2; Medium Burst Template

Robots

Robots, also known as bots and droids, range from small repair droids programmed with one simple function to humanoid creations coated in artificial skin and approaching true sentience.

In this chapter we take a look at three ways of building robots—as characters, as monsters, and using a simple set of construction tables. At the end of the section are a sample of robots you can use straight off the page.

Character Method

This option lets players take on the role of a robot. Basic character generation remains unchanged—the robot character buys attributes, skills, and Edges and Hindrances as normal.

Physical Hindrances, such as One Arm or Small, represent the character’s design—he cannot get a new arm to replace the “missing one” any easier than a human can regrow a missing limb. Character robots are assumed to have artificial intelligences rather than programmed computers as their brain. In this way, they can take mental Hindrances (such as Arrogant), and can learn, gaining Experience Points as normal.

Instead of a free Edge, robot characters begin with the Construct Monstrous Ability (see *Savage Worlds*). What additional Edges can be taken is up to you. There is no reason why a robot cannot have Alertness or Fleet Footed, but only human-looking robots with artificial skin should be allowed to take Charisma-affecting Edges. There’s a list of suitable Edges in the **Construction Method** section on page 54.

In addition to the regular Edges, you may wish to allow them to take Monstrous Abilities as Edges. For instance, a robot might be able to produce an

electrical discharge, which would be the Stun Ability. Infravision and Low Light Vision would equate to advanced sensors, whereas Wall Walker might represent magnetic feet. For variable Abilities, such as Armor, allow the character to gain +2 Armor each time he buys the Edge. You may wish to allow the Edge to be taken only once, once per Rank, or as often as the character likes. One deciding factor should be how common armor piercing weapons are in your game.

Weakness may be taken as a Hindrance, though you must judge whether a player’s chosen Weakness is acceptable. A robot with Weakness (Electricity) may have faulty wiring, but a character with Weakness (Silver) is very unlikely.

The following Abilities are not suitable for most robot characters—Burrowing, Ethereal, Fear, Infection, Invulnerability, Poison, Regeneration, Size, Small/Large/Huge, Strength, or Undead.

Monstrous Abilities can be taken at Novice rank and with no requirements. However, because these represent design modifications, you may wish to disallow them after character generation. Then again, there’s no reason why a robot can’t add new sensors or an electrical discharge appendage during play by buying a new Edge, if that’s how you want to handle it.

Robots should not have access to any Arcane Background other than Weird Science (if you use it in your setting).

Monster Method

The monster method follows exactly the same rules you probably already use when making your own monsters or NPCs—pick a concept and give it whatever

traits and abilities you think it needs. Of course, robots have several important features you should remember when assigning traits and abilities.

First, all robots must have the Construct Ability. No matter how smart they are or how lifelike they appear, they're still machines.

Second, unless a robot is an artificial intelligence, its Smarts should be followed with an (A), exactly the same for animals. This doesn't mean the robot has the same intellectual capacity as animal—it signifies the robot has a very limited capacity for reasoning matters outside its core programming.

For instance, a repair bot with a Smarts of d6(A) will be pretty clued up on theoretical technical knowledge, but it isn't going to start a conversation about the financial market. Even if it wanted to discuss the merits of various drive systems, it is unlikely to have the mental capacity to form an argument.

Aside from these two points, just give the robot what it needs to do its job. The repair bot above, for example, should have the Repair skill, as well as some basic level of Notice so it can find faults. It may also have Magnetic Feet (see p.55) if it works in space, and tools built onto its appendages (which might be usable as weapons in self-defense). A security droid, on the other hand, needs Armor, weapons, and the skills necessary to fulfill its function.

As a final note, robots may be Wild cards, gaining all the benefits associated with such characters,

Construction Method

Last, we present a construction method. This method is less involved than the others in this book, simply because robots are easier to build.

The only advantage to using this method over the others is a minor one—it creates robots with a cost if a character wants to buy one.

Size

The default robot size is assumed to be that of a human. This doesn't necessarily mean the robot is humanoid, only that it's overall dimensions are on a similar line. Robots thus begin with Size +0. You can choose to alter a robot's size, to certain limits.

The size of the robot has little effect other than increasing its Toughness and granting modifiers when targeting it with weapons.

Most of the Edges a robot possesses are represented by computer programs and size is not a limiter to sci-fi computing power when it comes to computers. The same applies to attributes—even a Size -2 robot may have a Strength of d10 or higher, though there should be a good reason for this.

Attributes

Robots have five attributes, as any other character or monster. A robot must have at least a d4 in every attribute. As can be seen on the table on page 57, each attribute costs \$5K up to a d12. After a d12, the cost increases dramatically. Except in very unusual cases, only Strength should be bought over a d12.

All robots have animal-equivalent Smarts (marked (A) on its record sheet. As discussed above, this does not mean it is literally as smart as an animal or has animal-like cunning, only that it is a machine which follows its programming and does not make decisions based on sentient reasoning.

If you want to create an artificial intelligence robot, you need to pay for the privilege. The cost is based on the robot's Smarts die. When you buy AI, the robot loses its (A) and becomes, in effect, a reasoning, possibly even emotional, being.

Skills

A robot's skills represent his programming. Whether a robot is an artificial intelligence or not determines which skills are available. Certain skills, such as Climbing, naturally assume the robot has the limbs necessary for such an endeavor.

AI: All standard skills. Robots cannot use arcane skills except for Weird Science, assuming you allow it in your setting.

Non-AI: Boating, Climbing, Driving, Fighting, Healing, Intimidation, Investigation, Knowledge, Lockpicking, Notice, Piloting, Repair, Shooting, Stealth, Survival, Swimming, Throwing, and Tracking.

Edges

Like other creatures, robots can have Edges. Edges are broken down into standard Edges (those a character could pick) and Monstrous Abilities.

Standard Edges

Robots can use most standard Edges exactly as a character. For the most part these present computer programs rather than prowess or training. Does a robot need to meet the trait requirements? Well, that's up to you and the needs of your setting.

Even if a robot doesn't need to meet the trait requirements, it should still meet the requirement of needing other Edges. For example, you can't buy a robot Improved Level Headed unless you have bought Level Headed first. Yes, it starts getting expensive, but think of it as buying a computer package, and then buying an upgrade which requires the core program to be installed first.

So what Edges can a robot have? In theory, it can have anything, but some of the Edges really don't make sense in terms of a robot having them. Use the following list as a guide as to what a robot can take. Edges marked with an asterisk are may only be taken by AI robots.

The list is presented alphabetically, although "improved" versions follow after the base Edge.

Available Edges: Ace, Alertness, Ambidextrous, Berserk, Block, Improved Block, Brawny, Combat Reflexes, Command*, Connections*, Dodge, Improved Dodge, Fervor*, First Strike, Improved First Strike, Florentine, Frenzy, Improved Frenzy, Giant Killer, Healer, Hold the Line!*, Inspire*, Investigator*, Level Headed, Improved Level Headed, Marksman, Mr Fix It, Quick, Quick Draw, Rock and Roll!, Scholar, Steady Hands, Sweep, Improved Sweep, Strong Willed*, Thief, Woodsman.

You may wish to rename Edges to be more "robotic." For example, Level Headed might be called Fast Processor and Alertness relabeled as Sensors.

Monstrous Abilities

Monstrous Abilities are another way of a enhancing a robot. Costs are shown on page 57. Unless you decide otherwise, only the following Monstrous Abilities may be taken: Aquatic, Armor, Hardy, Immunity, Infravision, Low Light Vision, Stun, and Wall Walker. All robots automatically have the Construct Ability.

Monstrous Abilities should be described in terms of a robot's type or a physical feature. For instance, Armor can simply be listed as armor, but Wall Walker may be called Magnetic Feet and Immunity (to whatever) as Shielding. The rules remain unchanged, but it adds a little flavor. Some new abilities not found in *Savage Worlds*, are detailed below.

Hover: Robots may have legs, wheels or tracks. They may also be able to hover. A robot with this ability moves at Pace 6 but can reach a maximum ceiling of 20" with a Climb of 3".

Humanoid Form: The robot is designed to mimic the human form. Depending on your setting, the robot may have a synthetic skin covering. In addition to the standard Edges above, it may also take Acrobat, Attractive, Very Attractive, and Charismatic.

Wild Card: The robot functions as a Wild Card, gaining a Wild Die and wound levels (though as a construct it does not suffer wound penalties).

Weapons

Robots may be deliberately armed with weapons or possess tools with which they can defend themselves (or attack if they have the programming). Standard weapons, be they ballistic weapons, energy weapons,

or melee weapons, cost the standard value of the weapon plus an additional \$1,000 for installation.

Tools might be large pincers, a wrecking ball, a vibroblade for cutting away metal, a blow torch, a buzzsaw, or just about anything you can imagine. Tools resembling melee weapons inflict Strength damage, but can be augmented to inflict more harm. Tools such as plasma torches or welders inflict 2d6 damage.

Example Robots

Here's some sample robots, complete with costs.

Engineer Robot

A basic technical droid often found on starships assisting the crew. It has short, stubby legs and three arms, one equipped with a welder and the other two with rudimentary pincers for clutching tools.

Cost: \$81,000

Attributes: Agility d6, Smarts d8(A), Spirit d6, Strength d8, Vigor d6

Skills: Notice d6, Repair d8

Pace: 6; **Parry:** 2; **Toughness:** 4

Special Abilities:

- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Magnetic Feet:** An engineer bot can walk up and along metal surfaces at its Pace if the structure will support its weight. It may also run.
- **Size -1:** Repair bots stand 3-4' tall.
- **Tools:** Str.
- **Welding Arm:** 2d6 damage.

Demolition Robot

Demolition robots are tall humanoids with a scoop on one hand and a huge wrecking ball on a chain fixed to the other. They are not particularly bright.

Cost: \$147,500

Attributes: Agility d6, Smarts d4(A), Spirit d4, Strength d12+4, Vigor d10

Skills: Fighting d6, Notice d4

Pace: 6; **Parry:** 5; **Toughness:** 10

Special Abilities:

- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Size +3:** Wreckers stand 15' tall.
- **Wrecking Ball:** Str+4.

Sentry Robot

Sentries are spherical robots bristling with sensors. Their main armament is a rapid fire laser rifle.

Cost: \$179,300

Attributes: Agility d8, Smarts d6(A), Spirit d6, Strength d6, Vigor d8

Skills: Notice d8, Shooting d8, Stealth d6

Pace: 0; **Parry:** 2; **Toughness:** 7(2)

Special Abilities:

- **Armor +2:** Additional plating.
- **Blaster:** Range 30/60/120, Damage 2d6, ROF 3, Shots 48.
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Fearless:** Sentry bots are immune to Fear and Intimidation.
- **Hover:** Pace 6"; Climb 3"
- **Keen Sensors:** Sentry bots have the Alertness Edge.

- **Sensors:** +2 to Notice (this is the Alertness Edge renamed)

- **Size -1:** Sentry robots are the same size as a basketball.

Pleasure Bot

Pleasure bots exist to serve humans in any way they can and do so without thought of morals or deviancy. They are programmed to exhibit emotions and follow basic topics of conversation, but they are not free-willed constructs. Certain firms will design a pleasure bot to match a photographic image, which has led to several lawsuits from celebrities unwilling to allow their image to be used in this manner.

Cost: \$168,000

Attributes: Agility d6, Smarts d6(A), Spirit d6, Strength d6, Vigor d6

Skills: Knowledge (Sexual Techniques) d6, Notice d6

Charisma: +4; **Pace:** 6; **Parry:** 2; **Toughness:** 5

Special Abilities:

- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Humanoid:** Pleasure bots resemble humans.
- **Very Attractive:** Whether "male" or "female," pleasure bots are coated in synthetic skin designed to appeal to humans. They have +4 Charisma.

Assassin Bot

Assassins bots are state-of-the-art machines with artificial intelligence. When fitted with artificial skin, they are virtually indistinguishable from humans. Although robots, their skeleton is plastic, designed to foil metal detectors. This is a basic factory model.

Cost: \$528,000

Attributes: Agility d8, Smarts d8, Spirit d6, Strength d12, Vigor d8

Skills: Fighting d8, Lockpicking d6, Notice d8, Shooting d8, Stealth d8

Charisma: +0; **Pace:** 6; **Parry:** 6; **Toughness:** 6

Special Abilities:

- **Advanced Sensors:** Assassin bots have Infravision and Low Light Vision.



Robot Construction

Type	Cost	Notes
Size		
Size (negative)	\$2K/step	Minimum of -2.
Size (positive)	\$5K/step	Maximum of +8.
Attributes		
Attributes	\$5K/die	The cost is per die, to a maximum of d12.
Improved Attributes	\$15K/point	Cost is per point over a d12. There is no maximum limit.
Artificial Intelligence	\$80K/die	Cost is per die of Smarts.
Skills		
Skills	\$2K/die	Per die, to the limit of the governing attribute.
Improved Skills	\$10K/die	Per die over the linked attribute.
Edges		
Standard Edges	\$5K/rank	Price is based on the required character rank only. A robot need not meet the requirements unless another Edge is required. See notes.
Aquatic	\$20K	See <i>Savage Worlds</i> .
Armor	\$15K	Cost is per +1 Armor. See <i>Savage Worlds</i> .
Burrowing	\$10K	See <i>Savage Worlds</i> .
Fearless	\$10K	See <i>Savage Worlds</i> .
Hardy	\$40K	See <i>Savage Worlds</i> .
Hover	\$50K	See notes.
Humanoid	\$100K	See notes.
Immunity	\$10K	Cost is per Immunity; see <i>Savage Worlds</i> .
Infravision	\$5K	See <i>Savage Worlds</i> .
Low Light Vision	\$5K	See <i>Savage Worlds</i> .
Stun	\$10K	See <i>Savage Worlds</i> .
Wall Walker	\$5K	See <i>Savage Worlds</i> .
Wild Card	\$75K	See notes.
Weapons		
Standard Weapon	Special	Basic cost is equal to the weapon plus \$1K
Tools (basic)	\$2K	
Tools (augmented)	\$4K/point	Cost is per point of damage in addition to Strength, to a maximum of +3.

- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Fearless:** Assassin bots are immune to Fear and Intimidation.
- **Humanoid:** Assassin bots resemble humans.
- **Wild Card:** Treat as a Wild Card character.

War Droid

War droids are bipedal constructs, but due to their skeletal appearance (which is designed to instil fear) cannot be mistaken for humans. Their sole function is to destroy. The price does not include weapons.

Cost: \$241,000

Attributes: Agility d8, Smarts d6(A), Spirit d6, Strength d12+2, Vigor d10

Skills: Fighting d8, Intimidation d8, Notice d6, Shooting d8

Pace: 6; **Parry:** 6; **Toughness:** 9

Special Abilities:

- **Advanced Sensors:** War droids have Infravision and Low Light Vision.
- **Armor +2:** Reinforced body.
- **Construct:** +2 to recover from being Shaken; Immune to poison, disease, and suffocation; No additional damage from Called Shots; Piercing weapons cause half damage.
- **Edges:** War droids have the Marksman and Steady Hands Edges.
- **Fearless:** War droids are immune to Fear and Intimidation.
- **Hardy:** A second Shaken result does not cause a wound.

Weird Science

When dealing with Weird Science in a sci-fi setting, the first thing you need to ask yourself, “How Weird is Weird?”

In most cases, Weird Science should be used to create devices above and beyond those available as standard gear. If everyone has personal teleport belts, why bother making a Weird Science device which has limited range or uses Power Points? In general, the lower the TI, the more use there is for Weird Science.

Weird Science works exactly as presented in the main rules and requires no further explanation here. In this chapter we take a quick look at how Weird Scientists can use skills to augment equipment, and to create drugs.

More Weird Science

Most Weird Science gizmos contain a single power, but that doesn’t have to be the end of the matter. One way to get more out of the Arcane Background is to allow skill bonuses to be placed into items.

One easy way of doing this is to create a new Edge, such as the one below. If you don’t have Weird Science in your game, you could make the Edge a Professional Edge, and swap the Arcane Background requirement for Smarts d10+.

By using this, the scientist can add accurate sights to gun (Shooting), create small computers to provide aid on certain topics (Knowledge), create medical scanners (Healing), and virtually anything else you can think of.

The second way to expand Weird Science is, again, with a new Edge, but this time focused on the creation of drugs (the sci-fi equivalent of potions).

Artificer

Type: Power Edge

Requirements: Seasoned, Arcane Background (Weird Science), Repair d10

On taking this Edge, the hero may craft (or modify) an item that adds +1 to the user’s relevant trait roll, increases the damage of a weapon by +1, or increases the bonus of armor by +1. No activation roll is required to use the finished item once it has been created.

Assuming the artificer is always “fiddling” with devices (not hiding in a trash compactor, for example), and has adequate tools, he may make a Repair roll at –4 at the end of any session in which he advances. If successful, he adds another +1 to any item of his choice.

If you want to limit the use of the Edge to prevent abuse of the rules, the character can make the roll at the end of any session in which he gains a new rank.

This could be his own blade, the laptop of another, or any other item of his choice. The item now adds the appropriate bonus to the user’s relevant trait or damage roll, or armor rating. No item may have more than a +3 bonus.

Stacking: Bonuses from various items don’t stack, so a gun with an advanced targeting computer +3 (Shooting) wielded by someone with targeting goggles +3 (Shooting) gets only the highest of the two.

Chemist

Type: Power Edge

Requirements: Seasoned, Arcane Background (Weird Science), Knowledge (Chemistry) d10

Drugs are common in sci-fi settings. This Edge allows a Weird Scientist to manufacture drugs as one-shot devices.

To create a drug, the chemist needs access to at least a small lab (\$1000 and weighs 20 lbs), ingredients, and time. Creating a drug takes a number of hours equal to the Power Points being invested. The monetary cost of the ingredients is equal to \$100 per Power Point.

At the end of the required time, the chemist pays the relevant Power Points and monetary costs, and rolls the lower of his Weird Science or Knowledge (Chemistry).

Power Points invested in the drug recharge at the usual rate (normally one per hour). A chemist needn't take the drug to get his Power Points back—given enough time, he can build up a supply of drugs for when he needs them.

If the skill roll is successful, the drug is complete. It can be imbibed as a single action by any living being, who then gains the benefits of the power. A basic combat drug, for example, might contain the *boost trait* power affecting the user's Vigor.

The effects of the drug are the same as the power. This includes any additional effects from raises on the original skill roll and any Power Points put in to extend the Duration. In general, only the following powers are suitable for use in drugs—*boost/lower trait, healing, quickness, and speed*.

Edges in Drugs

Another way of creating drugs is to use Edges. The chemist needn't know the Edge he wishes to place in a drug, neither does he have to meet any of the requirements of the Edge.

Investing Edges in drugs still requires Power Points. Each Rank of the Edge requires 2 points, with each additional requirement adding a further point. If the Edge is an "improved" version, the chemist must place both Edges in the drug to get the "improved" effect.

A drug designed to prevent the user being affected by psionics, for example, would use Arcane Resistance. As a Novice rank Edge, this costs 2 Power Points. The Spirit d8+ requirement adds a further Power Point for a total of 3.

Using Improved Arcane Resistance instead would require 3 Power Points for Arcane Resistance and a further 2 because the Improved version is Novice rank.

Drugs granting Edges last for 3 rounds. If the chemist wants a longer duration, he must add 1 Power Point for each extra round during manufacture.

Sample Trappings

If you're not sure what powers can be used for in a sci-fi setting, here are some example trappings for Weird Science powers across a variety of sci-fi sub-genres.

Armor: Energy shield, clothing changes density.

Barrier: Force field.

Beast Friend: "Psionic" device.

Blast: Atomic bazooka, advanced grenade.

Bolt: Laser pistol.

Boos/Lower Trait: Cybernetics,

Burrow: Exoskeleton with digging claws.

Burst: Hand flamethrower.

Deflection: Energy shield.

Detect/Conceal Arcana: Psionic scanner/damping field.

Dispel: Not suitable for Weird Science.

Elemental Manipulation: Not suitable for Weird Science.

Entangle: Web gun, tangle spray, net launcher.

Environmental Protection: Special suit with variable settings.

Fear: "Psionic" device.

Fly: Rocket pack, anti-gravity belt.

Greater Healing: Advanced auto-doc, robot.

Healing: Auto-doc, advanced med pack, robot.

Invisibility: Stealth suit, invisibility belt, chameleonic clothing.

Light: Torch.

Obscure: Smoke grenades, smoke generator.

Puppet: "Psionic" device.

Quickness: Cybernetics.

Shape Change: Transmogrifyer, illusion generator.

Smite: Vibro weapon, super sharp weapon, energy weapon.

Speak Language: Advanced language translator.

Speed: Cybernetics, rocket boots, leg servos in special suit.

Stun: Energy weapon, baton, grenade.

Telekinesis: Anti-gravity device.

Teleport: Teleport bracelet or belt.

Zombie: Nannites which "animate" corpses.

The following Edges are suitable for use in drugs. Those marked with an asterisk are best used in comedy or pulp settings, rather than hard sci-fi. Edges are listed alphabetically, though “improved” versions are listed after the basic Edge.

Arcane Resistance, Improved Arcane Resistance, Combat Reflexes, Danger Sense, Fleet Footed, Frenzy, Improved Frenzy, Hard to Kill, Level Headed, Improved Level Headed, Luck*, Great Luck*, Nerves of Steel, Improved Nerves of Steel, Quick, Strong Willed. Power Surge allows the recipient to recharge 2d6 Power Points the instant the drug is taken.

We’ll take a closer look at the various types of settings you can create in the Sci Fi World Builder Toolkit.

Alien Tech

As GM, there is an alternative form of technology available to you in sci-fi settings—alien artifacts. These are the sci-fi equivalent of magic items, but don’t necessarily correspond to any fixed rules. As GM, you can create anything you want.

We’ll take a look at how to decide if an item is alien tech or just ordinary gear, and how to create and use alien technology in your game.

Artifact or Gear?

The difference between alien artifacts and alien gear is simply one of understanding.

Gear represents commonly available and widely understood items. The alien equivalent of a flashlight, for example, may be spherical and require shaking to mix two chemicals, but everyone in the setting knows this. The same applies to weapons and other mundane gear.

Alien artifacts, on the other hand, represent the creations of super-advanced races, possibly using technology not understood by the lesser races, and relics left behind by a now-dead race. Even those considered “common” are mysteries to scientists. They may understand what the item does, but not how, or even why, it does it.

As a general rule of thumb, if a character can buy an item from a trader and use it without any special die roll, treat it as gear. Other, more unusual devices may be harder to come by but are far more powerful or valuable, and are considered alien tech.

Creating Alien Artifacts

Simple artifacts, such as those created by advanced alien races, can be created using the existing Weird

Science rules and the new guidelines for artificer gizmos and drugs.

True alien artifacts, those manufactured by now-extinct races or races that use a form of technology unknown to other races (such as biotechnology), are handled slightly differently.

When designing these artifacts, simply assign them some cool powers or abilities to suit their purpose. If you want to create a piece of machinery that can increase the user’s Smarts at the risk of unleashing demons from his mind, then don’t look for a suitable arcane power—just create some cool rules and let the players loose with it.

You can use Power Points if you wish, but many artifacts should have ever-lasting power supplies or require an unusual power supply. You can even combine Power Points with an unusual power supply.

For example, In the forthcoming *Necropolis* setting, certain devices use Power Points but can only be recharged by filling them with the blood of sentient creatures. Such strange and ghoulish items would certainly qualify as alien tech!

Understanding Alien Tech

So now you’ve created a weird item, you need to have a method for discovering how to use it. After all, there’s no point introducing cool artifacts into your campaign if they remain perpetual mysteries to the players.

Unless an alien artifact is “always on” and has an obvious visible effect (such as crystal shedding permanent *light*), or produces an obvious effect when experimented with (such as a stealth suit making the wearer completely *invisible* when worn), it can be difficult to tell what an alien artifact does and how to use it.

If you have Weird Scientists in your game, you might rule that the Arcane Background covers the study and use of alien artifacts, as well as recreating minor versions of them.

After an hour of study, the scientist makes a Weird Science roll at –4. On a success, he discovers how the artifact works, the powers it contains, and any drawbacks linked to using the device. Actually using an alien artifact uses the standard Weird Science rules with regard skill use.

For a campaign in which Weird Science does not exist, you can replace the Weird Science roll with a Smarts, or even a Knowledge (Alien Tech), roll.

Alien tech is also a powerful draw to adventure. The kinds of powers not typically available in sci-fi settings make alien artifacts valuable commodities and powerful weapons. Both qualities likely to attract heroes.

Superhero Lairs

Whether superhero games come under sci-fi or pulp is debatable, but we're including them here. Whether you play the *Necessary Evil* setting or one of your own devising, chances are that your characters will want to build a lair sooner or later. *Necessary Evil* presents some basic rules for a lair. This section looks at a new way of gaining a lair and fitting it out.

Getting A Lair

Rather than buy a lair with superhero points (or whatever system you use in your setting), characters can buy a lair with an Edge and devoting further leveling opportunities to improving the lair.

Once the character has his Lair Points, he can begin building his lair. The costs of various components are shown in parenthesis after the item's name.

Lair (Social Edge)

Requirements: Novice.

Every superhero needs somewhere to hang out and relax, away from nosey reporters and groupies. The character has gained possession of a building of some sort. He has 5 Lair Points to spend on the building and its contents. Points can be saved to buy a more expensive modification later. If this Edge is taken again, either by the same character or a different member of the team, the lair can be modified with a further 5 Lair Points.

(1) Building

At least one of the 5 initial Lair Points must be spent acquiring a building. There is nothing preventing the

character from owning multiple buildings, but all contents and extras must be paid for individually. Exactly what shape the building takes is up to you and the players to decide.

Every building must have a Size and Location, as shown on the tables below.

Size

The Room entry lists how many rooms (see Section 3) the building can hold. This cannot be altered once the building has been purchased.

Size	Rooms	Points	Example
Tiny	1	1	Basement
Small	3	2	Apartment
Average	6	3	Typical house
Large	10	5	Floor in office block
Huge	20	7	Mansion
Gargantuan	30	10	Entire office block

Location

Note that if the characters choose a location which requires special transport to reach it, such as a spacestation or desert island, they will need to buy a suitable vehicle to reach it. A individual lair may have only one location.

Location	Points
In a major conurbation	+0
Deserted island/wilderness	+1
Underground/extinct volcano	+1
Underwater (fixed base or submarine)	+2
In space (Earth orbit, on the Moon)	+3
Another planet/dimension	+4

(2) Condition

The condition of the lair determines not only the state of the actual building, but also the contents. All lairs have a facility modifier based on their condition. If you don't spend any points on condition, your lair's condition is pathetic (-1). This is used as a bonus to certain rolls, as detailed in Lair Contents.

Condition can be improved at a later date by paying the full Lair Point cost (not just the difference).

Condition	Facility Mod	Points
Pathetic	-1	0
Average	+0	1
Good	+1	3
Advanced	+2	5
State-of-the-art	+4	10

(3) Rooms

Lairs consist of one or more rooms, each with a defined purpose. Rooms can be added later at the lair's current facility modifier.

You cannot add more rooms than the lair has. If there is no more space, a bigger building will have to be acquired.

Command Center (+1)

The command center is somewhere the team can gather to discuss plans. Basic command centers have a pin-board with a purchased map of the city and (maybe) a few chairs. A state-of-the-art room has holographic maps linked via satellites to give an up to the minute view of the city, the country, or beyond.

The meeting room also contains the lair's communication and monitoring equipment. The condition of the lair determines the capabilities of the communications array. A barebones system may allow for monitoring of communications within a single city, whereas a state-of-the-art system allows instantaneous communication with other planets or dimensions (if you have that sort of thing in your setting).

Garage (+2/vehicle)

The lair is equipped with a garage and repair shop. Each time this facility is purchased, the characters gain a new garage capable of housing one of their vehicles (their choice) away from prying eyes, as well as the basic and specialist tools needed to keep it running. Repair rolls to the vehicle are modified by the lair's facility modifier. For the sake of simplicity, tools from one garage may not be used in another, even if the vehicle is the same type.

Generator (+1)

Most lairs are likely powered off the national grid. Not only does this leave them susceptible to blackouts (possibly caused by a supervillain), but it also means a supervillain can track down larger lairs by monitoring power usage. With a generator, the heroes provide their own electricity. Lairs outside a city must have a generator.

Kitchen & Dining (+1)

Even superheroes have to eat. Assuming the lair is designed for permanent occupation, the occupants will need somewhere to store, cook, and eat food. Depending on the condition of the lair, the kitchen may be a small microwave and cooler or something rivalling a 5-star restaurant, complete with chandeliers in the dining room.

Medical Center (+2)

A lodge with a medical center provides a place where injured superheroes can recuperate without attracting attention from public hospital staff. The medical center adds the lair's facility modifier to all Healing rolls in the lodge, and to Vigor rolls made for natural healing, in addition to general modifiers for the era and level of care.

Library/Computer (+1)

Good information can be essential when trying to find the lair of a villain or track down a missing diamond necklace. A library/computer room contains either a vast store of general books or a computer system linked to the web. Either way, it grants a bonus to Investigation rolls equal to the lair's facility modifier.

Specialist Library/Lab (+1)

Unlike a reference library, a specialist library or laboratory is dedicated to one core subject. This is a Knowledge skill chosen when the room is purchased. Using it grants a bonus to the Knowledge skill rolls equal to the lair's facility modifier.

Training Room (+4)

A training room might be a simple gym or a computer-controlled chamber with death rays to dodge and robot minions to fight. When a superhero at a lair with training facilities uses an advancement to increase skills (not buy new skills), he may also increase an additional skill by one die type as long as

it is not higher than the linked attribute. This makes a Training Room a very desirable upgrade!

Security Cells (+1 per 2 cells)

The addition of secure cells to the lair's facilities allows the superheroes to contain captives (including supervillains) for questioning. The cells have a base Toughness of 15, modified by the lair's facility modifier. The cells are monitored by cameras.

Superheroes can still choose to capture and imprison supervillains without a secure facility, but the base Toughness is reduced to 10 and there are no cameras dedicated to watching the cells.

Heroes Quarters (+1/4 heroes)

Even superheroes sleep. Depending on the condition, sleeping quarters may be a camping bed in a communal room with shared lavatory facilities up to personal bedrooms with four-poster beds and en suite bathrooms.

Workshop (+2)

The lair is equipped with a workshop for creating and repairing mechanical, robotic, electrical, and electronic devices. All Repair rolls, except for vehicles, are modified by the lair's facility modifier.

(4) Lair Extras

As well as dedicated rooms, a lair can have other features not vital to daily operations.

Camouflaged (+2)

The lair is camouflaged to look like a regular building, be it a school, hotel, basement in your mom's house, or whatever. The computers, suits and vehicles, and other hi-tech crime-fighting gear are hidden behind rotating desks, revolving paintings, and secret chambers.

If you want the actual lair itself to be hidden, you'll need to buy Well-Hidden (see below).

Defences (Special)

Lair Points can also be used to create defensive systems. Use the standard *Necessary Evil* powers. Each lair point buys two points of superpower. There are also some generic new power Modifiers below for lair defenses.

Typical defenses may be blast cannons (Attack, Ranged), guards (Minions), or ensnarement devices such as nets or cages (Ensnare). As always, the GM

More Rooms

If you adopt this system for creating lairs, or use it as a basis for your own rule, you might want to add some extra rooms.

An underwater base or spacestation, for instance, might have a hydroponics room to grow food. Otherwise, someone has to do the shopping and it's hard to keep a base secret if you're dialling out for pizza (assuming the delivery boy can reach you, that is). A hydroponic room is more background material than useful in adventures, so it has a +1 cost.

If your setting has alternate dimensions, you might want to create a chamber capable of opening dimensional rifts. Treat this room like a garage, and assign it a +2 cost. It also doubles as an escape pod in emergencies, though the trip might be one-way if the lair is destroyed.

You might also allow interrogation suites (facility modifier to rolls to question suspects), a general relaxation room with a bar, pool table, or swimming pool.

has the final say on what powers can and cannot be invested in a lair.

Unless a modifier is purchased, the defenses cover the entire lair, inside and out. Activation is automated if the lair has Secure Access (see below). If the power uses a die roll for activation, start at a d4 for a bare bones lair and increase the die type one step for each level of condition higher, up to a d12 at state-of-the-art.

Otherwise they are manually activated and use the skill die of the operator.

Modifiers:

Perimeter Only (-2): The defenses only protect the outside of the building.

Single Room Only (-3): The defenses only protect a single room within the lair. This must be declared when the power is purchased. Moving the defenses to a different room at a later stage costs 1 Lair Point.

Escape Pod (+1/3 occupants)

The lair has a built-in hidden escape pod that can be used for a quick escape should the lair become

overrun. This can be a chute, teleportation pad, short-range rocket, etc. The escape pod is relatively small, and can only accommodate you and a couple of other man-sized people or objects. It will take you a mile or so away from your lair, allowing you to make good your escape.

Secure Access (+ 1)

Only those people with the proper key (chip implant, keycard, mystic amulet, etc.) may gain access to the lair. Anyone else will set off an alarm that will alert everyone that does have proper access via klaxon horns, silent signal, radio broadcast, or some such alert.

Well-Hidden (+ 3)

Your lair is fairly well-hidden, either underground, underwater or obfuscated in some way. All attempts to track you down suffer a -4 to relevant die rolls when you are in your lair.

A lair may still be located underground, in a volcano, underwater, or in space and not have this feature. In such cases, the lair has no special concealment, and communications can easily be monitored. Perhaps the base still shows up on radar, or maybe the volcano doesn't have a special sliding roof to conceal the base from the air.

Example Lairs

Here are some sample lairs created using the guidelines presented above. They are non-setting specific and can be used in any superhero setting with minimal changes.

The number in parenthesis after the title is the total Lair Point cost. Numbers in parenthesis after the Rooms header are the total number of rooms available, and the number left to fill.

The Vigilante Lair (5)

Size: Small; **Location:** Downtown (conurbation); **Condition:** Average

Rooms (3/1): Command Center, Reference Library

Features: None

The vigilante's lair might be a lone hero's only sanctuary, or just somewhere he goes to hide from unwanted followers. This small lair is located in a big city.

It has a radio capable of picking up police and other emergency service radios within the county and a computer attached to the web. Since it has no

accommodation or catering facilities, it can take only a lone occupant sleeping on the couch and eating tinned food heated over a small camping stove. This vigilante is probably a regular at the local diner!

First Lair (10)

Size: Large; **Location:** Midtown (conurbation); **Condition:** Average

Rooms (10/7): Command Centre, Kitchen/Dining Room, Sleeping Quarters (sleeps 4)

Features: Secure Access.

This lair is designed for use by a small team just starting out in their superhero career. Although currently poorly equipped, it has plenty of room for expansion later. The lair is designed as a home-from-home and contains living facilities, as well as a basic communications system.

Orbital Spacestation (20)

Size: Large; **Location:** High Earth orbit (space); **Condition:** Good

Rooms (10/4): Command Centre, Garage, Generator, Kitchen/Dining Room, Sleeping Quarters (sleeps 4), Specialist Library (Alternate Dimensions).

Features: Escape Pod (x2; mini-shuttle)

This small spacestation is located in high Earth orbit and is perfect for a small team with access to a spacecraft. The version presented here has a lab dedicated to the study of alternate dimensions. The garage is designed to accommodate a small shuttle. Although the base currently only sleeps 4, there are still four rooms unallocated, allowing easy expansion for extra team members. The escape pods can house 6 people.

The Villain's Lair (30)

Size: Large; **Location:** Underwater; **Condition:** Good

Rooms (10/2): Command Centre, Generator, Kitchen/Dining Room, Reference Library, Security Cells (4), Sleeping Quarters (sleeps 12)

Features: Camouflaged (marine research base), Defences (Ranged, Attack [3]: Blast cannons. Range 12/24/48, Damage 3d6, ROF 1), Defences (Minions [5]: 10 security guards), Escape Pod (minisub), Secure Access.

This villain's lair is disguised to look like a maritime research center. It consists of a series of pressurized domes linked via transparent tunnels. Note that although there are 10 guards, there is only escape pod. The blast cannons are concealed in the ceiling of each room and are activated if security alarms are tripped. The guns are automated and have a d8 Shooting.

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