



FUTURE TECH™



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INTRODUCTION

Welcome to *d20 Future Tech*, the gadgets-and-gear supplement for the *d20 Future* supplement. Intended for use by both players and Gamemasters, *d20 Future Tech* expands upon *d20 Future* by presenting even more options for a futuristic campaign. More than just lists of equipment, though, this book presents guidelines for developing futuristic societies, generating nonstandard heroes (such as robots), and conducting combat using the kinds of weapons and vehicles available in high-technology settings.

WHAT IS D20 FUTURE TECH?

d20 Future Tech is many things. On one level, it's a peek into the technology of the future and how that technology will affect everyday life. Science fiction writers and other futurists have been imagining the future for almost as long as humankind has been around. Their visions range from utopian scientific wonderlands to bleak radioactive wastelands, but always have the common thread of technological progress tying them together. *d20 Future Tech* is the translation of these visionary concepts into rules for gear in futuristic *d20 MODERN* roleplaying campaigns.

On another level, *d20 Future Tech* is a collection of what the designers of *d20 Future* wanted to put in, but ultimately didn't have room for in the book—along with the countless ideas that came to them weeks or days or hours after *d20 Future* went to print. Furthermore, *d20 Future Tech* is the culmination of designs suggested or requested by you, the players, after you had a chance to read through *d20 Future* and play with those rules a few times. In some cases, the designers have clarified what they had already written; in others, they've filled in the gaps that players asked to know more about. So, *d20 Future Tech* is a companion piece to *d20 Future*—a compendium of requests, clarifications, and all the brilliant ideas that the designers have had since they wrote *d20 Future*.

On another level, *d20 Future Tech* is a book of examples of what can be done with the *d20 Future* rules. From chapters on personal equipment—including modifications to the gadget system first presented in *d20 Future*—to new starships, mecha, and robots,

d20 Future Tech offers virtual “props” for your future *d20 MODERN* games. Additionally, *d20 Future Tech* provides rules for combining the various forms of futuristic combat: vehicular, mecha, starship, and personal combat—how a vehicle attacks and damages a mecha, starship,

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or character; how a character attacks and damages a mecha; and so on. Finally, this book discusses how to tie all the elements of science fiction and technology together to create a cohesive futuristic campaign setting—one that seems both fantastic and realistic at the same time.

HOW TO USE THIS BOOK

The best use of *d20 Future Tech* is as a menu for outfitting a campaign. Once the GM has selected the Progress Level of the setting (see below), she can then establish the limitations of what is and isn't available in the campaign, and what constitutes a cutting-edge technology.

Though much of the information presented here relates specifically to equipment—and thus can enter a futuristic campaign at any point—some of it also affects character creation. Feats, in particular, should be available from the very beginning, and if the GM decides to allow robotic heroes, the players should also have access to the chapter on robotics early on in the campaign planning process.

PROGRESS LEVELS

As explained in *d20 Future*, Progress Levels (PL) indicate the state of technological advances that exist in any given civilization, whether that civilization is located somewhere on Earth or on some distant world. Progress Levels are generally homogenous throughout a civilization, especially after communications technology goes global at PL 5 (the Information Age): Anyone, anywhere in the world, can share in the scientific progress of other cultures on the same planet, or at least close the gap. Similarly, a society that has mastered space travel might journey to a world that has just developed the steam engine, and in the same solar system visit another world where the natives are testing their first spacecraft.

Progress Levels aren't necessarily the same for various aspects of technology, however. A society might be at PL 5 for vehicles and communications, but only at PL 4 for space travel. A common convention of science fiction is one or two fields of technology that are greatly advanced over all others. Having a society develop teleportation technology instead of space flight might be a setting's defining characteristic. Other works of fiction posit the existence of rapid interstellar travel, but rule out the possibility of personal laser weapons.

Each Progress Level beginning at PL 1 is briefly described below. For more information, see *d20 Future*.

PL 1: Bronze/Iron Age

When a civilization learns to create bronze from copper and tin, it has advanced to the Bronze Age, which allows it to advance to working iron, an even more durable metal. Settlements grow from small villages to large ones and eventually to small towns, fostering trade, which in turn leads to larger and larger settlements, right on up to the first small cities.

PL 2: Middle Ages

The hallmark of this Progress Level is the first real mass-communication system: printing. The ability to create and share multiple copies of books enables architecture, commerce, metallurgy, and mathematics to make great strides. At the same time, the populations of Bronze Age nations begin migrating toward cities, making urban areas more important than the surrounding farms for the first time in history.

PL 3: Age of Reason

The Age of Reason supplants faith- and superstition-based logic systems with scientific experimentation and systematic research. The study of chemistry, medicine, biology, astronomy, and even electromagnetism all thrive—aided by the invention of the first crude telescopes and microscopes.

PL 4: Industrial Age

The Industrial Age is characterized by the invention of the steam engine and electric power, and the development of the assembly line, all of which combine to create a boom in commerce and industry. Communication also leaps forward with the telegraph, telephone, and primitive radios.

PL 5: Information Age

Computer technology and electronic devices define the Information Age, and internal combustion engines replace steam engines. Borders between countries gradually fade away as corporations establish what amount to miniature embassies in every developing nation.

PL 6: Fusion Age

The Fusion Age is named for the most common renewable source of energy developed in this period. At the same time, artificial evolution through genetic manipulation becomes feasible, and ranged energy weapons begin to appear.

PL 7: Gravity Age

Gravity induction engines replace fusion engines, ushering in this age. Hovervehicles and interplanetary drives revolutionize transportation, and telecommunications link not just continents, but planets.

PL 8: Energy Age

Civilizations begin to miniaturize induction engines, allowing anyone to carry a limitless power supply. This paves the way for the development of personal force fields, practical one-person starfighters, and city-sized space stations.

PL 9 and Higher

Few civilizations advance beyond the Energy Age, and those that do are generally isolated worlds or species as yet undiscovered. At this stage of development, scientists rewrite the laws of physics, manipulating matter at a subatomic level, traveling through time, and adjusting space itself to literally shorten distances traveled, rather than the time taken to travel those distances.

WHAT YOU NEED TO PLAY

d20 Future Tech builds upon the rules in the *d20 Future* supplement, which in turn uses the rules in the *d20 MODERN Roleplaying Game*. You'll need both of those books to get full use out of this one. In addition, you might find *d20 Cyberscape* useful—particularly if you want to include a heavy focus on cybernetic limbs and computer netsurfing.

CHAPTER ONE

PERSONAL GEAR



As technology advances, the tools available to characters become more powerful, more versatile, or simply more convenient. The material in this chapter builds on Chapter Three: Gear in *d20 Future*. In addition to presenting weapons, armor, equipment, computers, and psitech items from PL 6 to PL 9, this chapter includes additional gadgets for each type of gear and a new concept in the gadget system: gear flaws. Gear flaws reduce the purchase DC of gear, making gear more affordable—though somewhat less useful—than stock models.

For more information on the gadget system and how to use gear in a *d20 Future* campaign, see Chapter Three of *d20 Future*.

UNIVERSAL WEAPON GADGETS

The following gadgets are universal and can apply to weapons found in any era, provided all gadget-specific restrictions are observed.

Automated

Any ranged weapon that must be mounted on a tripod or similar hard point can be automated. An automated weapon attacks any target that enters a 10-foot-by-10-foot area specified by the person who sets up the weapon. The weapon targets visually, so it cannot attack targets that it cannot see. (For targets using Hide, assume the weapon has a Spot modifier of +0.) This gadget can be selected multiple times for crew-served weapons, each time replacing one crewmember.

Restrictions: Mounted ranged weapons only.

Purchase DC Modifier: +3.

Concealable

Some weapons can be installed (and operated from) inside other items; for example, guns that fit into briefcases, grenades disguised as cosmetic products, and so forth. The concealed item cannot be identified as a weapon except

through close examination, or when it is in use. The concealed weapon cannot be larger than the item in which it is concealed.

Restrictions: None.

Purchase DC Modifier: +2.

Electrified

The weapon is attached to a power source. On a successful hit, the target takes 4d6 points of electricity damage as well as the damage dealt by the weapon. Ranged weapons are not affected by this gadget.

Restrictions: Melee weapons only.

Purchase DC Modifier: +2.

Extended Range

The range of the weapon is doubled. Melee weapons are not affected by this gadget.

Restrictions: Ranged weapons only.

Purchase DC Modifier: +2.

Grappling Sheath

Grenades and mines can be fitted with custom grappling sheaths designed to adhere to any surface against which they are thrown or placed. This gadget ensures that grenades deviate much smaller distances, and emplaced bombs cannot be easily removed.

When throwing a grenade equipped with a grappling sheath no farther than one range increment, the attacker chooses the corner of the target square in which the grenade lands. For two to three range increments, use the deviation diagram for explosives thrown from 1 foot to 5 feet. For four to five range increments, use the deviation diagram for explosives thrown from 6 feet to 10 feet. (The deviation diagrams are on page 149 of the *d20 Modern Roleplaying Game*.)

Once placed, a mine or other explosive equipped with a grappling sheath cannot be moved, short of tearing it loose. Doing so requires a DC 20 Strength check, and, depending on the mine's trigger, might cause it to detonate.

Restrictions: Grenades and mines only.

Purchase DC Modifier: +2.

Improved Accuracy

Through rifling, laser rangefinding, and microcomputer targeting, this gadget improves the accuracy of a ranged firearm, granting a +1 equipment bonus on attack rolls. This gadget can be selected for the same weapon multiple times.

Restrictions: Ranged weapons only.

Purchase DC Modifier: +2.

Improved Damage

This gadget increases the bore of a projectile weapon's barrels or improves the output of an energy weapon, adding 1 to the weapon's damage.

Restrictions: Ranged weapons only.

Purchase DC Modifier: +2.

Improved Stopping Power

Incorporating modified chokes and reducing the impedance of focusing crystals allows ranged weapons to produce significantly greater damage output. This gadget adds 1 die to the

weapon's damage (increasing damage from 2d8 points to 3d8, for example).

Restrictions: Ranged weapons only.

Purchase DC Modifier: +10.

Motion-Sensitive

Motion-sensitive weaponry attacks any target moving faster than 5 feet per round. The weapon's user chooses a 10-foot-by-10-foot area for the weapon to cover; any eligible target in the area causes the weapon to attack.

Restrictions: Grenades, mines, or automated ranged weapons only.

Purchase DC Modifier: +4.

Plastic

The weapon is made with high-impact plastic parts, rather than metal. It does not register to metal detection scans (though it does register to X-rays). The weapon has a hardness of 2 and half its normal hit points.

Restrictions: None.

Purchase DC Modifier: +1.

Reduced Weight

The weight of the weapon is reduced by 25%.

Restrictions: None.

Purchase DC Modifier: +2.

Sound-Activated

Sound-activated weaponry attacks any target that makes noise. The weapon's user chooses a 10-foot-by-10-foot area for the weapon to cover; any eligible targets in the area cause the weapon to attack. The weapon targets via audio, so it cannot attack targets that it does not hear. (For targets using Move Silently, assume the weapon has a Listen modifier of +0.)

Restrictions: Grenades, mines, or automated ranged weapons only.

Purchase DC Modifier: +4.

Thermal Targeting

Weaponry equipped with thermal targeting systems homes in on any target that produces heat in a certain temperature range, specified by the weapon's user. Attacks made with the weapon gain a +2 circumstance bonus against targets in that temperature range,

Temperature Range	Sample Targets
Low	Medium reptiles, Small mammals, Tiny robots
Average	Large reptiles, Medium mammals (including most humanoid races), Small robots, lanterns, candles
Above average	Huge reptiles, Large mammals, Medium robots or vehicles, torches, campfires, hot oven, electric vehicle
High	Gargantuan reptiles, Huge mammals, Large robots or vehicles
Very high	Colossal reptiles, Gargantuan mammals, Huge robots or vehicles, bonfires, furnaces
Extremely high	Colossal mammals, Gargantuan robots or vehicles, lava, lasers

Voice-Activated

Voice-activated weaponry allows the wielder to switch between firing modes (including activating or deactivating the safety) as a free action, even without the use of one's hands, and including when the weapon is out of one's hands. A voice-recognition chip can be installed (at an additional cost) to ensure that only the weapon's registered owner can issue commands to the weapon.

Restrictions: Ranged weapons only.

Purchase DC Modifier: +3.

UNIVERSAL WEAPON FLAWS

The following flaws are universal and can apply to weapons found in any era, provided all flaw-specific restrictions are observed.

Decreased Range

The range of the weapon is halved. Melee weapons are not affected by this flaw.

Restrictions: Ranged weapons only.

Purchase DC Modifier: -2.

Disposable

The weapon is designed to be used once, then thrown away. It cannot be reloaded.

Restrictions: Ranged weapons only.

Purchase DC Modifier: -2.

Increased Size

The size of the weapon is increased by one category (from Small to Medium, for example).

Restrictions: None.

Purchase DC Modifier: -2.

Increased Weight

The weight of the weapon is increased by 50%.

Restrictions: None.

Purchase DC Modifier: -2.

Reduced Accuracy

With the sights filed off, the barrel shortened, or the focusing crystals misaligned, ranged weapons are considerably less accurate. This flaw decreases the accuracy of a ranged firearm, conferring a -1 penalty on attack rolls. This flaw can be selected for the same weapon multiple times.

Restrictions: Ranged weapons only.

Purchase DC Modifier: -2.

Reduced Damage

Consisting of a modified barrel bore or an inferior voltage regulator, this flaw reduces the damage of the weapon by 1.

Restrictions: Ranged weapons only.

Purchase DC Modifier: -2.

Reduced Stopping Power

Increasing the choke on projectile weapons and the impedance of focusing crystals causes ranged weapons to produce much lower damage output. This flaw subtracts 1 die from the weapon's damage (decreasing damage from 2d8 points to 1d8, for example). This flaw cannot be applied to a weapon that deals only a single die of damage.

Restrictions: Ranged weapons only.

Purchase DC Modifier: -5.

UNIVERSAL AMMUNITION GADGETS

The following gadgets are universal and can apply to ammunition found in any era, provided all gadget-specific restrictions are observed.

Chemical, Muscle Relaxant

Rather than a solid slug, the projectile is an injector dart designed to deliver a dose of broad-range muscle relaxants. The projectile has half the normal range increment for the weapon and deals only 1d3 points of damage. If this penetrates the target's DR, the dart injects the target with muscle relaxant, dealing 1d4+1 points of Dexterity damage. The target can make a DC 14 Fortitude save to reduce the damage by half.

Restrictions: Ballistic weapons and ammunition only.

Purchase DC Modifier: +4.

Extended Range

The range of a ranged weapon is doubled. Melee weapons are not affected by this gadget.

Restrictions: Ranged weapons only.

Purchase DC Modifier: +2.

Flechette

Flechette rounds fire bundles of razor-sharp, fin-stabilized tungsten darts. A weapon that fires this ammunition improves its critical threat range by +1, but takes a -1 penalty on attack rolls.

Restrictions: Projectile weapons only.

Purchase DC Modifier: +4.

Improved Damage

Projectile ammunition with custom loads or energy weapons with dispersion crystals improve the damage of the weapon by +1.

Restrictions: Ranged weapons only.

Purchase DC Modifier: +2.

Improved Penetration

Utilizing high-frequency energy bursts, shots from this weapon reduce the effectiveness of armor. When fired at an opponent wearing any type of armor, the attack receives a +2 bonus. It has no benefit against targets that are not wearing armor.

Restrictions: Ranged nonballistic weapons only.

Purchase DC Modifier: +3.

Improved Stopping Power

By employing hollow-point ammunition or diffusion crystals, this gadget allows ranged weapons to produce significantly greater damage output. This gadget adds 1 die to the weapon's damage (increasing damage from 2d8 points to 3d8, for example).

Restrictions: Ranged weapons only.

Purchase DC Modifier: +10.

Reduced Ammo Size

Advances in ammunition propulsion and power output enable standard-sized clips to hold more ammo. This gadget increases the number of rounds or shots in a clip by 50%.

Restrictions: Ranged weapons only.

Purchase DC Modifier: +3.

UNIVERSAL AMMUNITION FLAWS

The following flaws are universal and can apply to ammunition found in any era, provided all flaw-specific restrictions are observed.

Birdshot

This is a lighter type of shotgun ammunition. It reduces the damage dealt by a shotgun by 1 die.

Restrictions: Shotguns only.

Purchase DC Modifier: -1.

Diffusing

Energy weapons with low-frequency modifications result in reduced penetration. Damage from the weapon is reduced by -2.

Restrictions: Ranged energy weapons only.

Purchase DC Modifier: -1.

UNIVERSAL ARMOR GADGETS

The following gadgets are universal and can apply to armors found in any era, provided all gadget-specific restrictions are observed.

Concussive Plating

Concussive plating blunts the force of incoming physical damage by instantly generating a small, controlled explosion at the point of impact. This gadget provides DR 2 against ballistic damage or bludgeoning damage.

Restrictions: Medium, heavy, or powered armor only.

Purchase DC Modifier: +3.

Improved Defense

Incorporating puncture- and energy-resistant weave, armor with improved defense gains a +1 increase to its Defense. This gadget can be selected for the same armor multiple times.

Restrictions: None.

Purchase DC Modifier: +2.

Increased Range of Motion

Advances in armor articulation grant the wearer a bit more flexibility, increasing the armor's maximum Dexterity bonus by +1. This gadget can be selected for the same armor multiple times.

Restrictions: None.

Purchase DC Modifier: +2.

Reduced Weight

The weight of the armor is reduced by 25%.

Restrictions: None.

Purchase DC Modifier: +2.

Segmented

Armor segmentation allows armor to move with the wearer, rather than the wearer learning to move with the armor. This benefit reduces the wearer's armor penalty by 1, to a minimum of +0. This gadget can be selected for the same armor multiple times.

Restrictions: None.

Purchase DC Modifier: +2.

Voice-Activated

Voice-activated armor allows the wearer to activate various functions of the armor (such as an environment seal, integrated equipment, and so on) as a free action, even without the use of one's hands, and even when the armor is out of one's hands. A voice-recognition chip can be installed (at an additional cost) to ensure that only the armor's registered owner can issue commands to it.

Restrictions: Powered armor only.

Purchase DC Modifier: +1 (+3 with voice-recognition chip).

UNIVERSAL ARMOR FLAWS

The following flaws are universal and can apply to armors found in any era, provided all flaw-specific restrictions are observed.

Ablative

The armor is made from inferior materials. For every 10 points of damage the wearer takes, the armor's Defense is reduced by 1.

Restrictions: None.

Purchase DC Modifier: -4.

Increased Weight

The weight of the armor is increased by 50%.

Restrictions: None.

Purchase DC Modifier: -2.

Reduced Defense

Armor with reduced defense takes a -1 penalty to its Defense, to a minimum of +1. This flaw can be selected for the same armor multiple times.

Restrictions: None.

Purchase DC Modifier: -2.

Reduced Range of Motion

The armor lacks in even standard flexibility, decreasing the armor's maximum Dexterity bonus by -1 . This flaw can be selected for the same armor multiple times.

Restrictions: None.

Purchase DC Modifier: -2 .

Rigid

A virtually complete lack of armor segmentation makes the armor not only uncomfortable to wear, but difficult to move in. This disadvantage increases the wearer's armor penalty by $+1$. This flaw can be selected multiple times.

Restrictions: None.

Purchase DC Modifier: -2 .

UNIVERSAL EQUIPMENT GADGETS

The following gadgets are universal and can apply to equipment found in any era, provided all gadget-specific restrictions are observed.

Concealable

Some items can be installed (and operated from) inside other items, for example, communicators that fit into hollowed-out false teeth, a flash-seal that looks like a personal music storage device, and so forth. The item cannot be properly identified except through close examination, or when it is in use. The item cannot be larger than the item in which it is to be concealed.

Restrictions: None.

Purchase DC Modifier: $+2$.

Durable

The hit point total of the equipment is increased by 50% of the original total. This gadget can be selected multiple times, each time increasing the hit point total of the equipment by 50% of the original total.

Restrictions: None.

Purchase DC Modifier: $+2$.

Reduced Size

The size of the equipment is reduced by one category (from Large to Medium, for example).

Restrictions: None.

Purchase DC Modifier: $+2$.

Reduced Weight

The weight of the equipment is reduced by 25%.

Restrictions: None.

Purchase DC Modifier: $+2$.

Tough

The hardness of the equipment is increased by $+2$. This gadget can be selected multiple times.

Restrictions: None.

Purchase DC Modifier: $+1$.

UNIVERSAL EQUIPMENT FLAWS

The following flaws are universal and can apply to equipment found in any era, provided all flaw-specific restrictions are observed.

Flimsy

The hardness of the equipment is decreased by -2 , to a minimum of 0. This flaw can be selected multiple times.

Restrictions: None.

Purchase DC Modifier: -1 .

Fragile

The hit point total of the equipment is decreased by 25% of the original total. This flaw can be selected up to four times, each time decreasing the hit point total of the equipment by 25% of the original total.

Restrictions: None.

Purchase DC Modifier: -2 .

Increased Size

The size of the equipment is increased by one category (from Small to Medium, for example).

Restrictions: None.

Purchase DC Modifier: -2 .

Increased Weight

The weight of the equipment is increased by 50%.

Restrictions: None.

Purchase DC Modifier: -2 .

UNIVERSAL COMPUTER GADGETS

The following gadgets are universal and can apply to computers found in any era, provided all gadget-specific restrictions are observed.

Durable

The hit point total of the computer is increased by 50% of the original total. This gadget can be selected multiple times, each time increasing the hit point total of the computer by 50% of the original total.

Restrictions: None.

Purchase DC Modifier: $+2$.

Improved Database

The computer's files contain an up-to-date, cross-referenced information database on a wide range of common and uncommon subjects, granting a $+2$ equipment bonus on Research checks made with a computer.

Restrictions: None.

Purchase DC Modifier: $+2$.

Reduced Size

The size of the computer is reduced by one category (from Large to Medium, for example).

Restrictions: None.

Purchase DC Modifier: +2.

Reduced Weight

The weight of the computer is reduced by 25%.

Restrictions: None.

Purchase DC Modifier: +2.

Tough

The hardness of the computer is increased by 2. This gadget can be selected multiple times.

Restrictions: None.

Purchase DC Modifier: +1.

UNIVERSAL COMPUTER FLAWS

The following flaws are universal and can apply to computer equipment found in any era, provided all flaw-specific restrictions are observed.

Flimsy

The hardness of the computer is decreased by -2, to a minimum of 0. This flaw can be selected multiple times.

Restrictions: None.

Purchase DC Modifier: -1.

Fragile

The hit point total of the computer is decreased by 25% of the original total. This flaw can be selected up to four times, each time decreasing the hit point total of the equipment by 25% of the original total (minimum 1 hp).

Restrictions: None.

Purchase DC Modifier: -2.

Increased Size

The size of the computer is increased by one category (from Small to Medium, for example).

Restrictions: None.

Purchase DC Modifier: -2.

Increased Weight

The weight of the computer is increased by 50%.

Restrictions: None.

Purchase DC Modifier: -2.

UNIVERSAL PSITECH GADGETS

The following gadgets are universal and can apply to psitech found in any era, provided all gadget-specific restrictions are observed.

Increased Duration

The duration of the psitech item's effects is doubled. Psitech items without durations are not affected by this gadget.

Restrictions: None.

Purchase DC Modifier: +2.

Increased Power Area

The numeric measurements of a psitech item's burst, emanation, line, or spread-shaped effect increase by 100%. Psitech items that do not affect an area are not affected by this gadget.

Restrictions: None.

Purchase DC Modifier: +3.

Extended Range

The range of the psitech item is doubled. Psitech items without ranges, or that require melee attacks to operate, are not affected by this gadget.

Restrictions: Ranged items only.

Purchase DC Modifier: +2.

Increased Variables

All variable, numeric effects of the psitech item are increased by one-half. A weapon deals half again as much damage, for example, while a psitech healing device cures half again as many hit points. Saving throws and opposed rolls are not affected, nor are psitech items without random variables.

Restrictions: None.

Purchase DC Modifier: +3.

Maximized Variables

All variable, numeric effects of the psitech item are maximized. The psitech item deals maximum damage, cures the maximum number of hit points, affects the maximum number of targets, and so forth. Saving throws and opposed rolls are not affected, nor are psitech items without random variables.

Restrictions: None.

Purchase DC Modifier: +5.

Reduced Manifestation Time

Activating the psitech item is a free action. You can perform another action, even activating another psitech item, in the same round. You can activate only one psitech item with this gadget per round. A psitech item with an activation time of more than a full-round action cannot benefit from this gadget.

Restrictions: None.

Purchase DC Modifier: +4.

Reduced Power Point Cost

The power point cost of a psitech item is reduced by -1, to a minimum of 1. Psitech items without power point costs are not affected by this gadget.

Restrictions: None.

Purchase DC Modifier: +1.

Reduced Size

The size of a psitech item is reduced by one category (from Large to Medium, for example).



Restrictions: None.
Purchase DC Modifier: +2.

Reduced Weight

The weight of a psitech item is reduced by 25%.

Restrictions: None.
Purchase DC Modifier: +2.

Variable Energy Type

This gadget allows you to switch between two different energy types as a free action. Select an energy type: acid, cold, electricity, fire, or sonic/concussion. This gadget can be selected for the same psitech item multiple times, each time adding a single additional energy type.

Restrictions: Weapons only.
Purchase DC Modifier: +4.

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UNIVERSAL PSITECH FLAWS

The following flaws are universal and can apply to psitech found in any era, provided all flaw-specific restrictions are observed.

Increased Manifestation Time

Activating the psitech item takes longer than normal.

Original Activation Time	New Activation Time
Free action	Move action
Move action	Attack action
Attack action	Full-round action
Full-round action or longer	Double activation time

Restrictions: None.
Purchase DC Modifier: -4.

Increased Power Point Cost

The power point cost of a psitech item is increased by 1. This flaw can be selected for the same psitech item multiple times. Psitech items without power point costs are not affected by this gadget.

Restrictions: None.
Purchase DC Modifier: +1.

Increased Size

The size of a psitech item is increased by one category (from Small to Medium, for example).

Restrictions: None.
Purchase DC Modifier: -2.

Increased Weight

The weight of a psitech item is increased by 50%.

Restrictions: None.
Purchase DC Modifier: -2.

Minimized Variables

All variable, numeric effects of the psitech item are reduced to 1. The psitech item deals minimum damage, cures the minimum number of hit points, affects the minimum number of targets, and

so forth. Saving throws and opposed rolls are not affected, nor are psitech items without random variables.

Restrictions: None.
Purchase DC Modifier: -5.

Psychic Feedback

The psitech item puts a strain on the user's nervous system, dealing half of its damage to the user as nonlethal damage every time it is used. If the item does not normally deal damage, it deals 1d6 points of nonlethal damage to the user every time it is activated.

Restrictions: None.
Purchase DC Modifier: -4.

Reduced Duration

The duration of the psitech item's effects is halved. Psitech items without durations are not affected by this flaw.

Restrictions: None.
Purchase DC Modifier: -2.

Reduced Power Area

The numeric measurements of a psitech item's burst, emanation, line, or spread-shaped effect decrease by 50%. Psitech items that do not affect an area are not affected by this flaw.

Restrictions: None.
Purchase DC Modifier: -3.

Reduced Range

The range of the psitech item is halved. Psitech items without ranges, or ones that require melee attacks to operate, are not affected by this flaw.

Restrictions: Ranged items only.
Purchase DC Modifier: -2.

Reduced Variables

All variable, numeric effects of the psitech item are reduced by one-half. A weapon deals only half as much damage, for example, while a psitech healing device cures only half as many hit points. Saving throws and opposed rolls are not affected, nor are psitech items without random variables.

Restrictions: None.
Purchase DC Modifier: -3.

PROGRESS LEVEL 6 GEAR

The Fusion Age mainly advances technology by improving upon the advances of the Information Age. The overall design philosophy is to reduce the size and weight of the equipment, or to improve its efficiency—in terms of damage, or energy output, or what-have-you—without significantly increasing its existing specs.

Fusion Age Weapons

The following weapons are available at PL 6 and higher.

Chainsword

Three feet of tungsten steel with a molecule-thin razor chain of hardened synthetic crystals, the chainsword is a particularly lethal melee weapon (and so brutal that even some military forces are uncomfortable using them). The razor chain whirls chainsaw-

TABLE 1-1: PROGRESS LEVEL 6 RANGED WEAPONS

Weapon	Damage	Critical	Damage	Range	Rate of		Size	Weight	DC	Purchase	Restriction
			Type	Increment	Fire	Magazine					
Charge pistol	2d8	20	Ballistic	60 feet	S, A	30 box	Medium	2 lb.	18	Lic (+1)	
Charge rifle	2d10	20	Ballistic	150 feet	S, A	50 box	Large	14 lb.	24	Lic (+1)	
Compression gun	2d10 nonlethal	20	Concussion	10 feet	S	Special ¹	Large	9 lb.	16	Lic (+1)	
Falcon .55	2d8	20	Ballistic	40 feet	S, A	16 box	Medium	2 lb.	19	Lic (+1)	
Flechette pistol	2d6	20	Piercing, Slashing	40 feet ¹	S, A	30 box	Medium	2 lb.	20	Res (+2)	
Flechette rifle	2d8	20	Piercing, Slashing	80 feet	S, A	50 box	Large	12 lb.	26	Res (+2)	
Gyrojet pistol	2d6	20	Ballistic	60 feet	S	8 box	Medium	2 lb.	14	Lic (+1)	
Gyrojet rifle	2d6	20	Ballistic	140 feet	S	15 box	Large	15 lb.	18	Lic (+1)	
Sleep pistol	Special ¹	n/a	n/a	Special	S	6 int.	Medium	2 lb.	18	Res (+2)	

¹ See the weapon description for details.

TABLE 1-2: PROGRESS LEVEL 6 MELEE WEAPONS

Weapon	Damage	Critical	Damage	Range	Size	Weight	DC	Purchase	Restriction
			Type	Increment					
Chainsword	2d8	19–20	Slashing	—	Large	4 lb.	17	Ill (+4)	
Ketch-all pole, electric ¹	1d4 ¹	20	Bludgeoning	—	Large	8 lb.	14	Lic (+1)	

¹ See the weapon description for details.

style, powered by a microbattery pack that can keep the weapon running for up to 20 minutes (200 rounds) of use. Replacement battery packs have a purchase DC of 8. Replacing the battery pack requires a move action.

Charge Pistol

Charge weapons replace gunpowder and other chemical explosives with electrochemical propellant, ignited with a short but massive shock to the cartridge (rather than the old-fashioned firing pin). The propellant converts to white-hot plasma with a smoother, more powerful expansion than gunpowder, resulting in a slug with a considerably higher muzzle velocity. The recoil is slightly greater than with gunpowder, though not enough to significantly affect the user's aim.

Charge Rifle

The charge rifle is a larger version of the charge pistol, with better range, increased firepower, and, of course, a full-automatic mode.

Compression Gun

Named for the method by which it acquires a charge, a compression gun releases a short-range concussive burst of sonic energy. The damage is nonlethal, but the shock to the system can drop the target in her tracks. Compression guns resemble sawed-off shotguns, with either a pump-action lever or a hand crank for generating a charge. A compression gun carries no ammunition, fires only one shot at a time, and requires a move action to recharge.

Distraction Round

A heavy-duty dart with a sound chip and tiny speaker attached, a distraction round deals no damage. Instead, it sticks in a solid surface and begins emitting a random series of small noises—quiet breathing, small coughs, creaking leather, the sound of scraping feet, and so on. These noises are just loud enough to attract the attention of a sentry (Listen DC 13), potentially providing a distraction.

Falcon .55

With the increasing popularity of a civilian model of the Falcon .45, law enforcement needed a better sidearm. In PL 6, the new service pistol is simply a higher-caliber version of the old reliable pistol, with the same tremendous stopping power and autofire mode in a lightweight frame.

Flechette Pistol

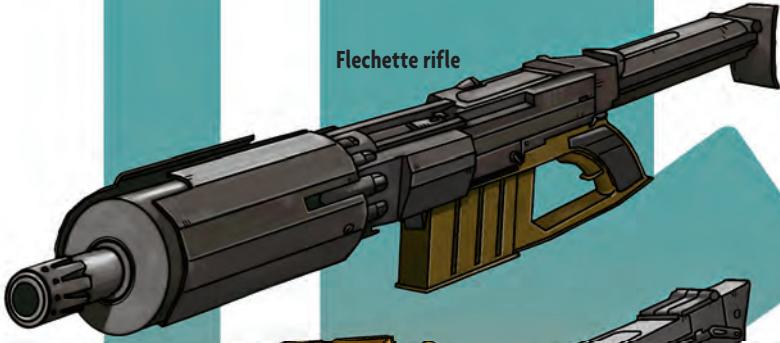
Flechette weapons fire bundles of tiny, razor-sharp aerofoils. The bundles expand upon exiting the barrel, maximizing the damage area (though the aerofoils lack real penetrating power). The majority of the damage is due to blood loss and nerve and muscle damage, rather than serious internal injuries. The aerofoils also lose momentum more quickly than a standard slug; the damage is halved at greater than 2 range increments.

Flechette Rifle

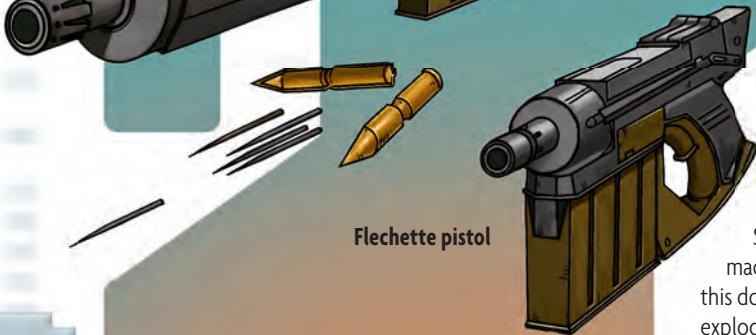
The larger version of the flechette pistol, the flechette rifle boasts improved range and a slightly larger aerofoil bundle, as well as an autofire setting—perfect for clearing rooms full of opponents without seriously damaging the room itself.

TABLE 1-3: PROGRESS LEVEL 6 AMMUNITION TYPES

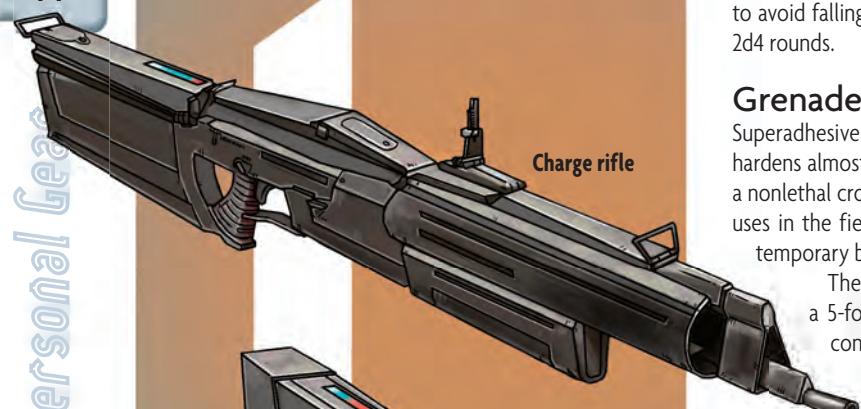
Ammunition (Quantity)	Damage Type	Purchase DC	Restriction
Distraction round (1)	—	13	Res (+2)
Jammer round (1)	—	15	Res (+2)
Microphone round (1)	—	14	Res (+2)
Surveillance round (1)	—	15	Res (+2)



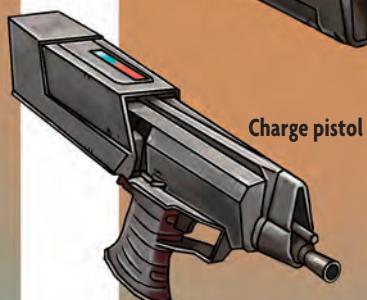
Flechette rifle



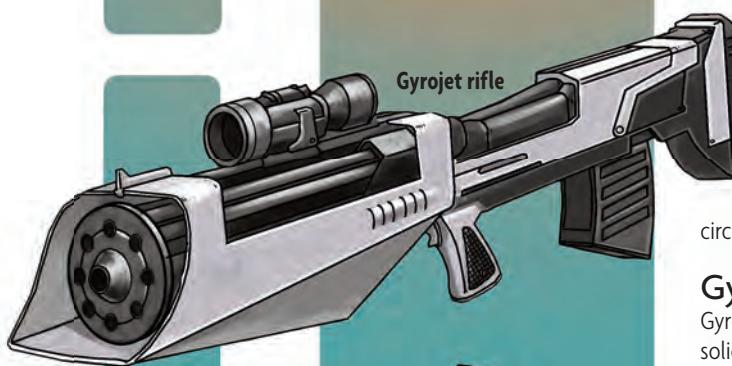
Flechette pistol



Charge rifle



Charge pistol



Gyrojet rifle



Gyrojet pistol

WM

Grenade, Midnighter

Midnighter grenades release light-absorbing smoke that doesn't just obscure vision—the smoke creates a field of impenetrable darkness with a 10-foot radius.

Not even creatures that can normally see in the dark (such as with darkvision) can see in an area shrouded in midnighter smoke. Normal lights (flashlights, candles, lanterns, and so forth) do not illuminate the darkened area. Night vision goggles are equally ineffective. Only blackout goggles (see page 15) can penetrate the inky darkness.

Grenade, Sleep

Sleep grenades carry a payload of frozen somnall, a pharmaceutical barbiturate normally used to sedate patients, but in this dosage it is a potent riot-control measure. When the grenade explodes, it scatters the drug as a fine mist over a 20-foot radius; any living creature in the radius must make a DC 18 Fortitude save to avoid falling instantly unconscious. Unconsciousness lasts for 2d4 rounds.

Grenade, Superadhesive

Superadhesive is an adhesive resin that expands rapidly and hardens almost instantly in contact with air. Its primary use is as a nonlethal crowd-control option, but some of its earliest actual uses in the field yielded surprising uses—notably as an instant, temporary barricade.

The superadhesive generated by the grenade fills a 5-foot square, creating a barrier nearly as solid as a concrete wall. The hardened superadhesive has hardness 8 and 60 hit points, with a break DC of 20. Anyone caught in the square can attempt to break out with a Strength check, or he can await rescued by someone who deals damage to the hardened foam from outside.

The foam gradually becomes brittle enough to break more easily (losing 1 point of hardness every 10 minutes). Alternately, it can be dissolved by the Solvaway chemical as a full-round action (see page 70 of *d20 Future*).

Grenade, Superlube

Superlube is a virtually frictionless substance designed for use against rioting prison convicts. The superlube grenade fills a 10-foot-by-10-foot square with this substance, impeding movement without dealing damage.

Anyone attempting to leave a square coated with superlube must make a Balance check or fall down in the same square. Characters moving at a crawl gain a +5 circumstance bonus on their Balance checks.

Gyrojet Pistol

Gyrojet weapons fire miniature self-propelled rockets rather than solid slug projectiles. Though somewhat heavier than standard ammunition, gyrojet ammo has the advantage of being slightly more accurate, while the weapons themselves are lighter and don't require any sort of power source.

Gyrojet Rifle

The larger version of the gyrojet pistol, the gyrojet rifle has a greater range and a larger clip capacity, but it is otherwise basically the same.

TABLE 1–4: PROGRESS LEVEL 6 EXPLOSIVES AND SPLASH WEAPONS

Weapon	Damage	Critical	Damage Type	Burst Radius	Reflex DC	Range Increment	Size	Weight	DC	Purchase Restriction
Grenade, midnightr	Special ¹	—	—	10 ft.	15	10 ft.	Tiny	1 lb.	14	Res (+2)
Grenade, sleep	Special ¹	—	—	20 ft.	15	10 ft.	Tiny	1 lb.	14	Res (+2)
Grenade, superadhesive	Special ¹	—	—	—	15	10 ft.	Small	2 lb.	15	Res (+2)
Grenade, superlube	Special ¹	—	—	5 ft.	15	10 ft.	Small	2 lb.	17	Res (+2)

1 See the weapon description for details.

TABLE 1–5: PROGRESS LEVEL 6 ARMOR

Armor	Type	Equip. Bonus	Nonprof. Bonus	Max Dex Bonus	Armor Penalty	Speed (30 ft./20 ft.)	Weight	DC	Purchase Restriction
Stun shield	Shield	+2	+1	—	-2	30 ft./20 ft.	15 lb.	9	Res (+2)

Jammer Round

A subsonic slug outfitted with a tiny transmitter, the jammer round disrupts electronic devices without destroying them or affecting nearby devices. The jammer round need only be fired into the same 5-foot square as the target device (an effective Defense of 10). Any device in the target square becomes nonfunctional for 3 rounds.

Ketch-All Pole, Electric

An electrified version of the venerable ketch-all pole, this version not only restrains the target, but takes most of the fight out of her as well. A wielder who hits an opponent with a ketch-all pole (electrical or nonelectrical) can immediately initiate a grapple (as a free action) without provoking an attack of opportunity. In addition to the normal options available to a grappler, the wielder of a ketch-all pole can attempt to pull his target to the ground (the equivalent of a trip attack, though no attack roll is necessary).

Alternately, the wielder of the electric ketch-all pole can trigger a shock to the target as an attack action. This shock deals 4d6 points of electricity damage (Fortitude DC 16 half).

The ketch-all pole has reach and cannot be used against adjacent opponents. A ketch-all pole can be used only against opponents within one size category of the wielder.

Microphone Round

Microphone rounds are subsonic slugs fitted with miniature microphones and microtransmitters. The round can be fired into any solid object. Once affixed, it transmits sound to a receiver unit (such as headphones) located within 100 feet of the transmitter. The round picks up and transmits sound to the listener as though the listener were standing at the impact point.

Sleep Pistol

Sleep pistols fire spheres of frozen somnall designed to render rioters unconscious without dealing damage. The pistol fires the Somnall sphere 40 feet, where it explodes, scattering the drug as a fine mist over a 5-foot square. Any living creature in the affected square must make a DC 15 Fortitude save to avoid falling instantly unconscious. Unconsciousness lasts for 2d4 rounds. The sleep pistol can be adjusted to fire the Somnall sphere from 20 feet to 60 feet; resetting the detonation distance is a full-round action.

Surveillance Round

Surveillance rounds are subsonic slugs fitted with miniature cameras and microtransmitters. The round can be fired into any solid object. Once affixed, it transmits its view to a monitor designed to receive the round's signal (see Surveillance Round Receiver

on page 18). The round's field of vision is only 90 degrees and is centered on the line from the firing point to the impact point. The field of vision cannot be changed, and the surveillance round does not pick up audio.

Fusion Age Weapon Gadgets

The following gadgets are found in the Fusion Age and can apply to weapons of that era or later, provided all gadget-specific restrictions are observed.

Laser Bayonet

Laser bayonets are not actually bayonets, but they serve the same general purpose. Mounted on longarms (usually assault rifles), the laser bayonet triggers when the wielder strikes an opponent with the weapon itself as a melee attack (taking the usual -4 penalty for attacking with an improvised weapon). The weapon deals the standard improvised weapon damage (see Table 4–8: Improvised Weapon Damage by Size in the *d20 MODERN Roleplaying Game*), as well as 2d6 points of energy damage.

Restrictions: Longarms only.

Purchase DC Modifier: +3.

Fusion Age Armor

The following armors are available at PL 6 and higher.

Stun Shield

Stun shields were developed as another nonlethal crowd-control measure: a shield that protects the wielder and temporarily incapacitates attackers. In addition to the shield bonus it grants, the shield emits a pulse of stunning energy when struck by an unarmed attacker in melee combat. The attacker must succeed on a DC 13 Fortitude save or be stunned for 1d4 rounds.

Fusion Age Armor Gadgets

The following gadgets are found in the Fusion Age and can apply to armors of that era or later, provided all gadget-specific restrictions are observed.

Armorflex

Armorflex is a treatment applied to armor material that reacts to variations in electrical current, rendering the armor either soft and pliable, or hard and rigid. As a move action, the wearer can adjust the armor's equipment bonus to Defense, at the same time altering the armor's maximum Dexterity bonus and armor penalty. The

baseline maximum equipment bonus is the armor's normal bonus; dialing this down by 1 increases the maximum Dexterity bonus by 1, and reduces the armor penalty by 1, to a minimum of 0 in either the equipment bonus or the armor penalty. (Once one of these numbers reaches 0, the armor can be adjusted no lower. There is no upper limit on the maximum Dexterity bonus, however.)

Restrictions: None.

Purchase DC Modifier: +5.

Fusion Age Equipment

The following equipment is available at PL 6 and higher.

Blackout Goggles

Blackout goggles are the PL 6 equivalent of night vision goggles—more effective against standard darkness and the only means of seeing through the smoke generated by midnighter grenades. The wearer can see in total darkness better than darkvision (without the -4 penalty on Spot and Search checks), and the goggles do not require even a little light to operate. In total darkness (such as midnighter smoke), blackout goggles enable the wearer to see up to 60 feet, though only in black-and-white.

Chemical, Equalize

Developed for the military, equalize stabilizes the subject's body heat to compensate partially for external temperatures, granting the subject a +2 circumstance bonus on Fortitude saves to resist hot or cold weather. A single dose lasts for 4 hours.

Chemical, Prolong

Another military development, prolong enables the subject to continue acting after reaching -1 hit points, as though the subject had the Remain Conscious talent (see page 25 of the *d20 MODERN Roleplaying Game*). Prolong's effects last for 30 minutes. It must be administered before the subject reaches -1 hit points.

TABLE 1-6: PROGRESS LEVEL 6 EQUIPMENT

Purchase					
Name	Size	Weight	DC	Restriction	
Chemical and Medical Equipment					
Chemical, equalize	Diminutive	—	6	—	
Chemical, prolong	Diminutive	—	9	—	
Chemical, refresh	Diminutive	—	6	—	
Chemical, rejuve	Diminutive	—	7	—	
Chemical, revall	Diminutive	—	8	—	
Health-Alert	Diminutive	—	7	—	
Hydrate	Diminutive	—	5	—	
Computer Equipment					
System smoker	Medium	5 lb.	14	Mil (+3)	
Wrist-Comp	Tiny	2 lb.	20	—	
Miscellaneous Equipment					
Blackout goggles	Tiny	2 lb.	18	Lic (+1)	
Jumper pack	Small	35 lb.	15	—	
Microtorch	Tiny	1 lb.	12	—	
Nausea wand	Small	3 lb.	8	Lic (+1)	
Piercing panel	Small	2 lb.	13	Res (+2)	
Superlube sprayer	Large	48 lb.	15	Res (+2)	
Wallcrawler gear	Small	2 lb.	11	—	
Psitech Equipment					
Neural blunker	Medium	3 lb.	15	Res (+2)	
Psiblocker	Tiny	1 lb.	10	Lic (+1)	

Chemical, Refresh

Refresh began as a military experiment, but quickly became a popular pharmaceutical for athletes. Refresh removes the exhausted condition from the subject, rendering him merely fatigued. A dose lasts for 1 hour; when it wears off, the subject is exhausted for 4 hours (during which time an additional dose of refresh is ineffective).

Chemical, Rejuve

Rejuve enables the subject to recover twice as fast as normal, as though she had the Stamina talent (see page 25 of the *d20 MODERN Roleplaying Game*.)

Chemical, Revall

Revall restores an unconscious subject to 1 hit point. It is often used in conjunction with prolong (see above), though it is advisable only for the purpose of stabilizing a subject and making him ambulatory.

Health-Alert

Health-Alert bracelets (and later, subcutaneous microchips) monitor the subject's vital signs, providing constant, real-time data on her health—like a 24-hour-a-day medical checkup. The Health-Alert identifies loss of hit points, ability damage, and the conditions dazed, disabled, dying, exhausted, fatigued, helpless, paralyzed, stunned, unconscious, and, by default, stable. Because this information is displayed as a series of coded readouts, though, it requires a DC 5 Knowledge (earth and life sciences) check to correctly interpret the data. A handheld diagnostic computer, commonly included in first aid and medkits in PL 6, displays the information in plain language when it is touched to the bracelet (or the area where the microchip is implanted).

The real utility of the Health-Alert is that it transmits its data to paramedic facilities, alerting them if the subject's vital signs are low (such as when suffering from adverse conditions). The paramedics can then contact the subject (in the case of low-danger situations, such as the fatigued or exhausted conditions), or to dispatch a team to administer emergency aid (as in the case with disabled or paralyzed subjects). Response time is generally from 1d4+2 minutes in heavily populated areas (such as cities), 2d4+10 minutes in areas of average population (such as small towns), or 2d20+20 minutes in sparsely populated areas (such as in the country). Service in wilderness areas is nonexistent.

The Health-Alert's frequency can be altered with a DC 25 Computer Use check.

Hydrate

Hydrate is a commercially available chemical compound that provides the same benefit as an 8-hour supply of water—all in pill form. Using more than two capsules a day for more than three days results in acute kidney damage (1d4 Constitution damage each day until use is discontinued).

Jumper Pack

A jumper pack is a bulky backpack that allows the wearer to fly for short distances. Less versatile (and thus less popular) than the jetpack, the jumper pack derives its name from the fact that it can carry the wearer a maximum of 250 feet before its premeasured fuel mixture runs out, forcing the wearer to land; this results in a kind of sustained jumping movement. A character equipped with a jumper pack can fly at a speed of 50 feet (poor maneuverability).

Each jumper pack carries enough fuel for 10 jumps; replacement fuel cells have a purchase DC of 8.

Microtorch

The microtorch, which is no larger than a flashlight, is a handheld arc welder and cutting torch combination. It is commonly used by rescue services, service workers, and military engineer units. In addition to making sturdy welds, the microtorch can burn through steel. A microtorch deals 2d10 points of damage, but it must be no more than 1 inch from the surface to be cut. Obviously, a microtorch can be used as a weapon as well; the wielder must make a melee touch attack to deal damage with it.

Nausea Wand

The nausea wand employs short-range subsonic waves to cause a systemic reaction in the target's body, producing sudden, devastating nausea. The wielder makes a melee touch attack to trigger the effect. Targets who fail a DC 15 Fortitude save are nauseated for 1d4+1 rounds.

Piercing Panel

The forerunner of the piercing visor, the piercing panel allows the wielder to see through any solid object against which the panel is pressed. Using a combination of sensors, the panel creates an accurate computer-rendered image of what lies on the other side of the object.

Placing and activating a piercing panel requires a full-round action. The panel can penetrate 3 inches of metal (except lead, which it cannot penetrate at all), or 1 foot of other materials, including concrete, wood, and plaster.

Superlube Sprayer

Superlube is a virtually frictionless substance designed for use against rioting prison convicts. The superlube sprayer consists of two large, heavy tanks strapped to the user's back, with a spray nozzle attached to the end of a hose, used to spray superlube.

As an attack action, the user can spray a 5-foot-by-5-foot square with superlube; he can spray a 10-foot-by-10-foot square as a full-round action. Anyone attempting to leave a square coated with superlube must make a Balance check or fall down in the same square. Characters moving at a crawl gain a +5 circumstance bonus on their Balance checks.

Wallcrawler Gear

Wallcrawler gear uses thousands of tiny suction cups and variable-grip adhesives implanted in soft boots and gloves to greatly improve the wearer's ability to cling to surfaces. Using wallcrawler gear grants the wearer a +4 equipment bonus on Climb checks. Using at least the gloves in combat grants the wearer a +4 equipment bonus on grapple checks made to hold an opponent.

Fusion Age Equipment Gadgets

The following gadgets are found in the Fusion Age and can apply to equipment of that era or later, provided all gadget-specific restrictions are observed.

Graphic Weave

Graphic weave changes the color of the wearer's clothing and can be programmed to mimic the appearance of a different cut of clothing, though the actual cut doesn't change. (For example,

COMPUTERS AND ARTIFICIAL INTELLIGENCE

Computers equipped with true artificial intelligence (or A.I.) appear in the Fusion Age. Such a computer can be thought of as a sort of stripped-down robot—it needs only a frame, skill software, feat software, and perhaps sensors and accessories. Locomotion, manipulators, armor, and ability upgrades are useful, but not necessary to the A.I.'s functions. Like robots with A.I., computers with A.I. can have classes and levels—though, of course, many special abilities are beyond their capacity to perform without appropriate manipulators or sensory apparatus.

See Chapter Ten: Robotics in *d20 Future* for information on how to construct a robot or computer with artificial intelligence.

a jumpsuit with graphic weave could be made to resemble a tuxedo, but it would still be a one-piece article of clothing.)

Activating a change in the graphic weave is a move action. Changing the apparent cut of the clothing grants the wearer a +1 circumstance bonus on Disguise checks. At the GM's discretion, changing the clothing's color might grant the wearer a +2 circumstance bonus on Hide checks. Programming unusual patterns into the clothing (such as matching the wallpaper of a specific room, so as to appear to blend in) requires a DC 15 Computer Use check. The graphic weave's computer memory can store up to six different variations.

Restrictions: None.

Purchase DC Modifier: +1.

Fusion Age Computers

The following computer equipment is available at PL 6 and higher.

System Smoker

System smokers are antihacking programs that backtrack unauthorized access to the source and override the surge protection on the intruder's system, causing a massive electrical jolt. The operator has very little time to react, but can notice the incoming power surge with a successful DC 18 Computer Use check. Doing so allows her to make a DC 15 Reflex save to disconnect the computer. If the operator fails, the electrical surge destroys the computer.

Wrist-Comp

A wrist-comp is a miniature flatscreen computer worn, as the name suggests, on the user's wrist. It functions as well as any other computer, except the tiny display imposes a -1 penalty on Computer Use checks.

Fusion Age Computer Gadgets

The following gadgets are found in the Fusion Age and can apply to computers of that era or later, provided all gadget-specific restrictions are observed.

Holographic Display

Three-dimensional holographic displays vastly increase a computer's graphic capability, granting a +2 equipment bonus on Computer Use checks.

Restrictions: None.

Purchase DC Modifier: +3.

Satellite Imagery Receiver

A computer equipped with a satellite imagery receiver can access real-time images from surveillance satellites—providing a bird's-eye view of nearly any exterior location. This device not only provides an up-to-the-minute map of an area, but it indicates which areas are lit and the location of personnel on the ground.

Obviously the satellite imagery doesn't penetrate buildings, or even heavy foliage or cloud cover, and top-secret areas are, of course, not covered by satellite surveillance. Even when conditions are ideal, the total window of surveillance is almost never longer than 20 minutes.

The user cannot adjust the satellite's trajectory, field of view, or speed, though she can zoom in or zoom out. Covert action units use the images from surveillance satellites to avoid detection, often timing their activities to coincide with a surveillance satellite passing overhead (with a clear field of vision) for maximum effectiveness.

Satellite imagery receivers are coded to access specific, public satellites. Accessing a private satellite—assuming the user doesn't have the proper access code—requires a Computer Use check (DC 15), to defeat the satellite's computer security.

Restrictions: None.

Purchase DC Modifier: +5.

Softscreen Monitor

A softscreen monitor is a collapsible monitor made of flexible optic microfibers. It can be rolled up for easy transport.

Restrictions: Not applicable to computers with holographic displays.

Purchase DC Modifier: +4.

Surveillance Round Receiver

The surveillance round (see page 15) is useless without a monitor equipped to receive the round's transmission. This receiver unit attaches to any video monitor (computer or otherwise) and displays the transmission from the surveillance round.

Restrictions: None.

Purchase DC Modifier: +1.

Trajectory Detector

Consisting of a network of sensors in a lightweight vest (which can be worn over armor), the trajectory sensor extrapolates the course of a projectile backward from the point of impact—pinpointing the attacker's location. It is mainly used by the military to locate snipers—though, of course, it is useless until the attacker fires.

A trajectory detector grants the user an equipment bonus on Spot checks made to locate an attacker: a +2 equipment bonus for each shot fired. It does not provide any information about the attacker other than the location from which the attack was made.

Restrictions: None.

Purchase DC Modifier: +2.

Fusion Age Psitech

The following psitech is available at PL 6 and higher.

Neural Blanker

The neural blunker is a bulky, pistol-like weapon that delivers a devastating psychic shock to the target. A target who fails a DC 15 Will save is stunned for 1d4+1 rounds.

Psiblocker

Psiblockers are neural interference devices worn on the head. A psiblocker grants the wearer power resistance 10. Anyone using psionic powers against the wearer must make a level check (1d20 + psionic character's class level) for the power to affect the wearer (assuming power resistance applies; see the power's description).

Fusion Age Psitech Gadgets

The following gadgets are found in the Fusion Age and can apply to psitech items of that era or later, provided all gadget-specific restrictions are observed.

Psychic Converter

The psychic converter enables items ordinarily powered by electricity to be powered with psionic power points instead. The converter can store up to 10 psionic power points; transferring power points requires a full-round action (no matter how many are transferred). Each use of an item drains 1 power point; for items with sustained usage (such as a light source), each power point allows the item to operate for 2 minutes.

Restrictions: Electrically powered items only.

Purchase DC Modifier: +2.

PROGRESS LEVEL 7 GEAR

In the Gravity Age, technology undergoes its most radical advances, with weapons of war being the primary field of development. The Gravity Age sees the advent of both plasma weapons and powered armor, and gravitic technology, for which the age is named, revolutionizes nearly all forms of technology—if not in operation, then in construction.

Gravity Age Weapons

The following weapons are available at PL 7 and higher.

Gauss Rifle

Gauss rifles use magnetic energy to damage the target's internal organs—making armor ineffective and powered armor a liability. A gauss rifle deals 2d6 points of damage with a ranged touch attack. A target wearing powered armor must make a DC 13 Fortitude save; failure means the armor becomes nonfunctional for 1d3 rounds.

When used against robots or mecha, the gauss rifle's damage is doubled and the robot or mecha becomes nonfunctional for 1d3 rounds (Fortitude DC 13 negates).

Grav-Glob Gun

Grav-globs are high-density blobs made of magnetized, adhesive metal alloy. When properly charged, grav-globs quickly increase in size, simultaneously becoming heavier. A grav-glob initially weighs 1 pound, but doubles in weight each round to 2, 4, 8, and finally 16 pounds (its upper limit). Because a successful hit with a grav-glob merely encumbers the target, grav-glob guns are extremely popular as nonlethal crowd-control devices.

If the attack roll with a grav-glob gun results in a critical hit, the grav-glob makes contact not only with the target, but with a nearby solid surface as well (usually the floor, but possibly a wall or vehicle). A critical hit with a grav-glob sticks the target in place unless the target makes a DC 15 Reflex save. Failure means the target is unable to move, and takes a -2 penalty on attack rolls and a -4 penalty to her Dexterity. Success means the target is not



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stuck in place, but still has the grav-glob attached to her and moves at only half speed.

A character struck by a grav-glob can remove it with a DC 17 Strength check.

Grenade, Plasma

Plasma technology makes grenades with electrically charged gases the terror of the battlefield, leaving behind only hemispherical craters. Because the plasma explosion is so devastating, the burst radius is intentionally engineered to be small, in order to preserve potentially useful enemy materiel and to minimize the chance of a catastrophic cook-off of the enemy's ammunition.

Light Antitank Pistol

The light antitank pistol, or LAP, is a disposable, one-shot pistol version of the PL 5 M72A3 LAW rocket launcher. Like the LAW, it is collapsible and must be extended (as a move action) before firing. Its overall length is just over 1 foot.

With a successful hit, the LAP's high explosive warhead detonates, dealing 10d6 points of damage to all creatures within a 10-foot radius (Reflex DC 18 half). Further, the rocket's shaped charge enables it to bypass up to 10 points of hardness when used against a vehicle, building, or object. (This applies only to the target struck, not other objects within the burst radius.)

The LAP has a minimum range of 20 feet. If fired against a target closer than 20 feet, it does not arm and will not explode.

The Exotic Firearms Proficiency (rocket launchers) feat applies to this weapon.

Nanoround

Nanorounds are programmable projectiles equipped with nanite loads that can be set to attack only certain materials, such as metal or flesh. Nanorounds exist for all types of handguns and longarms. (The purchase DC modifier given on Table 1-10 is added to the normal cost of the weapon's ammunition.)

A projectile weapon equipped with nanorounds deals no damage on a successful hit. Instead, it deals damage over the

TABLE 1-7: PROGRESS LEVEL 7 RANGED WEAPONS

Weapon	Damage	Critical	Type	Damage Incr.	Range	Rate of Fire	Magazine	Size	Weight	DC	Purchase Restriction
Gauss rifle	2d6 ¹	20	Bludgeoning/concussion	60 feet	S	20 int.	Large	14 lb.	26	Mil (+3)	
Grav-glob gun	Special ¹	20	—	50 feet	S	15 int.	Huge	42 lb.	25	Res (+2)	
Light antitank pistol ²	10d6 ¹	—	—	80 feet	1	1 int.	Medium	3 lb.	14	Mil (+3)	
Needle pistol	2d4	20	Piercing	40 feet	A	80 box	Medium	2 lb.	15	Res (+2)	
Needle rifle	2d6	20	Piercing	100 feet	A	200 box	Large	10 lb.	18	Res (+2)	
Render rifle	2d10	20	Slashing	120 feet	S	10 int.	Large	14 lb.	20	Mil (+3)	

¹ See the weapon description for details.

² This weapon requires the Exotic Firearms Proficiency (rocket launchers) feat.

TABLE 1-8: PROGRESS LEVEL 7 MELEE WEAPONS

Weapon	Damage	Critical	Type	Damage Increment	Range Size	Weight	DC	Purchase Restriction
Power cestus	Special ¹	20	Bludgeoning	—	Small	3 lb.	14	Res (+2)

1 See the weapon description for details.

TABLE 1-9: PROGRESS LEVEL 7 AMMUNITION TYPES

Ammunition (Quantity)	Damage Type	Purchase DC	Restriction
Nanoround (varies)	Special ¹	+4 ¹	Mil (+3)

1 See the ammunition description for details.

TABLE 1-10: PROGRESS LEVEL 7 EXPLOSIVES AND SPLASH WEAPONS

Weapon	Damage	Critical	Damage Type	Burst Radius	Reflex DC	Range Increment	Size	Weight	Purchase DC	Purchase Restriction
Grenade, plasma	8d6	—	Energy	—	15	10 ft.	Tiny	1 lb.	16	Mil (+3)

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following 1d3+1 rounds to whatever material it has been programmed to damage.

Setting	Damage/Round
Flesh tissue	1d4 Con
Bone tissue	1d4 Str
Nerve tissue	1d2 Dex/1d3 Int
Metal	1d2 hardness/1d2 hit points
Wood	1d3+1 hardness/1d3+1 hit points

Needle Pistol

Needle weapons (or “needlers”) are a variation of the PL 6 flechette weapons (see page 13), firing streams of tiny, pointed slivers of titanium rather than bundles of tungsten darts. These needles deal less damage than the average bullet, but the weapons fire virtually silently and can hold considerably more ammunition than other projectile weapons.

Because they are autofire-only weapons, needle weapons scatter their damage over an area and are typically not used to target an individual. However, a needle pistol targets a 5-foot square, rather than the usual 10-foot square for autofire weapons. It is most dangerous when used by someone with the Burst Fire feat, which makes the most of the needle stream.

Despite their ammunition’s logical adaptability to the task, needlers cannot be used to deliver poisons. The magazine is actually a coil of titanium wire, which is cut to the appropriate shape as part of the firing process; coating the entire coil with poison invariably jams the weapon.

Needle Rifle

Needle rifles are the long-range version of the needle pistol with a much larger magazine.

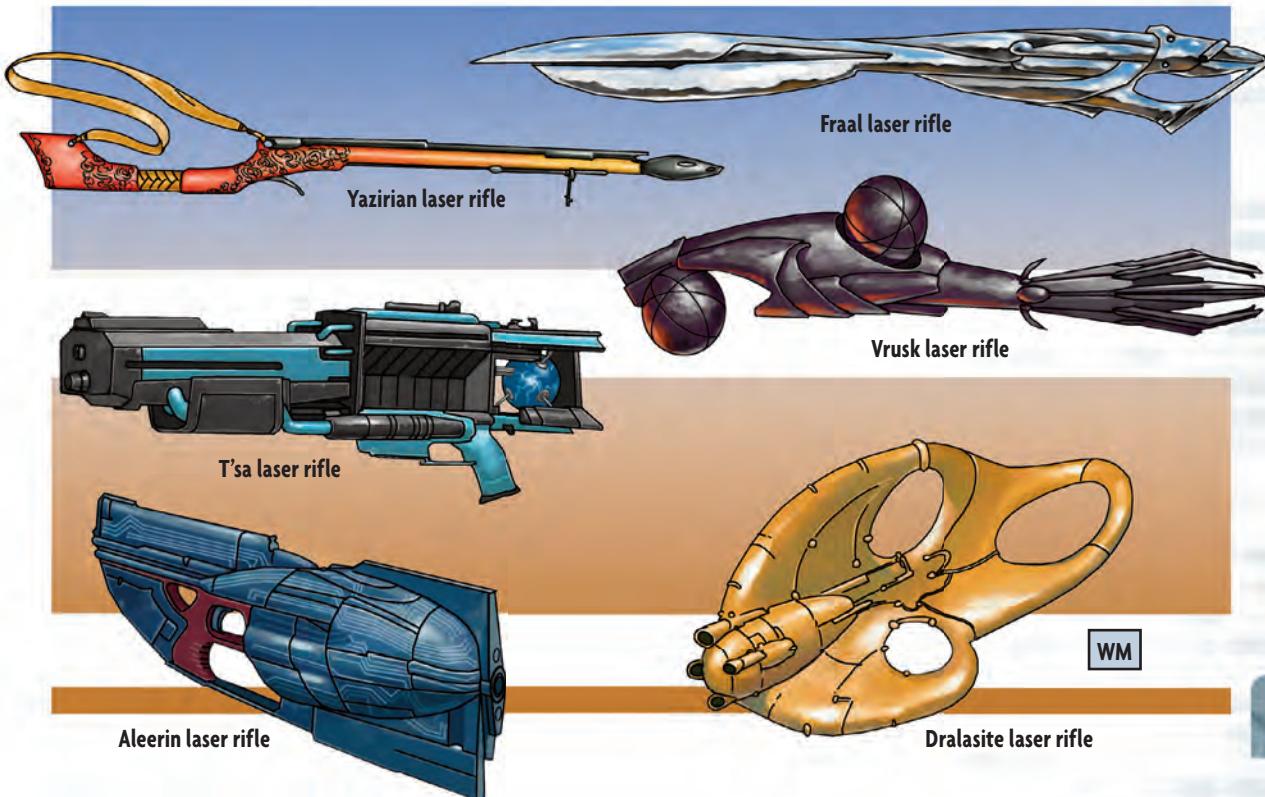


TABLE 1-11: PROGRESS LEVEL 7 ARMOR

Armor	Type	Equip. Bonus	Nonprof. Bonus	Max Dex Bonus	Armor Penalty	Speed (30 ft./20 ft.)	Weight	Purchase DC	Restriction
General Armor									
PAT Series ¹	Tactical	+7	+4	+0	-4	15 ft.	65 lb.	19	Mil (+3)
Grav shield	Concealable	-	-	-	-	30 ft.	15 lb.	22	Res (+2)
Psitech Armor									
Telekinetic shield ¹	Special ¹	+2	+2	+6	-	30 ft.	4 lb.	21	-

¹ See the armor description under Gravity Age Psitech for details.

Power Cestus

Consisting of a forearm-length metal gauntlet, the power cestus uses gravitonic capacitors to lighten the gauntlet for the wearer, but without losing any of its terrific smashing power (or the wielder's speed). When used by a character with the Brawl or Combat Martial Arts feat, the power cestus increases the base damage by an unarmed strike by 2d4 points and turns the damage into lethal damage.

The cost and weight given are for a single item.

Render Rifle

Render rifles use gravitic inducers to cycle rapidly back and forth between attraction and repulsion, literally tearing the target to pieces. A target struck by a render rifle's beam takes not only the given damage, but 1d4 Constitution damage as well. The target can make a DC 15 Reflex save to negate the Constitution damage.

Gravity Age Weapon Gadgets

The following gadgets are found in the Gravity Age and can apply to weapons of that era or later, provided all gadget-specific restrictions are observed.

Zero-Point Energy (ZPE) Battery

Zero-point energy batteries utilize gravitonic capacitors in a precise array to yield extraordinary amounts of energy. The energy output is six times higher than conventional electrical batteries. (Multiply the clip size by 6.) Any weapon with a power pack can replace the power pack with a ZPE battery.

Restrictions: Weapons with power packs only.

Purchase DC Modifier: +4.

Gravity Age Armor

The following armors are available at PL 7 and higher.

Personal All-Terrain (PAT) Armor

The first working power armor suit is the PAT Series 1. Though heavy and slow, the PAT dominates urban battlefields in a way that tanks and APCs never could. Consisting of durable plating, an onboard computer, heads-up display, exoskeletal strength assist, and battery array, the PAT not only protects its wearer from most small-arms fire, but enables the wearer to wield heavy weapons and provides computer targeting.

The PAT Series 1 armor suit provides the following benefits (in addition to its armor protection):

- +2 Strength;
- +1 equipment bonus on attack rolls;
- +1 equipment bonus on Computer Use checks;

- Modem;
- Digital camera;
- Portable satellite telephone.

Grav Shield

Grav shields produce a constant repulsion field that blunts the force of incoming attacks. The wielder gains DR 5/—.

Gravity Age Armor Gadgets

The following gadgets are found in the Gravity Age and can apply to armors of that era or later, provided all gadget-specific restrictions are observed.

Gravlight Systems

Gravlight systems use gravitonic capacitors to counterbalance the weight of armor, making it more comfortable to wear and more maneuverable. Armor equipped with gravlight systems has its nonproficiency bonus and maximum Dexterity bonus increased by 1, and its armor penalty reduced by 2 (from -4 to -2, for example). The wearer's speed also increases by 5 feet, to a maximum of his normal base land speed.

Restrictions: None.

Purchase DC Modifier: +4.

Gravity Age Equipment

The following equipment is available at PL 7 and higher.

Autolitter

The autolitter is a combination stretcher and paramedic. Consisting of a collapsible stretcher held aloft by a thruster unit, it incorporates a medicomp sensor (see page 75 of *d20 Future*), which automatically scans the patient to determine the best method of treatment, as well as an integrated medical kit with four doses of biocort (see page 74 of *d20 Future*) and four doses of energize (see below).

Chemical, Energize

Energize makes the subject's heart and lungs temporarily more efficient, increasing the subject's hit points by 2d4+2—even above the subject's normal total. These temporary hit points last for 15 minutes.

Chemical, Withstand

Withstand is a potent pharmaceutical that toughens the subject's flesh and bones, converting any damage the subject takes to non-lethal damage. Withstand's effects are temporary, though, lasting only 1 minute. At the end of that period, the subject takes 1 point of Constitution damage, due to the stress on his system.

TABLE 1-12: PROGRESS LEVEL 7 EQUIPMENT

Purchase					
Name	Size	Weight	DC	Restriction	
Chemical and Medical Equipment					
Autolitter	Medium	26 lb.	22	—	
Chemical, energize	Diminutive	—	8	—	
Chemical, withstand	Diminutive	—	10	—	
Computer Equipment					
BodyComp	Large	22 lb.	24	—	
Miscellaneous Equipment					
Flight pack	Medium	24 lb.	20	Lic (+1)	
Nausea gun	Medium	3 lb.	8	Lic (+1)	
Psitech Equipment					
Sanguinizer	Tiny	1 lb.	21	Ill (+4)	

Flight Pack

The flight pack allows a character to fly at a speed of 60 feet (good maneuverability) for up to 8 hours on a single fuel cell. It consists of a set of boots and gloves attached by thin cables to a small backpack. Replacement fuel cells have a purchase DC of 8.

Nausea Gun

Like its wand predecessor (see page 17), the nausea gun employs subsonic waves to produce sudden, overwhelming nausea in targets up to 60 feet away. The nausea gun requires a ranged touch attack to trigger the effect. Targets who fail a DC 15 Fortitude save are nauseated for 1d4+1 rounds.

Gravity Age Equipment Gadget

The following gadget is found in the Gravity Age and can apply to equipment of that era or later, provided all gadget-specific restrictions are observed.

Zero-Point Battery (ZPE) Battery

Zero-point energy batteries utilize gravitonic capacitors in a precise array to yield extraordinary amounts of energy. The energy output is six times higher than conventional electrical power packs. (Multiply the number of charges in the power pack by 6.) Any item with a power pack can replace the power pack with a ZPE battery.

Restrictions: Equipment with power packs only.

Purchase DC Modifier: +4.

Gravity Age Computers

The following computer equipment is available at PL 7 and higher.

BodyComp

The BodyComp is a full-body suit incorporating all the standard computer hardware, as well as tactile and olfactory feedback. In essence, the BodyComp creates an immersive experience for the wearer—a sense of being physically present in a virtual landscape.

The BodyComp's wearer can perform computer operations as though they were physical actions. Finding a file requires a Search check; defeating computer security requires a Disable Device check; and operating a remote device merely requires locating it. The DCs for each of these activities are the same as the standard Computer Use DCs. Other applications still require the Computer Use skill.

Gravity Age Psitech

The following psitech items are available at PL 7 and higher.

Sanguinizer

Designed for use as a torture device, the sanguinizer induces a sudden, catastrophic thrombosis in the victim by pinching shut several vital arteries telekinetically. The result is bloody, painful, and often fatal. The victim takes 1d4 points of Constitution damage for each round of exposure to the device, and must make a DC 13 Fortitude save or be paralyzed with seizures for as long as the device is in operation. (Use the victim's Constitution score prior to the Constitution damage to calculate the Fortitude save modifier.) On a successful save, the victim is merely nauseated.

The sanguinizer is a short-range device; it can affect only a target in an adjacent square.

Telekinetic Shield

The telekinetic shield is a 9-inch disc worn on the wielder's wrist. When activated (as a free action), it telekinetically diverts the path of incoming objects, granting the wielder a +2 deflection bonus to Defense against ballistic weapons or physical melee attacks.

Gravity Age Psitech Gadgets

The following gadgets are found in the Gravity Age and can apply to psitech items of that era or later, provided all gadget-specific restrictions are observed.

Crystal Matrix

Crystal matrices combine zero-point energy and psionic emissions to boost the power of psionic items. The item's manifester level is treated as 2 levels higher for purposes of any effects that depend on manifester level (such as saving throws).

Restrictions: None.

Purchase DC Modifier: +4.

PROGRESS LEVEL 8 GEAR

The Energy Age brings on the miniaturization of power production, making it possible for weapons and equipment that once required huge power sources to become relatively common personal gear. This same reduction in the size of physical power plants makes interstellar travel finally possible, and ensures that humankind can make contact with other starfaring species and exchange information and technologies.

Energy Age Weapons

The following weapons are available at PL 8 and higher.

Missile Launcher

The human-portable version of the CryoVac missile launcher (see page 76) delivers a warhead of high-intensity cryogenic cold. Each missile deals 10d6 points of cold damage (Reflex DC 15 half) to everyone in a 15-foot burst radius. Characters who take damage from the missile must also make a DC 15 Fortitude save or be paralyzed with cold for 1d4+1 rounds; those who succeed at this save are merely pinned for 1d4+1 rounds.

TABLE 1-13: PROGRESS LEVEL 8 RANGED WEAPONS

Weapon	Damage	Critical	Type	Damage Incr.	Range Fire	Rate of Magazine	Size	Weight	DC	Purchase Restriction
Missile launcher	10d6 ¹	20	Energy	60 feet	1	1 int.	Large	15 lb.	24	Mil (+3)
Singularity launcher	15d6 ¹	20	Concussion	80 feet	1	1 int.	Large	17 lb.	28	Mil (+3)
Throwback rifle	Special ¹	—	Concussion	20 feet	S	12 int.	Medium	8.5 lb.	16	Res (+2)

¹ See the weapon description for details.

TABLE 1-14: PROGRESS LEVEL 8 EXPLOSIVES AND SPLASH WEAPONS

Weapon	Damage	Critical	Type	Damage Radius	Burst DC	Reflex Increment	Range Size	Weight	DC	Purchase Restriction
Grenade, pyrokinetic ¹	5d6	—	Energy	10 ft.	18	10 ft.	Tiny	1 lb.	18	Mil (+3)

¹ See the weapon description under Energy Age Psitech for details.

Singularity Launcher

Another infantry weapon derived from the more massive mecha weapon (see page 76), the singularity launcher fires a tiny black hole, inducing remarkably heavy gravity at the point of impact. The black hole generated by the weapon deals 15d6 points of damage to the target. Each launcher holds only enough energy to generate one such singularity; afterward, the weapon is useless.

Throwback Rifle

Not exactly a nonlethal weapon, but still useful in crowd control situations, the throwback rifle uses gravitic induction to produce a high-intensity repulsion blast. Targets struck by the blast take no immediate damage but are hurled away from the wielder, taking damage as though from falling. A Medium-sized target is thrown 20 feet by a hit from the throwback rifle. Smaller creatures add 10 feet to this distance for each size category less than Medium; larger creatures subtract 10 feet from this distance for each size category greater than Medium (to a minimum of 0 feet, or no effect).

A character takes 1d6 points of damage per 10 feet of distance “fallen,” but only if the character strikes a solid surface that is perpendicular to the path of travel. A character who is thrown parallel to the ground takes only half damage, unless he impacts a perpendicular surface before traveling the full indicated distance.

Depending on the situation, a character might be able to reduce the damage somewhat with a successful DC 15 Tumble check. The GM should determine when the Tumble skill is applicable.

Energy Age Weapon Gadgets

The following gadgets are found in the Energy Age and can apply to weapons of that era or later, provided all gadget-specific restrictions are observed.

Induction Inversion Adapter

The induction inversion adapter allows an energy weapon to be switched to depletion mode, creating an inversion beam that drains the energy from whatever power sources the beam strikes. Switching to depletion mode is a free action. The weapon's wielder must attack the object from which he desires to drain the power. If the attack is successful, the target object takes no damage, but must make a DC 15 Reflex save. (Treat robots, characters in

powered armor, and mecha as attended objects for the purpose of this save.)

If the save fails, the object is no longer operational and must be recharged before it can be used again. If the save succeeds, the object loses only half its remaining power; its remaining charge or run time is reduced by 50% (to a minimum of 1 charge or 1 round).

Restrictions: Ranged energy weapons only.

Purchase DC Modifier: +8.

Energy Age Armor

The following armors are available at PL 8 and higher.

Tactical Assault Armor

Bridging the gap between powered armor and mecha, tactical assault armor incorporates many of the design features of mecha in a size useable by ordinary infantry. Featuring an induction engine power plant, the armor includes powerful servomotors boosting the wearer's physical strength, speed, and overall combat performance.

The tactical assault armor suit provides the following benefits (in addition to its armor protection):

- +4 Strength;
- +10 feet base land speed;
- +1 equipment bonus on attack rolls;
- +2 equipment bonus on Survival checks;
- +2 equipment bonus on Computer Use checks;
- Hologram recorder (see page 78 of *d20 Future*);
- Modem;
- Portable satellite telephone.

Energy Age Armor Gadgets

The following gadgets are found in the Energy Age and can apply to armors of that era or later, provided all gadget-specific restrictions are observed.

Absorptive

Absorptive armor is studded with microreceptors that absorb incoming energy attacks, boosting the armor's power. Absorptive armor gives the wearer DR 10 against energy damage. For each 10

TABLE 1-15: PROGRESS LEVEL 8 ARMOR

Armor	Type	Equip. Bonus	Nonprof. Bonus	Max Dex Bonus	Armor Penalty	Speed (30 ft./20 ft.)	Weight	Purchase DC	Restriction
Tactical assault	Tactical	+9	+4	+1	-6	30 ft.	55 lb.	25	Mil (+3)



Tactical assault armor

points of damage the armor absorbs, the wearer gains a +1 bonus to her Strength score, to a maximum of +4 Strength. Each +1 of additional Strength lasts for 3 rounds.

Restrictions: Powered armor only.

Purchase DC Modifier: +5.

Energy Age Equipment

The following equipment is available at PL 8 and higher.

Chemical, Mutagenic Inducer

Mutagenic inducers are fast-acting, irradiated chemical cocktails that temporarily mutate the subject in specific ways. Each mutation lasts for 5 minutes, and has a purchase DC equal to its Mutation Points multiplied by 10. (So Acidic Saliva would have a purchase DC of 10, Energy Diffusion would have a purchase DC of 20, and so on. Mutations with an MP cost of 0 have a purchase DC of 5.)

Mutations are available in single-dose injectors and can be combined, though combining two of the same mutation does not alter the ability or extend the duration. (See Chapter Twelve: Mutations in *d20 Future* for descriptions of the mutations.)

Certain pharmaceutical companies take shortcuts to reduce the cost of their mutagenic inducers by introducing mutation drawbacks—but these are not as predictable as the mutations themselves. Mutagenic inducers with drawbacks reduce the purchase DC by 2 for each drawback (maximum of three drawbacks); the GM should use Table 12–2: Drawbacks in *d20 Future* to determine which drawbacks occur. Drawbacks with permanent effects (such as Ability Decay) instead last for 1 day per dose.

Hellgel

Hellgel is a kind of inert plasma in gel form that can be applied to a surface before being activated, making it a perfect means of burning through solid metal—particularly ship hulls. The substance is ordinarily licensed only to rescue and salvage workers, but frequently shows up in the possession of shipjackers and pirates.

A single tube of hellgel is sufficient to create a 3-foot-by-3-foot hole. Multiple tubes can be applied end to end to increase the size of the hole. Applying hellgel takes 2 rounds for each square foot. Once it is in place, it can be ignited by an electrical signal generated by a chip in the gel and triggered by a remote attached to the tube. The maximum range for the remote is 15 feet. Once ignited, the gel burns for 1 round, dealing 4d10 points of damage.

TABLE 1–16: PROGRESS LEVEL 8 EQUIPMENT

Name	Size	Weight	Purchase DC	Restriction
Chemical and Medical Equipment				
Chemical, mutagenic inducer	Diminutive	—	Varies	Res (+2)
Computer Equipment				
Hydromolecular	Tiny medium	0.5 lb.	10	—
Miscellaneous Equipment				
Hoverpack	Tiny	13 lb.	17	—
Psitech Equipment				
Psicom	Diminutive	—	16	Lic (+1)

1 See the item description for details.

Hoverpack

A refinement of the jetpack and flight pack, the hoverpack allows the wearer to fly at a speed of 80 feet (perfect maneuverability) for up to 12 hours on a single fuel cell. Replacement fuel cells have a purchase DC of 6.

Energy Age Equipment Gadgets

The following gadgets are found in the Energy Age and can apply to equipment of that era or later, provided all gadget-specific restrictions are observed.

Holosol

Holosol is a sensory inducer unit that connects to a hologram player (see page 78 of *d20 Future*) and creates the impression of an actual physical presence. The sensation is only imaginary, however; touching a “holosolid” wall creates the feeling of resistance, but anyone who knows the wall is only a hologram can simply push her hand right through. Those not aware of a holosolid object’s true nature are allowed to make a DC 15 Will save after interacting with the hologram; success means they are able to ignore its apparent solidity. A character can also attempt the Will save if informed by another character that the object is not truly solid.

Restrictions: None.

Purchase DC Modifier: +5.

Energy Age Computers

The following computer equipment is available at PL 8 and higher.

Hydromolecular Medium

Hydromolecular medium is the latest advancement in data storage: data encoded onto water molecules. A character who drinks the water temporarily gains the benefit of the data stored in it. The purchase DC is calculated based on the nature and degree of the data.

Data	Purchase DC
Skill	2 per rank
Feat	15

Skill ranks gained by drinking hydromolecular medium do not add to any skill ranks the imbiber might already have in the skill. The imbiber takes the greater number of ranks; she does not add them together. Similarly, having a feat and drinking it in the form of hydromolecular medium does not grant the imbiber two copies of the feat, even if the feats ordinarily stack. The imbiber must possess all necessary prerequisites for a feat for the imbued feat to be usable.

TABLE 1-17: PROGRESS LEVEL 9 RANGED WEAPONS

Weapon	Damage	Critical	Damage Type	Range Incr.	Rate of Fire	Magazine	Size	Weight	Purchase DC	Restriction
Antimatter launcher	8d12 ¹	20	Energy	80 ft.	S	12 int.	Large	16 lb.	24	Mil (+3)
Displacement wand	Special ¹	—	—	50 ft.	S	10 int.	Large	14 lb.	22	Res (+2)
Pulseaser	3d8 ¹	20	Energy	100 ft.	S, A	24 int.	Large	14.5 lb.	25	Res (+2)

¹ See the weapon description for details.

Drinking the medium requires a full-round action, and the effects manifest 3 rounds later. The imbiber can make use of the skill or feat for 5 minutes, after which the information degrades to uselessness (though a basic recall of the information remains, rather like reading a book). Fortunately, because the medium is simple water, repeated use of hydromolecular medium has no lasting side effects. In fact, hydromolecular medium has replaced the printed word as a recreational activity.

Energy Age Computer Gadgets

The following gadgets are found in the Energy Age and can apply to computers of that era or later, provided all gadget-specific restrictions are observed.

Hydromolecular Encoder

The computer’s data storage system is capable of recording information directly onto water molecules, making tremendous amounts of data storage no more expensive than a glass of water. Data recorded in water can then be drunk, temporarily granting the imbiber several ranks in a skill, or even a feat. See *Hydromolecular Medium*, above.

Encoding a skill onto water molecules takes 1 minute per skill rank; recording a feat onto water molecules takes 10 minutes. In either case, the character must possess a recorded copy of the skill or feat in question. Otherwise, writing the necessary skill software requires 1 hour per skill rank and a successful Computer Use check (DC 20 + the number of skill ranks); writing the feat requires 12 hours of work and a successful DC 30 Computer Use check.

Restrictions: None.

Purchase DC Modifier: +4.

Energy Age Psitech

The following psitech is available at PL 8 and higher.

Grenade, Pyrokinetic

Pyrokinetic grenades unleash sheets of roaring flame that target only enemies within the blast radius, dealing 5d6 points of fire damage (Reflex DC 18 half). Any character who takes damage from a pyrokinetic grenade might also catch on fire. (See page 230 of the *d20 MODERN Roleplaying Game*.)

Psicomm

A psicomm unit resembles a silver rectangle that attaches to the wearer’s head with adhesives. Psicomms allow characters to communicate telepathically with one another as though they were employing the *mindlink* power (see page 369 of the *d20 MODERN Roleplaying Game*). Only individuals with a psicomm unit are included in the link, and their psicomm units must be attuned to other units in the link. To attune a psicomm unit to another, the two must touch for at least 30 seconds.

The maximum range for psicomm communication is 500 feet.

¹ See the weapon description for details.

Energy Age Psitech Gadgets

The following gadgets are found in the Energy Age and can apply to psitech items of that era or later, provided all gadget-specific restrictions are observed.

Psychoreactive Trigger

Grenades or other explosives equipped with psychoreactive triggers are capable of detonating only under extremely precise conditions: specific thought patterns, in most cases. The psychoreactive trigger actually uses a sophisticated brain-wave scanner to detect combinations of thoughts that denote targets and nontargets, and the trigger's computer decides whether or not the device can explode.

The psychoreactive trigger can search for up to two conditions, and exclude one. For example, it could scan for the thought patterns of a soldier (condition 1) who is male (condition 2), and detonate the mine when such a person enters the mine's square. However, the trigger can be instructed not to detonate if the soldier is an ally of the person who set the mine (exclusion).

The less specific the trigger's conditions and exclusion are, the more likely it is to detonate. The more specific, the more likely it is to detonate as intended. The conditions must relate to the identity of a potential target, rather than an individual's actions. That is, the trigger can't be set to detonate if the mine is noticed, or if the target is speaking (though it could be set to detonate against someone who was afraid, or who was thinking about a particular subject).

Restrictions: Psitech grenades, mines, or bombs only.

Purchase DC Modifier: +6.

PROGRESS LEVEL 9 GEAR

Beyond the Energy Age, developments in technology embrace concepts previously only considered theoretical. Miniaturization allows individuals to wear reactors like jewelry, people are able to custom-code atoms to store computer data, and the average human can transcend the limitation of flesh with ease. At the same time, travel technology reaches the point that a traveler can transport himself bodily to nearly any location imaginable. Even time itself becomes malleable, as chronal technology breaks—then redefines—the laws of physics.

PL 9 Weapons

The following weapons are available at PL 9 and higher.

Antimatter Launcher

An antimatter launcher fires nearly microscopic particles of antimatter that generate massive explosions when they come into

contact with solid matter. The antimatter launcher deals 8d12 points of damage on a normal hit, and 5d12 splash damage to anything in a square adjacent to the target.

Displacement Wand

The displacement wand uses chronal energy to launch the target up to half a minute into the future. The wielder must make a melee touch attack with the wand. If the target fails a DC 15 Reflex save, she vanishes from the spot and reappears in the same spot 1d6 rounds later. The target cannot move or act in any way in the meantime. If the target's square is occupied when the target reappears, the target is displaced to a randomly determined adjacent square. The target's position in the initiative order does not change.

It is possible for the wand's wielder to use it on herself.

Pulsemaser

Pulsemasers use a combination of microwave and laser energy to penetrate armor. A shot from a pulsemaser ignores half of the target's hardness when dealing damage.

PL 9 Weapon Gadgets

The following gadgets are found in Progress Level 9 and can apply to weapons of that era or later, provided all gadget-specific restrictions are observed.

Digital Storage

Also known as the digital holster or digital scabbard (in the case of melee weapons), this device breaks a weapon down and stores it digitally in the form of a thin metal bracer. The wielder can then, as a free action, tap the bracer to "draw" the weapon, which appears immediately in his hand. Storing a weapon in the holster is also a free action. The bracer can store only one weapon at a time. The weapon cannot weigh more than 20 pounds and must be able to be held in one hand.

Restrictions: None.

Purchase DC Modifier: +4.

PL 9 Armor

The following armors are available at PL 9 and higher.

Blackhole Singularity Shield

Another adaptation from mecha gear, the blackhole singularity shield generates microscopic black holes that swallow up incoming attacks. As a move action, the wearer can prime the singularity shield. Until his next turn, the wearer can make an opposed attack roll against any incoming weapon, and if successful the incoming

TABLE 1-18: PROGRESS LEVEL 9 ARMOR

Armor	Type	Equip. Bonus	Nonprof. Bonus	Max Dex Bonus	Armor Penalty	Speed (30 ft./20 ft.)	Weight	Purchase DC	Restriction
Psitech Armor									
Psychoactive armor ¹	Concealable	+8 ¹	+6	+6	-1	30 ft./20 ft.	5 lb.	20	—
Shield									
Blackhole singularity shield	Concealable	+2	+6	+6	-0	30 ft./20 ft.	15 lb.	26	Res (+2)

¹ See the item description under PL 9 Psitech for details.



attack deals no damage. The shield generator requires 10 rounds to recharge after it has been used.

PL 9 Armor Gadgets

The following gadgets are found in Progress Level 9 and can apply to armors of that era or later, provided all gadget-specific restrictions are observed.

Digital Storage

Using the same technology as the digital holster (for weapons), this device breaks armor down and stores it digitally in the form of a thin metal band, usually worn about the waist. The wielder can then, as a free action, tap the band to instantaneously don the armor. Storing armor in the device is also a free action. Only one suit of armor can be stored in the device at any one time. The armor cannot weigh more than 100 pounds.

Restrictions: None.

Purchase DC Modifier: +6.

PL 9 Equipment

The following equipment is available at PL 9 and higher.

Autoport

With digitization extended to include safely transporting living tissue across even interstellar distances, short-range teleportation becomes the travel mode of choice for most destinations. Home matter-transference terminals enable citizens to carry out their daily errands and such, while personal teleportation devices such as the autoport allow individuals to make short, time-saving jumps up to 1,000 feet at a time.

The autoport's teleportation is instantaneous. The user merely states a distance and direction, such as "900 feet downward," or "upward to the northwest, 45-degree angle, 400 feet," and instantly reappears in the designated location. After arrival, the user cannot take any other actions until his next turn.

The user can bring along objects as long as their combined weight doesn't exceed the user's maximum load, but cannot bring other creatures.

If the user arrives in a place that is already occupied by a solid body, the user takes 1d6 points of damage and is shunted to a random open space on a suitable surface within 100 feet of the intended location. If there is no free space within 100 feet, the user takes an extra 2d6 points of damage and is shunted to a free space within 1,000 feet. If there is no free space within 1,000 feet, the user takes an extra 4d6 points of damage and is returned to his starting position.

Because transporting matter requires a great deal of energy, the autoport must recharge for a full 5 minutes between each use.

TABLE 1-19: PROGRESS LEVEL 9 EQUIPMENT

Name	Size	Weight	Purchase DC	Restriction
Computer Equipment				
Atomic medium	Tiny	—	Varies ¹	—
Miscellaneous Equipment				
Autoport	Small	5 lb.	18	Lic (+1)
Transmogrifier	Tiny	0.5 lb.	18	Res (+2)
Psitech Equipment				
Psychosurgery kit	Small	6 lb.	16	Lic (+1)

¹ See the item description for details.

Transmogrifier

A transmogrifier modifies the user's flesh to enable him to assume the form of other living beings. The change takes a full-round action, and lasts for half an hour before the user reverts automatically to her original form. The new form can be of the same type as the user or any of the following types: aberration, animal, dragon, fey, giant, humanoid, magical beast, monstrous humanoid, ooze, plant, or vermin. The assumed form cannot have more Hit Dice than the user (or 15 HD, whichever is lower). The new form may not be smaller than Fine, incorporeal, or gaseous. The user's creature type and subtype (if any) change to match the new form (see Chapter Eight of the *d20 Modern Roleplaying Game*).

Upon transmogrifying, the user regains hit points as if she had rested for a night (though this healing does not restore temporary ability damage and provide other benefits of resting; and changing back does not heal the user further). If slain, the user reverts to her original form, though she remains dead.

The user gains the Strength, Dexterity, and Constitution scores of the new form, but retains her own Intelligence, Wisdom, and Charisma scores. She also gains all extraordinary special attacks possessed by the form (such as constrict, improved grab, and poison), but does not gain the extraordinary special qualities possessed by the new form (such as blindsense, fast healing, regeneration, and scent) or any supernatural or spell-like abilities.

Incorporeal or gaseous creatures are immune to transmogrification. A creature with the shapeshifter subtype can revert to its natural form as a full-round action.

Once it is used, a transmogrifier requires 2 hours to recharge.

PL 9 Computers

The following computer equipment is available at PL 9 and higher.

Atomic Medium

Like the hydromolecular medium before it (see page 25), the atomic medium is the height of data storage technology: data encoded into the form of atomic isotopes, known as information isotopes. Any character who breathes in a small cloud of these isotopes gains the benefit of the data stored in them. The purchase DC is calculated based on the nature and degree of the data.

Data	Purchase DC
Skill	2 per rank
Feat	15

Skill ranks gained by inhaling information isotopes do not add to any skill ranks the character might already have in the skill. The character takes the greater number of ranks; he does not add them together. Similarly, having a feat and inhaling it in the form of these isotopes does not grant the character two copies of the feat, even if the feats ordinarily stack. The character must possess all necessary prerequisites for a feat for the feat to be useable.

Inhaling atomic medium requires a move action. The effects manifest the following round. The container spews out the medium as a cloud of invisible particles, filling a 10-foot-by-10-foot area. Every character in the area gains the benefit of the medium. The character can make use of the skill or feat for 5 minutes, after which the information degrades to uselessness (though a basic recall of the information remains, rather like reading a book). Repeated use of information isotopes has no lasting side effects.

PL 9 Computer Gadgets

The following gadgets are found in Progress Level 9 and can apply to computers of that era or later, provided all gadget-specific restrictions are observed.

Atomic Encoder

The computer's data storage system is capable of recording information directly onto atoms, altering them into information isotopes. (See *Atomic Medium*, above.)

Encoding a skill into information isotope form takes 1 minute per skill rank; recording a feat takes 10 minutes. In either case, the character must possess a recorded copy of the skill or feat in question. Otherwise, writing the necessary skill software requires 1 hour per skill rank and a successful Computer Use check (DC 20 + the number of skill ranks); writing the feat requires 12 hours of work and a successful DC 30 Computer Use check.

Restrictions: None.

Purchase DC Modifier: +4.

PL 9 Psitech

The following psitech is available at PL 9 and higher.

Psychoactive Armor

Psychoactive armor consists of a quantity of telekinetically charged neutronite spheres, each no more than half an inch in diameter. When attuned to the wearer (a process taking 3 rounds of handling the spheres), they circle lazily about the wearer until she is attacked, at which point the wearer's reactions cause them to snap together into a small but solid wall of armor, granting a +8 dodge bonus to Defense.

Psychosurgery Kit

As with psychoactive armor, the psychosurgery kit reacts to the user's condition by treating injuries and illnesses with a box of telekinetically charged tools and pharmaceuticals. Consisting of a box about the size of a handgun case, the kit senses when the user is in need and automatically reacts, as though a character with the Treat Injury skill were on hand. The kit is imbued with 20 psionic power points, and each function of the kit uses up some of those points. When all the power points are gone, the kit becomes inert. The kit can perform each function multiple times, as needed.

Function	Power Points
Restore 1d4 hit points	3
Remove dazed condition	3
Remove stunned condition	3
Remove unconscious condition	3
Stabilize dying character	3
Surgery (restores 1d6 hit points)	4
Treat disease	3

EQUIPMENT PACKAGES

Purchasing equipment for characters can take a great deal of time, especially when equipment is scattered across multiple books. Even when a player knows the equipment she wants her character to have, the random nature of the Wealth system might make her wait for the GM to be present before making her Wealth checks.

These things can conspire to drag out time that could be better spent jumping into the real action of the game.

The following equipment packages present standard, predetermined packages for a variety of character types. They assume a character in a PL 6 campaign, as a baseline. Items in *italic* type appear in *d20 Future*; items in **bold** type are described earlier in this chapter.

Using Equipment Packages

To use these packages, follow the steps outlined below.

Determine your character's starting Wealth bonus and then select an equipment package for your character. Your character automatically gets the equipment listed in the basic package for his or her Progress Level, regardless of starting Wealth bonus. Record this equipment on the character sheet.

Each package has three additional entries, each with a minimum Wealth bonus. If your character has a starting Wealth bonus equal to or higher than the listed number, you can add that equipment to the character sheet as well.

When you are done, subtract from your character's starting Wealth bonus the highest number associated with the package you selected for your character. (For this purpose only, treat the basic package as having a value of Wealth bonus +5.) The result is your character's current Wealth bonus. If your Wealth bonus was not high enough to take anything other than the Basic Package, your character's current Wealth bonus is +0.

You can add to the character sheet any additional items with a purchase DC equal to or lower than 14 (or your character's starting Wealth bonus, whichever is higher).

You can exchange any item for any other nonrestricted item with an equal or lower purchase DC.

Academic Package

The academic package applies to any character whose life is devoted to studying, teaching, or research.

Basic Package

Binoculars (standard), briefcase, camera (digital), clothing (business), clothing (casual), day pack, fake ID, first aid kit, flashlight (penlight), instrument (keyboard or stringed), laser pointer, marbles (bag), multipurpose tool, overcoat, slingshot, *universal communicator*, wheeled suitcase (15 lb. capacity), windbreaker.

Wealth Bonus +7: Computer (desktop), *display contacts*, jetpack, modem (broadband), PDA, *stun baton*.

Wealth Bonus +9: Computer (notebook), *Kirsch Sunflower* (economy coupe).

Wealth Bonus +11: Computer (card).

Adventurer Package

This package is tailored for any character who spends her time in the wilderness (or disused parts of a city).

Basic Package

Aluminum travel case (40 lb. capacity), backpack, binoculars (standard), **blackout goggles**, camera (digital), clothing (casual), chemical light sticks (5), compass, contractor's field bag, duct tape, flashlight (battery flood), *flash-seal*, holster (hip), knife, map (road atlas), multipurpose tool, Pathfinder, pull-up pouch vest, rope

(150 ft.), search-and-rescue kit, sleeping bag, speed loader, tent (2-person dome), *universal communicator*, violet rations (12).

Wealth Bonus +5: Beretta 92F, **grenade (midnighter)**.

Wealth Bonus +7: Electro-optical scope, *laser pistol*, *laser sniper rifle*.

Wealth Bonus +9: **Charge pistol**, *Kirsch Sunflower* (economy coupe), *jetpack*.

Athlete Package

The athlete package is ideal for any character practicing physical sports, from team sports to rock climbing.

Basic Package

Aluminum travel case (10 lb. capacity), backpack, binoculars (standard), *chemical (antitox)*, *chemical (boost)*, climbing gear, clothing (casual), club, first aid kit, flashlight, **Health-Alert**, holster (hip), **hydrate**, *jetpack*, map (road atlas), tent (2-person dome), *universal communicator*, **wallcrawler gear**, windbreaker.

Wealth Bonus +8: *Aquaconverter*, *laser pistol*, PDA.

Wealth Bonus +10: *Cretan Motors Kentaur* (pickup truck), **compression gun**, portable video camera.

Wealth Bonus +12: Computer (card), *Cretan Motors "Hecaton"* (pickup truck), *display contacts*.

Blue Collar Package

The blue collar package is most applicable to factory workers, physical laborers, and similar unskilled laborers.

Basic Package

Backpack, briefcase (or standard handbag), camera (disposable), clothing (business), clothing (casual), coat, first aid kit, flashlight (standard), *jetpack*, map (road atlas), mechanical (or electrical) toolkit (basic), sleeping bag, *universal communicator*.

Wealth Bonus +6: PDA.

Wealth Bonus +8: Computer (desktop).

Wealth Bonus +10: *Kirsch Sunflower* (economy coupe).

Celebrity Package

This package is aimed at any character whose activities revolve around being in the public spotlight.

Basic Package

Wealth Bonus +9: Aluminum travel case (40 lb. capacity), backpack, camera (digital), *chemical (antitox)*, clothing (business), clothing (casual), clothing (formal), *disguise kit (morphic)*, fake ID, first aid kit, flashlight (standard), **flechette pistol**, holster (concealed carry), *jetpack*, map (road atlas), multipurpose tool, portable video camera, sleeping bag, *stun baton*, tent (2-person dome), *universal communicator*, windbreaker.

Wealth Bonus +11: Computer (card), *display contacts*.

Wealth Bonus +13: *SKG Lamplighter* (economy sedan).

Wealth Bonus +15: *Cretan Motors "Hecaton"* (pickup truck).

Creative Package

The creative package is optimal for artists of all types—illustrators, novelists, actors, photographers, and so on.

Basic Package

Aluminum travel case (40 lb. capacity), backpack, camera (digital), digital audio recorder, first aid kit, flashlight, instrument (stringed), map (road atlas), portable video camera, *universal communicator*, windbreaker.

Wealth Bonus +9: PDA, sleeping bag.

Wealth Bonus +11: Computer (desktop), *display contacts*, printer, scanner.

Wealth Bonus +13: Computer (card).

Criminal Package

This package is ideal for any character who earns her living on the shady side of the law: bank robbers, con artists, thieves, and so on.

Basic Package

Aluminum travel case (10 lb. capacity), camera (digital), chemical light sticks (5), clothing (casual), day pack, duct tape, fake ID, fatigue jacket, flashlight (standard), handcuffs (steel), holster (concealed carry), map (road atlas), *stun baton*, *universal communicator*.

Wealth Bonus +7: *Laser pistol*.

Wealth Bonus +9: Charge pistol, *tangler gun*.

Wealth Bonus +11: *Laser sniper rifle*, *SKG Lamplighter* (economy sedan).

Dilettante Package

The dilettante package is tailored for characters who drift from one interest to another and never spend too long on one pursuit.

Basic Package

Aluminum travel case (75 lb. capacity), briefcase, camera (digital), clothing (business), clothing (casual), clothing (formal), Derringer, digital audio recorder, fake ID, flashlight (penlight), GPS receiver, instrument (any kind), PDA, overcoat, pepper spray, portable video camera, skis and poles, *stun baton*, *universal communicator*.

Wealth Bonus +10: *SKG Lamplighter* (economy sedan).

Wealth Bonus +12: Computer (card), *display contacts*.

Wealth Bonus +14: Nakazawa Delta-9 (family wagon).

Doctor Package

The doctor package is tailored for any character who practices medicine, from holistic healing to osteopathic surgery.

Basic Package

Aluminum travel case (40 lb. capacity), camera (digital), chemical light sticks (5), **chemical (rejuve)**, **chemical (revall)**, clothing (casual), coat, first aid kit, flashlight (penlight), flashlight (standard), map (road atlas), medical kit, *medkit (advanced)*, *medkit (fast use)*, PDA, *universal communicator*, windbreaker.

Wealth Bonus +11: Nakazawa Delta-9 (family wagon), portable video camera, surgery kit.

Wealth Bonus +13: Computer (card), *display contacts*, printer.

Wealth Bonus +15: *SKG Lamplighter* (economy sedan).

Emergency Services Package

This package is good for firefighters, emergency medical technicians, emergency management workers, and any kind of character who helps those in need.

Basic Package

Aluminum travel case (10 lb. capacity), binoculars (rangefinding), bolt cutter, camera (digital), car opening kit, clothing (casual), compass, contractor's field bag, duct tape, evidence kit (basic), fire extinguisher, first aid kit, flare gun, flashlight (battery flood), handcuffs (zip-tie), lock release gun, map (road atlas), medical kit, *medkit (advanced)*, *medkit (fast use)*, multipurpose tool, police scanner, rope (150 ft.), tool belt, uniform, *universal communicator*, windbreaker.

Wealth Bonus +6: **Chemical (rejuve)**, **chemical (revall)**, surgery kit.

Wealth Bonus +8: *Jetpack*.

Wealth Bonus +10: Cretan Motors Kentaur (pickup truck).

Entrepreneur Package

The entrepreneur package is best suited for those characters who prefer to be the masters of their own destinies.

Basic Package

Aluminum travel case (75 lb. capacity), binoculars, camera (digital), chemical light sticks (5), clothing (business), clothing (casual), coat, duct tape, first aid kit, flashlight (battery flood), flashlight (penlight), flashlight (standard), Glock 17, holster (concealed carry), map (road atlas), multipurpose tool, portable video camera, *universal communicator*, windbreaker.

Wealth Bonus +11: *Display contacts*, printer, scanner, **wrist-comp**.

Wealth Bonus +13: Computer (card), Gaia Motor Company Virgo (minivan).

Wealth Bonus +15: Nakazawa Delta-9 (family wagon).

Investigative Package

This package is aimed at characters involved in criminology, espionage, behavioral profiling, and similar professions.

Basic Package

Binoculars (rangefinding), camera (digital), **chemical (boost)**, chemical light sticks (5), clothing (business), day pack, *disguise kit (morphic)*, duct tape, evidence kit (basic), fake ID, fatigue jacket, first aid kit, flashlight (penlight), flashlight (standard), handcuffs (steel), handcuffs (zip-tie) (25), holster (concealed carry), *laser pistol*, map (road atlas), **piercing panel**, *stun baton*, *universal communicator*, windbreaker.

Wealth Bonus +9: Portable video camera, *tangler gun*.

Wealth Bonus +11: Nakazawa Delta-9 (family wagon).

Wealth Bonus +13: Computer (card), *display contacts*.

Law Enforcement Package

The law enforcement package is ideal for any character who spends her time protecting the innocent, upholding the law, and maintaining order.

Basic Package

Chemical light sticks (5), clothing (casual), Colt Double Eagle, *disguise kit*, evidence kit (basic), fire extinguisher, first aid kit, flashlight (penlight), flashlight (standard), handcuffs (steel), holster (hip), holster (concealed carry), lock release gun, map (road atlas), multipurpose tool, patrol box, pepper spray, Ruger Service-Six,

search-and-rescue kit, speed loader, *stun baton*, **stun shield**, undercover vest, uniform, *universal communicator*.

Wealth Bonus +5: Evidence kit (basic).

Wealth Bonus +7: Light duty vest.

Wealth Bonus +9: SKG Lamplighter (economy sedan), telephone line tracer.

(5), club, day pack, duct tape, first aid kit, flashlight (penlight), sleeping bag, *universal communicator*, windbreaker.

Wealth Bonus +8: PDA, portable video camera.

Wealth Bonus +10: *Display contacts*, Kirsch Sunflower (economy coupe), **wrist-comp**.

Wealth Bonus +12: Computer (card), *display contacts*.

Military Package

This package is aimed at members of the armed forces, mercenaries, federal agents, or any character whose role in life is to defend his way of life (or his employer's).

Basic Package

Backpack, Beretta 92F, binoculars (ranging), climbing gear, clothing (casual), demolitions kit, fatigues, fatigue jacket, flare gun, gas mask, *grenade (concussion)*, grenade (tear gas), holster (hip), **Health-Alert**, **hydrate**, knife, *light combat armor*, map (tactical), multipurpose tool, police scanner, search-and-rescue kit, sleeping bag, smoke grenade, tent (2-person dome), uniform, *universal communicator*, *violet rations* (12).

Wealth Bonus +5: Bayonet, M16A2.

Wealth Bonus +7: Laser pistol.

Wealth Bonus +9: Laser rifle, Nakazawa Delta-9 (family wagon).

Scientist Package

This package is good for researchers, forensic investigators, lab technicians, and other characters who make science the focus of their lives.

Basic Package

Aluminum travel case (10 lb. capacity), briefcase, chemical kit, clothing (business), clothing (casual), coat, day pack, digital audio recorder, evidence kit (basic), **Health-Alert**, laser pointer, multipurpose tool, pager, portable hard drive, *universal communicator*, windbreaker.

Wealth Bonus +7: Computer (desktop), *display contacts*, PDA.

Wealth Bonus +9: SKG Lamplighter (economy sedan).

Wealth Bonus +11: Computer (card).

Religious Package

The religious package is ideal for clergy: ministers, rabbis, theological scholars, and so on.

Basic Package

Binoculars (standard), camera (digital), clothing (formal), duct tape, first aid kit, flashlight (standard), map (road atlas), uniform, *universal communicator*, windbreaker.

Wealth Bonus +9: Computer (desktop), *display contacts*, portable video camera, printer.

Wealth Bonus +11: Computer (card).

Wealth Bonus +13: Kirsch Sunflower (economy coupe).

Technician Package

The technician package is ideal for any character who works on machines, electronics, or computers.

Basic Package

Camera bag, camera (digital), clothing (business), clothing (casual), coat, day pack, digital audio recorder, duct tape, electrical tool kit (basic), lineman's buttset, mechanical tool kit (basic), **microtorch**, multipurpose tool, tap detector, tool belt, *universal communicator*, windbreaker.

Wealth Bonus +7: Computer (desktop), *display contacts*, Kirsch Sunflower (economy coupe), PDA.

Wealth Bonus +9: Computer (card).

Wealth Bonus +11: Nakazawa Delta-9 (family wagon).

Rural Package

The rural package is best suited for farm workers, hunters, colonists, pioneers, and other characters outside of the usual urban lifestyle.

Basic Package

Backpack, coat, duct tape, first aid kit, flashlight (battery flood), *fusion torch*, map (road atlas), rope (150 ft.), sawed-off shotgun (12-ga shotgun), sleeping bag, *stun baton*, *universal communicator*, Winchester 94 (.444 hunting rifle).

Wealth Bonus +8: Harris-Musselman dirt bike.

Wealth Bonus +10: Cretan Motor Kentaur (pickup truck).

Wealth Bonus +12: Cretan Motor "Hecaton" (pickup truck).

White Collar Package

The white collar package is the counterpart of the blue collar package, set aside for managers, small business owners, clerks, local politicians, bureaucrats, and executives.

Basic Package

Briefcase, caller ID defeater, clothing (business), clothing (casual), clothing (formal), digital audio recorder, fire extinguisher, first aid kit, flashlight (standard), **Health-Alert**, map (road atlas), multipurpose tool, overcoat, portable video camera, skis and poles, *universal communicator*, windbreaker.

Wealth Bonus +7: Computer (desktop), Kirsch Sunflower (economy coupe), multifunction PDA/cell phone.

Wealth Bonus +9: Computer (laptop).

Wealth Bonus +11: Gaia Motor Company Virgo (minivan).

Student Package

This package is designed for characters who are engaged in scholastic studies of some kind.

Basic Package

Aluminum travel case (10 lb. capacity), backpack, camera (digital), instrument (percussion), instrument (stringed), chemical light sticks



CHAPTER TWO

STARSHIPS

The most recognizable staples of science fiction, starships play an important role in a sci-fi roleplaying game. *d20 Future* gives players and Gamemasters everything they need to integrate starships into a game in a basic way; this chapter presents new rules that expand those options significantly. This chapter includes rules for creating entirely new types of starships, as well as expanded options for ship enhancement and modification. Additionally, this chapter includes new information on running starship combat and new actions for both pilots and crewmembers in space, as well as supplemental starship operation rules.

DESIGNING NEW STARSHIPS

Though one of the simplest ways to create unique starships is to apply a template to a base ship, sometimes you might need to create a new type of starship. These unmodified starships form the basis of most starship types and are used to create general classifications of starships. Most specific starship designs can be created by adding templates to the base starships; though two factions might have drastically different types of assault fighters, in the end they are still assault fighters and are variations on the same theme. However, in the event that a player or Gamemaster wishes to create a new base starship, the following rules expand upon those provided in *d20 Future*.

The first step is to come up with a concept for the starship. If one of the other base ships already fills that role, a template might work better than creating a whole new starship.

However, if a new ship type is called for, simply determine the PL of the ship (usually relevant to the campaign) and keep in mind the role and function of the ship before starting. The following instructions will walk you through the starship creation process:

1. Select ship type and size.
2. Determine superstructure.
3. Select armor.
4. Select power core.
5. Determine crew.

TABLE 2-1: STARSHIP TYPE

Size	HD	Minimum Crew	Minimum Passenger	Max Systems	Defense Systems	Weapon Base Purchase DC
Ultralight Ships						
Large ¹	1-3	0	4	0-1	0-1	36
Huge	3-6	1	8	1-2	1-2	40
Gargantuan	6-10	1	20	2-3	2-3	48
Colossal	10-20	4	1,000	3-6	3-6	52
Light Ships						
Gargantuan	20-30	4	50	2-3	2-3	52
Colossal	30-80	8	2,000	3-8	3-8	56
Mediumweight Ships						
Gargantuan	50-100	8	100	2-4	2-4	56
Colossal	100-250	8	4,000	4-10	4-10	60
Heavy Ships						
Gargantuan	100-250	16	400	2-5	2-5	60
Colossal	250-800	24	8,000	5-16	5-16	64
Superheavy Ships						
Colossal	800-6,000	40	16,000	5-40	8-60	68

¹ Very few starships of this size exist, and most are unmanned drones.

6. Determine passenger capacity.
7. Determine life support requirements.
8. Determine cargo capacity.
9. Install hangar bays.
10. Select engines.
11. Select communications and sensors.
12. Select defense systems.
13. Select weapons systems.
14. Select grappling systems.
15. Add any other components.

Ship Type

Determining a starship's type is the first and most important step in the creation process. A starship's type (followed by its size) determines almost every major aspect of its statistics and potential for weapons and defense systems. Many of the rules for ship design found in *d20 Future* are based on starship size, but the relevant sections have been included here for convenience. The starship's creator should determine the ship's type and size first, based on the role that the starship will fill. For suggestions on assigning a ship type and size to the new design, compare the concept to existing ships and determine based on existing designs.

A starship's type and size determine its Hit Dice, which are given a range listed on the table below. A starship can have any number of Hit Dice that it is qualified for based on its type and size, and the ship's hit points are equal to Hit Dice \times 20. It must have a minimum crew to operate and has a maximum passenger capacity based on type and size. A starship's Hit Dice also determine the number of defense systems and weapons systems that it can carry at any given time (though it may have fewer than its maximum).

All starships of that type have a base purchase DC, which covers all standard components for a ship of that size. Only components that modify the starship's base purchase DC can increase this; most other components are purchased and installed separately and do not affect the purchase DC.

Ship Size

Since the ship's size has already been determined as a function of its type, consult Table 2-2: Starship Sizes for specific modifiers and bonuses based on the ship's size.

Superstructure

The next important step is determining the starship's superstructure. Superstructure encompasses a wide array of statistics, including Hit Dice, length, and weight. The starship's Hit Dice are based on the ship's type and size; the designer can select any number of Hit Dice within the appropriate range (as dictated on Table 2-1: Starship Type). The length is determined based on the ship's physical form, though it must fit within the constraints of its size category. Finally, the starship's weight is based on its size and function; there is no precise method of calculating a ship's weight (size, composition, and interior mechanisms vary too widely), so determine a ship's weight by comparing it to other ships of its size and type.

Armor

The next step in the process is to choose a type of armor. All starships have one type of armor, which is bought and added separately like an individual component. Since most armor types are

TABLE 2-2: STARSHIP SIZES

Starship Size	Starship's Size Modifier	Targeting System's Equipment Bonus	Autopilot System's Equipment Bonus	Ship Length	Ship Weight
Large	-1	+0	+0	Less than 16 feet	1,000-4,000 lb.
Huge	-2	+1	+1	16-32 feet	4,000-32,000 lb.
Gargantuan	-4	+2	+2	32-64 feet	32,000-250,000 lb.
Colossal	-8	+3	+3	64 feet or more	250,000 lb. or more

based on one-half the starship's base purchase DC, any character or characters capable of purchasing such a starship should also be able to afford even the most expensive types of armor. The starship's armor not only determines the ship's hardness rating, it applies penalties to movement and adds weight to the ship. A starship can have any type of armor appropriate to its PL. (See page 133 of *d20 Future* for armor listings.)

Power Core

All starships are powered by a central power core, which provides energy to run internal ship systems as well as a very small amount of power to peripheral systems with their own fuel sources, such as engines and missile weapons. All starships come with a power core already figured into the cost of the ship, though it is one of the most basic varieties (those with a base price modifier of +0 on Table 2-3: Starship Power Cores). Starships can be built with more powerful power cores, though most carry with them a modifier to the starship's base price; this modifier represents not only the cost of the power core and its fuel, but also any ship systems that must be made compatible with the power core and any shielding, housing, or other mechanical parts that are required for it to function.

Replacement power cores can be purchased for the purchase DC listed on the table, along with any fuel should the power core require it. Upgrading a power core from one type to another requires the purchase of the replacement core (at its own purchase DC), as well as modifications to the ship's systems, which require a purchase DC of 1/2 the power core's base price modifier. A starship can have more than one power core, though each core beyond the first must be purchased and installed as though upgrading a power core. Only one power core can be active at a time, but in case of primary core failure, a secondary power core can be brought online with a DC 20 Computer Use check.

TABLE 2-3: STARSHIP POWER CORES

Power Core	Fuel		Purchase		Base Price Modifier
	PL	DC	DC	Rest.	
Power cell	5	—	40	—	+0
Fission generator	6	31	42	Lic (+1)	+0
Fusion generator	6	18	42	Lic (+1)	+4
Grav-fusion cell	6	18	44	Lic (+1)	+8
Solar cell	6	—	39	—	+0
Antimatter reactor	7	40	44	Res (+2)	+4
Mass reactor	7	26	42	Lic (+1)	+0
Tachyonic collider	7	—	47	Res (+2)	+8
Dynamic mass reactor	8	26	46	Lic (+1)	+0
Matter converter	8	10	47	—	+4
Zero-point cell	8	—	47	Res (+2)	+8
Singularity generator	9	47	50	Res (+2)	+0

Power Cell (PL 5)

Early starships possess simple power cells that are essentially advanced batteries. These power cells deplete quickly but are relatively inexpensive. All starships in PL 5 use power cells because they are the only option available. Many starships at higher Progress Levels keep power cells as backup cores to act as emergency power, since they do not require complex mechanisms to function.

CORE CONTAINMENT

Some starships use volatile and dangerous methods of power generation that require energy containment fields or thick hull plating to prevent radiation from leaking into the interior of a ship. Known as core containment, these systems are just as susceptible to damage as any other part of a starship. When determining damage dealt to individual systems (such as from critical hits), you can substitute damage to the core containment system for a destroyed defense system. A damaged core containment system exposes the crew of the starship to a moderately radioactive source (see Table 4-1: Radiation Exposure in *d20 Future*). Power cells and solar cells do not require core containment and are immune to such breaches.

Fuel Duration: Most power cells last for 2d4 weeks, after which new power cells must be installed.

Fission Generator (PL 6)

Essentially a controlled and miniaturized nuclear power plant, the fission generator uses refined atomic energy generation techniques based on those discovered in PL 5. Most energy derived from a fission generator comes from the managed chain reactions of nuclear materials, such as uranium and plutonium. Like nuclear power plants, a fission generator must be shielded against radiation to prevent harm to the crew.

Fuel Duration: The fuel rods in a fission generator last for 1d4 years, after which they must be replaced.

Fusion Generator (PL 6)

Using magnetic containment fields and complex atomic processes, fusion generators are able to produce clean and abundant nuclear energy by harnessing the same chemical reactions that take place inside a star. Fusion generators use water, hydrogen, and small amounts of other purified gases as their primary fuel sources, drastically cutting down the costs of refueling.

Fuel Duration: The liquid fuel required for a fusion generator lasts for 1d4 years. Though the fuel is never consumed, eventually the fusion process breaks down its chemical bonds. The fuel must be changed to maintain clean, working fusion reactions.

Grav-Fusion Cell (PL 6)

An advanced approach to the fusion generator, the grav-fusion cell replaces the magnetic fields used in controlled fusion with gravity fields. This improvement allows for greater control not only over the containment fields, but also over the fusion reactions themselves, eliminating many of the impurities in the process and preserving the reusable fuel for longer periods of use.

Fuel Duration: The liquid fuel required for a grav-fusion cell lasts for 1d4+2 years.

Solar Cell (PL 6)

Solar cells are similar to power cells in that they don't use complex mechanisms or chemical reactions to provide power. Unlike power cells, solar cells can be recharged instead of replaced, making them useful for ships that remain close to stars. Solar cells convert heat and light into usable energy, using advanced solar panels mounted on the exterior of the starship. However, if a ship is far from a star, such as in the blackness of deep space, recharging the cell becomes impossible, possibly stranding a ship.

Fuel Duration: The solar cell can store enough power to operate for 2 weeks. Once the power is depleted, the ship can gather solar energy to recharge its cells by moving within 2 AU of a star or other celestial body that gives off light and heat in collectible form. The cells recharge at a rate of 1 day of power per hour of charging.

Antimatter Reactor (PL 7)

An antimatter reactor harnesses the massive amounts of energy produced by the collision of matter and antimatter. Housed in a complex containment field that uses both magnetic and gravity-based manipulation, an antimatter reactor produces plentiful energy while consuming only microscopic amounts of antimatter.

Fuel Duration: The antimatter cells required for an antimatter reactor last for $2d4+1$ years.

Mass Reactor (PL 7)

The mass reactor consumes and converts the mysterious dark matter found throughout the universe into usable energy. Since the mass reactor draws energy from the decay of dark matter (a process which converts the dark matter into normal matter, which is then disposed of as solid waste), a starship with this type of reactor works best in portions of the universe where dark matter is abundant.

Fuel Duration: The dark matter required for a mass reactor lasts for 6 months. However, most starships with mass reactors also carry dark matter scoops that can collect ambient dark matter from space and convert it into energy. Otherwise, dark matter fuel cells can be purchased as normal fuel.

Tachyonic Collider (PL 7)

When gravity-manipulation technology advances to the point where it is able to slow down tachyon particles (which move at faster-than-light speeds), the tachyonic collider can generate nearly limitless power. Since tachyons move faster than light, they generate immense amounts of energy when slowed down to less than light speed as they strain against the gravity field that impedes them. However, damage to the tachyonic collider power core can unleash dangerous levels of gravity; in addition to radiation exposure as a result of core containment breach, the ship suffers the effects of a time dilation of 60.2 until the breach is repaired (see Time Dilation on page 100 of *d20 Future*).

Fuel Duration: Tachyonic colliders require no fuel.

Dynamic Mass Reactor (PL 8)

Similar to its predecessor, the mass reactor, the dynamic mass reactor uses dark matter in more efficient and stable ways. A dynamic mass reactor functions in the same manner as the mass reactor but gets more power from similar amounts of dark matter.

Fuel Duration: The dark matter required for a dynamic mass reactor lasts for 2 years. However, most starships with mass reactors

also carry dark-matter scoops that can collect ambient dark matter from space and convert it into energy. Otherwise, dark-matter fuel cells can be purchased as normal fuel.

Matter Converter (PL 8)

A matter converter breaks down the basic elements in almost any matter and uses them as fuel. It works in much the same way as a fusion generator, but it pulls the necessary hydrogen and other elements from any solid matter. Matter converters are clean and efficient, and many starships equipped with matter converters use the ship's own byproducts as fuel.

Fuel Duration: The solid fuel required for a matter converter lasts for $1d4$ years. Though any solid matter can be used as fuel, many starships purchase special fuels that convert cleanly and efficiently without taking up large amounts of space on board the ship.

Zero-Point Cell (PL 8)

One of the most powerful and efficient power cores in existence, the zero-point cell harnesses the power of quantum fluctuation and zero-point energy to produce massive amounts of energy. The zero-point cell is not only powerful and efficient, it also brings with it almost none of the dangers associated with so-called "limitless" energy sources.

Fuel Duration: Zero-point cells require no fuel.

Singularity Stabilizer (PL 9)

A singularity stabilizer uses gravity-manipulating fields to contain a miniature black hole. Power is sapped from the contained black hole and converted into usable energy in vast quantities. Singularity stabilizers can maintain the black hole for extended amounts of time, though eventually the singularity begins to collapse on itself from the lack of power. The singularity must then be replaced by another artificially generated black hole. When a starship with a singularity stabilizer is destroyed, there is a 1% chance that the collapse of the core containment field causes the black hole to expand (consuming anything within 10 AU of the ship); there is also a 1% chance that the collapsing core containment field creates a wormhole to a distant part of the universe.

Fuel Duration: The singularity required for a singularity stabilizer lasts for $2d8$ years.

Crew

The next step in starship creation is to determine how many crewmembers are required to effectively run the ship. All ships have a minimum crew requirement based on their type and size. A ship can have more crewmembers than the minimum, though a good guideline to follow is that no starships can have more crewmembers than the maximum passenger capacity for a ship of its size and type. Life support requirements for the crew are included in the base price of the starship. After determining the number of crewmembers required to run the ship, decide on crew

TABLE 2-4: CREW QUALITY

Crew Quality	Skill Check Modifier	Pilot's Class Bonus to Defense	Pilot's Dexterity Modifier	Gunner's Attack Bonus	Modifier to Starship Base Purchase DC
Untrained	+0	+1	+0	-4	-4
Trained	+4	+3	+2	+2	+0
Expert	+8	+5	+4	+4	+4
Ace	+12	+7	+6	+8/+3	+8

quality. For hero-owned ships, the crew quality is simply that of the hero or heroes owning or piloting the ship. For Gamemaster-run ships, or player ships with crew requirements so large the party cannot effectively operate them by themselves, the Gamemaster determines the general quality of the crew and derives the relevant statistics from Table 2-4: Crew Quality.

Passenger Capacity

Similar to determining the number of crewmembers required to run a ship, the next step in starship creation is determining the number of passengers that can be carried. Once again, the ship's type and size determine the maximum number of passengers. A starship can carry any number of passengers ranging from zero to its maximum. However, unlike crewmembers, the life support requirements for passengers must be met in other ways. For every potential passenger on the ship, the ship must have at least 10 pounds of cargo capacity dedicated to the life support systems necessary to keep that passenger alive.

Cargo Capacity

Since starships operate primarily in space where gravity holds no sway, a ship's cargo capacity is determined not by mass but by size. A starship need only possess the available space for an object to be able to carry it; after that, artificial gravity ensures that the ship's weight is unaffected by the cargo within. When determining cargo capacity, choose what size objects it needs to accommodate, then account for each piece of cargo; large numbers of smaller cargo holds can be combined into a single, larger hold for simplicity's sake. Table 2-5: Cargo Capacity Costs gives a suggested weight for each size of cargo, allowing the designer to simply designate in raw weight how much cargo the ship needs to carry and obtain the cargo space to match. On the whole, a starship should not have more than three-quarters of its own weight in cargo capacity.

For example, if a ship designer knows that the ship must be able to carry a dozen Huge mecha as part of its routine function, she would include twelve cargo holds capable of holding one Huge item. Each one of those holds can store 32,000 lb. of material (the maximum for a Huge cargo), giving the ship a total cargo capacity of 384,000 lb. Rather than build twelve Huge cargo holds, however, the designer can instead choose to build one Colossal cargo hold.

TABLE 2-5: CARGO CAPACITY COSTS

Cargo Size	Cargo Weight	Minimum Ship Size	Purchase DC
Diminutive	Less than 10 lb.	Any	2
Tiny	10–30 lb.	Any	3
Small	30–100 lb.	Any	4
Medium	100–600 lb.	Any	7
Large	600–4,000 lb.	Any	9
Huge	4,000–32,000 lb.	Gargantuan	15
Gargantuan	32,000–250,000 lb.	Colossal	25
Colossal	250,000+ lb.	Colossal	35

Hangar Bays

Hangar bays are much like cargo space for the purpose of allotting space. First, choose what type and size of ships the hangar will need to hold, then assign a hangar of that size (using the same

guidelines as for cargo capacity). However, since hangar bays require specialized equipment to accommodate starships, they have a purchase DC modifier that is applied to the purchase DC of a similarly sized cargo hold, based on the type of starship the hangar is to accommodate. A hangar can accommodate a starship of a lighter type than the ships it is designed to hold (for example, hangars designed to carry mediumweight starships can also accommodate light and ultralight starships), but not heavier ships. Smaller hangar bays can be combined into larger hangar bays to simplify the process; a typical hangar bay can accommodate six ships that are one size category smaller than the bay. The cost of a single hangar bay (no larger than can accommodate a single Colossal starship, or a starship up to one size smaller than the carrying ship) is already figured into the base price of the starship.

For example, a ship's designer wants the ship to be able to carry a wing of assault fighters (four fighters total). Since assault fighters are Gargantuan in size, the designer can include four Gargantuan hangars capable of holding ultralight ships. Alternately, since a Colossal hangar can hold up to six Gargantuan ships, the designer can simply choose to include a Colossal hangar for the assault fighters. If the designer also wanted to be able to carry his personal frigate (light ship, size Colossal), he would have to build a second hangar to accommodate the Colossal ship, which has a purchase DC of 39 (35 cargo hold cost + 4 for light ship hangar).

TABLE 2-6: HANGAR BAY COSTS

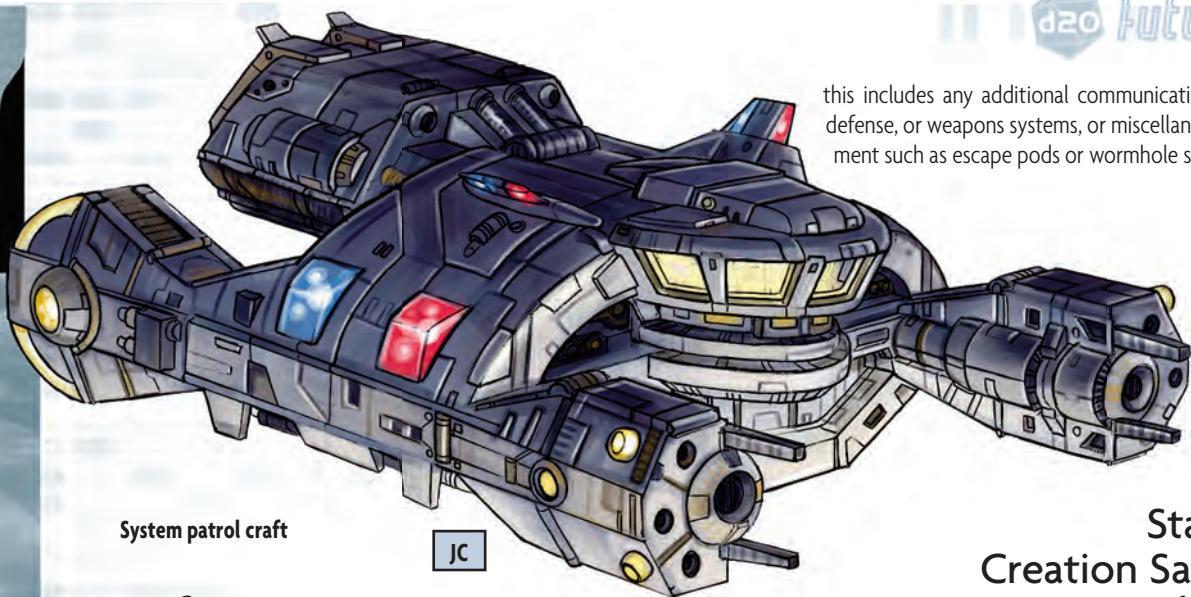
Ship Type	Cargo Purchase DC Modifier
Ultralight	+2
Light	+4
Mediumweight	+6
Heavy	+8
Superheavy	+10

Engines

The next step in starship design is determining the ship's engines. Most starships have thrusters, plus one other type of engine; the exceptions to this rule are ultralight ships from PL 5 (which have only thrusters) and superheavy ships (which have thrusters plus two other types of engines). Select engines appropriate to the starship's size, type, and PL when designing the ship. The cost of these engines is figured into the base price of the starship, though additional engines can be added as though purchasing an upgrade separately. All starships have a base tactical speed of 3,000 feet (6 sq.). See page 131 of *d20 Future* and the new engines described later in this chapter.

Communications and Sensors

Starships also require sensors and communications systems to be fully functional. When designing the ship, select a number of communications and sensor systems based on the ship's type. Ultralight and light ships can have two sensor systems, while all other ships can have three sensor systems; all starships have two external communications systems. The cost of these communications and sensor systems is included in the base price of the starship. Additional sensors and communications systems can be added by purchasing and installing them separately. See pages 136 to 139 of *d20 Future* and the new equipment described later in this chapter.



System patrol craft

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Defense Systems

Starships have a number of defense systems based on their Hit Dice. Ultralight starships have one defense system per 3 HD, light starships have one defense system per 10 HD, mediumweight starships have one defense system per 25 HD, heavy starships have one defense system per 50 HD, and superheavy starships have one defense system per 150 HD. The designer must purchase each defense system separately, though they do not modify the base purchase DC of the starship. See page 134 of *d20 Future* and the new defense systems described later in this chapter.

Weapons Systems

Starships have a number of weapons systems based on their Hit Dice; the weapons systems encompass beam or laser weapons, missiles, and mines. Ultralight starships have one weapons system per 3 HD, light starships have one weapons system per 10 HD, mediumweight starships have one weapons system per 25 HD, heavy starships have one weapons system per 50 HD, and superheavy starships have one weapons system per 150 HD. The designer must purchase each weapons system separately, though they do not modify the base purchase DC of the starship. See page 139 of *d20 Future* and the new weapons systems described later in this chapter.

Grappling Systems

All starships can have up to two grappling systems; any grappling system included in the ship's design subtracts a single weapons system from the total included in the base purchase cost of the starship. Consult Table 2-7: Grapple Modifiers for the ship's bonus on grapple checks. See page 143 of *d20 Future* for descriptions of grappling systems.

TABLE 2-7: GRAPPLE MODIFIERS

Ship Size	Grapple Modifier
Colossal	+16
Gargantuan	+12
Huge	+8
Large	+4

Other Components

Any other components can be purchased and installed separately, and are not considered part of the base purchase DC of the starship;

this includes any additional communications, sensor, defense, or weapons systems, or miscellaneous equipment such as escape pods or wormhole screens.

Starship Creation Sample: System Patrol Craft

The starship creation system presented here is relatively simple and quick to use. For example, assume that a starship designer wishes to create a new ship for a PL 7 campaign. The designer decides the ship will be used for patrol and policing within the confines of a single star system: It should be capable of fending off marauders while maintaining enough speed and agility to cross the distance between planets in time to respond to calls for help. This system patrol craft will be the equivalent of a police vehicle and will not possess a large crew.

System Patrol Craft (PL 7)

Type: Ultralight	Size: Colossal (-8 size)
Subtype: System patrol craft	Tactical Speed: 4,000 feet (8 sq.)
Defense: 7	Length: 140 feet
Flat-footed Defense: 5	Weight: 787 tons
Autopilot Defense: 5	Targeting System Bonus: +5
Hardness: 30	Crew: 4 (trained +4)
Hit Dice: 15d20 (300 hp)	Passenger Capacity: 8 prisoners
Initiative Modifier: +2	Cargo Capacity: 50,000 lb.
Pilot's Class Bonus: +3	Grapple Modifier: +16
Pilot's Dex Modifier: +2	Base Purchase DC: 56
Gunner's Attack Bonus: +2	Restriction: Restricted (+2)

Attack

2 fire-linked mass cannons +1 ranged (12d12)
Plasma missile launcher +1 ranged (18d8)

Attack of Opportunity

None

Standard PL 7 Design Specs:

- Power Core:** Antimatter reactor
- Engines:** Induction engine, thrusters
- Armor:** Cerametal
- Defense Systems:** Light fortification, particle shield
- Sensors:** Class V sensor array, improved targeting system
- Communications:** Drivesat comm array, mass transceiver
- Weapons:** 2 mass cannons (fire-linked), plasma missile launcher (8 missiles)
- Grappling Systems:** Tractor beam emitter

First, the designer decides to make the ship an ultralight starship that is Colossal in size. Colossal ships impose a -8 size penalty on relevant checks. Since a Colossal ultralight ship can have between 10 and 20 HD, the designer decides to give it 15 HD to give it some durability (for a total of 300 hp). The ship should be somewhere in size between an escort and a fast freighter, so the designer assigns it a length of 140 feet and a weight of 700 tons. For armor, the designer selects cerametal due to its lightweight design, which maintains tactical speed. The armor adds 87 tons to the weight of the ship and has a purchase DC of 36 (10 + 52/2). Since the ship will be operating within a star system and will have little chance to collect dark matter, the designer selects an antimatter reactor for the ship's power core, increasing the purchase DC by 4. The minimum crew for a ship of this size and type is four, which seems like a good minimum size for a squad of stellar police officers; the Gamemaster assigns police officers a crew rating of trained (+4). Since the ship needs minimal space for passengers, the designer gives it the capacity to carry eight passengers (in this case, prisoners). Again, cargo space is not really necessary, but since on occasion a patrol will bring back something of value, the designer adds a Gargantuan cargo hold capable of transporting 50,000 lb. (25 tons). For its sole hangar bay, the designer adds a Colossal bay capable of holding two Gargantuan assault fighters and two Large escape pods. The designer gives the ship an induction engine in addition to its thrusters. The ship gets a drivesat comm array and a mass transceiver for communications systems, a Class V sensor array, and an improved targeting system. Since the ship has 15 HD, it can have up to five defense systems and five weapons systems. However, recognizing that the ship is just a patrol craft, the designer elects to give it only light fortification and a particle shield for its defense systems, as well as two fire-linked mass cannons and a plasma missile launcher for weapons. Since the ship might need to tow criminal spacecraft, the designer adds a tractor beam emitter as a grappling system.

STARSHIP COMBAT MANEUVERS

Pilots can perform the following starship combat maneuvers, which provide bonuses and penalties to ships engaged in combat. The following combat maneuvers can be used with the *perform combat maneuver* action (see *Expanded Crew Actions* on page 39).

Afterburn

A pilot of a starship with afterburners (such as hydrogen injectors or plasma injectors) can initiate the afterburn maneuver as a part of normal movement. By making a DC 10 Pilot check, the pilot activates the afterburners and gains the bonus to tactical speed indicated by the individual engine system. Additionally, the pilot of a starship without a dedicated afterburner system can attempt to increase the tactical speed of a ship by altering the fueling methods and tweaking throttle controls; the pilot makes a DC 15 Pilot check and, if successful, the starship gains an extra 500 feet (1 square) of movement this round. If the check fails, the ship simply does not gain the benefits of one of its move actions.

Attack Run

A pilot in a smaller starship can engage in an attack run against a larger ship. In essence, a starship on an attack run dives beneath the

firing solutions of the target ship's weapons, managing to avoid fire while skimming the surface of the larger ship. Only ultralight and light starships can attempt attack runs, and only mediumweight, heavy, and superheavy ships can be the targets of an attack run.

The pilot initiating the attack run must make a DC 20 Pilot check to move his starship into the target's square and initiate the attack run. If the pilot fails this check, there is a collision, which is resolved as normal. If successful, each gunner can make one attack (or, if the pilot is the sole gunner, he gains a single attack) as a free action against the target starship. During this maneuver, the target ship's point-defense systems (if any) can attack the starship making the attack run as a free action. At the end of the attack run, the attacking ship moves out of the target ship's square.

Jinking

A pilot can move the ship erratically to present a more difficult target for attackers. The pilot makes a Pilot check. The result determines the bonus to the starship's Defense. Unfortunately, the erratic movement also provides a penalty on any attack rolls made from the jinking starship.

This Pilot check is modified by the size and type of the jinking ship, as follows:

Size	Modifier
Superheavy/Colossal	-16
Heavy/Colossal	-8
Heavy/Gargantuan	-4
Mediumweight/Colossal	-2
Mediumweight/Gargantuan	+0
Light/Colossal	+2
Light/Gargantuan	+8
Ultralight/Colossal	+12
Ultralight/Gargantuan	+16
Ultralight/Huge	+20
Ultralight/Large	+24

Pilot Check	Defense Bonus	Attack Penalty
up to 9	+2	-4
10–14	+3	-6
15–19	+4	-8
20–24	+5	-10
25–29	+6	-12
30–34	+7	-14
35+	+8	-16

Sideswipe

During a starship's movement, the pilot can attempt to sideswipe a starship or other target, either to deal damage without fully ramming it, or to cause another pilot to lose control of her starship. The starship must move into the same square as its target in order to sideswipe. There is no additional movement cost. Both pilots make opposed Pilot checks; if the pilot initiating the sideswipe maneuver is successful, both starships take damage as if they had collided (see *Collisions and Ramming* on page 160 of the *d20 MODERN Roleplaying Game*), except that the collision multiplier is 1/4. The pilot of the target starship can make a DC 15 Reflex save to reduce the damage to both starships by half of that result. The pilot of the sideswiped starship must succeed on

a DC 15 Pilot check at the beginning of his next turn or lose control of his starship.

The DC for a sideswipe is 15. It is modified by the relative size and speed of the target.

Target Condition	DC Modifier
Each size category larger	-5
Each size category smaller	+5

EXPANDED CREW ACTIONS

The crew on a starship are far more than mere passengers. Each person aboard a starship can potentially aid in starship combat, contributing in one way or another to the overall effort of the starship. The *d20 Future* sourcebook defines the main crew positions as commander, pilot, copilot, gunner, sensor operator, and engineer. The following section provides new actions during starship combat that crewmembers in each position can take on their turns. These actions are be supplemental to those listed on page 144 of *d20 Future*.

Commander

The commander is the leader and coordinator aboard a starship, providing direction and instruction to thousands of crewmembers. Usually only larger ships have commanders.

Complex Maneuver: A commander can direct the actions of an entire ship's crew and provide valuable insight to help get the job done faster. As a full-round action, the commander can select a number of crewmembers equal to his Charisma bonus; the commander then makes a DC 15 Charisma check, and if successful, provides a +2 competence bonus on any skill checks (but not attack rolls) by those designated members of the crew.

Tactical Orders: A commander's grasp of tactics can mean the difference between life and death in the midst of combat. By coordinating the efforts of both pilots and gunners, the commander can maneuver the ship into a position where it has a tactical advantage over its enemies. A commander can take a full-round action to provide a +1 bonus to the ship's Defense, or a +1 bonus on the attack rolls of all gunners aboard the ship.

Pilot or Copilot

The pilot (also called a helmsman in some larger vessels) directs the general movement of the starship. A pilot is responsible for the safety of the vessel and prevents any collisions and avoids potentially lethal hazards. The copilot might often perform the duties of the pilot, should the pilot be otherwise occupied.

Perform Combat Maneuver: As a move action, the pilot can perform one of the combat maneuvers listed in Starship Combat Maneuvers. See each maneuver for specific details on initiating and completing that maneuver.

Gunner

The gunner is responsible for the weapons aboard a starship. While a starship might have many gunners or just a single weapons officer, the gunner provides the necessary skill and combat prowess to effectively destroy enemy targets.

Provide Cover Fire: Talented gunners can ward off enemy attacks by laying down heavy cover fire in strategic patterns so

that opponents shy away instead of focusing on their target. As a full-round action, the gunner can provide a +2 bonus to her starship's Defense against attacks made by enemies within range of that gunner's weapon or weapons.

Sensor/Communications Operator

The sensor operator (who also often controls communications systems) has several options available to him during starship combat. Sensor operators (sometimes called CommScan or SensCom officers) control the ship's sensors and can use those systems to provide a valuable edge in combat.

Alert with Sensors: A good sensor operator provides valuable data on incoming attacks to the pilot or copilot. As an attack action, the sensor operator can make a DC 15 Computer Use check to provide the ship with a +1 bonus to Defense for 1 round.

Jam Targeting Data: Using the communications systems aboard a starship, the sensor operator is able to send out confusing signals and static that causes targeting systems to fail. As an attack action, the sensor operator can make a DC 15 Computer Use check to negate any attacking ship's targeting computer bonus on attack rolls.

Jam Transmissions: Similar to the methods used to jam targeting data, a sensor operator can make it impossible for a starship to send a transmission. As a full-round action, the sensor operator can select a single starship within sensor range to jam; if that target ship wishes to send a transmission, its sensor operator must make an opposed Computer Use check against the jamming ship's sensor operator to break through the interference.

Pinpoint with Sensors: Sensor operators can use the ship's sensors to enhance the targeting computer's effectiveness. As an attack action, the sensor operator can make a DC 15 Repair check to increase the targeting computer's bonus on attack rolls by 2. Any equipment that would negate the targeting computer's bonus on attack rolls also negates this bonus.

Engineer

An engineer is capable of pushing a ship to its limits and then bringing it back safely. Engineers are responsible for making sure the ship stays running at maximum capacity and can even work miracles when systems fail and when the ship takes damage.

Angle Shields: An engineer can reinforce a ship's shields (if present) to more effectively ward off attacks. By making a DC 15 Computer Use check, the engineer can shift shielding from one side of the ship to another. The engineer selects one side of the ship (fore, aft, port, or starboard) to take shielding away from, and one side to gain the benefits of angling the shields in that direction. Any attacks targeting the side of the ship where the shields were taken from bypass shields entirely and apply damage directly to the starship's hit points. Any attacks targeting the side of the shield to which the shielding was angled have their damage halved. As a move action, the shields can be restored to their normal coverage.

Reroute Power: As a full-round action, an engineer can reroute power from one system to another. The engineer makes a DC 15 Computer Use check to perform this action. First, the engineer selects one of the following systems from which power will be rerouted:

STARSHIP MODIFICATIONS

The following equipment can be added to a starship during creation, or as after-market modifications. Each new piece of equipment can be purchased at the listed purchase DC, or can be included when designing a starship from scratch (provided the ship meets all the necessary requirements for that piece of equipment).

Starship Engines

Though all starships begin with thrusters, the following engine types increase the ship's ability to move through space. Additionally, two new engine subtypes, afterburners and faster-than-light (FTL) drives are presented here. The latter only increases the long-distance speed of the starship, while the former only increases the tactical speed of the starship.

Disposable Boosters (PL 5)

Developed to help the first manned shuttles reach orbit, disposable boosters are popular throughout PL 5 and later PL 6 as they allow relatively inexpensive speed boosts. In space, disposable boosters provide temporary speed increases by firing the thrusters

Defense Systems: Disable one of the starship's defense systems.

Engines: Reduce the ship's tactical speed by 500 feet (1 square).

FTL: Disable the ship's faster-than-light travel capabilities.

Minor Systems: Disable one minor internal system (communications, life support, or artificial gravity, for example).

Sensors: Disable the ship's sensors or targeting computer.

Shields: Reduce shield power by half its remaining HD (minimum 1 HD), if the starship has shields.

Weapons: Disable one weapons system (weapon batteries count as one weapons system, though fire-linked weapons do not).

Once the power has been drained from one of the above systems, the power can be rerouted to a single other system. Select one of the following systems and related effects from the list below:

Engines: Increase the ship's tactical speed by 500 feet (1 square).

Shields: Increase the shield power by half its remaining HD (minimum 1 HD), if the starship has shields.

Weapons: Increase the damage of an energy-based weapon by one-half its base damage (for example, an energy weapon that deals 6d12 points of damage now does 9d12). Fire-linked weapons gain an increase equal to half the base damage of the linked weapons, not half of the linked damage dice (for example, two fire-linked weapons that deal 6d12 points of base damage and 9d12 linked deal 12d12 points of damage when benefiting from this action).

Restore a System: Restore one system deactivated in a previous power-rerouting attempt.

Restore Shields: A starship's engineer must be adept at keeping the ship's shields working at all times. As an attack action, the engineer can make a DC 15 Repair check to restore a number of HD to shields equal to her Intelligence bonus. The ship's shields can never exceed its normal maximum amount.

in short, controlled bursts. A set of disposable boosters gives the ship the ability to use the afterburn maneuver, increasing the tactical speed by 500 feet (1 square). Disposable boosters can be used twenty times before needing to be replaced.

Minimum Ship Size: Large.

Tactical Speed Bonus: +500 feet (1 square), afterburn only.

Purchase DC: 25.

Hydrogen Injectors (PL 6)

The first afterburn system to be widely applied to existing engines, the hydrogen injector system pumps purified, concentrated hydrogen into the thrust mechanisms of a starship's engines. Hydrogen injectors give the ship the ability to use the afterburn maneuver, increasing the tactical speed by 1,000 feet (2 sq.).

Minimum Ship Size: Huge.

Tactical Speed Bonus: +1,000 feet (2 sq.), afterburn only.

Purchase DC: 30.

Plasma Injectors (PL 7)

An advanced form of afterburner, the plasma injector system replaces earlier hydrogen injectors by providing more explosive thrust through highly energized plasma. Plasma injectors give the ship the ability to use the afterburn maneuver, increasing the tactical speed by 1,500 feet (3 sq.).

Minimum Ship Size: Huge.

Tactical Speed Bonus: +1,500 feet (3 sq.), afterburn only.

Purchase DC: 35.

Stardrive (PL 7)

One of the first faster-than-light (FTL) drives truly capable of reducing the distance between the point of departure and that of arrival, the stardrive creates a controlled singularity that shunts a starship into an alternate dimension known as drivespace. One of the earliest, if most inefficient, predecessors to jump gate technology, the stardrive reduces the effective distance traveled by a starship by a factor of 350 (in effect, the starship travels at 350 times its normal cruising speed). A stardrive requires a mass reactor power core; no other power core works correctly. While in drivespace, a starship cannot interact with objects in normal space and cannot drop out of drivespace until the journey is completed.

Minimum Ship Size: Gargantuan.

Tactical Speed Bonus: None.

Purchase DC: 25 + one-half the base purchase DC of the starship.

Drivewave (PL 8)

The drivewave is a unique improvement on the stardrive that further improves the ship's ability to travel over long distances. A drivewave works in tandem with the starship's primary engines to enable faster-than-light travel by shunting the ship into an alternate dimension where travel distances are greatly reduced. It does not require a mass reactor. Drivewaves are the direct predecessors to the jump drive, which develops early in PL 9. A drivewave reduces the effective distance traveled by a ship by a factor of 500 (in effect, the starship travels at 500 times its normal speed). While in drivespace, a starship cannot interact with objects in normal space and cannot drop out of drivespace until the journey is completed.

Minimum Ship Size: Gargantuan.

Tactical Speed Bonus: None.

Purchase DC: 20 + one-half the base purchase DC of the starship.

Linear Deviation Drive (PL 8)

A linear deviation drive (also simply called a deviation drive) bends the fabric of both space and time to allow fantastic travel speeds that seem almost instantaneous to those inside the starship. A linear deviation drive warps time so that the passengers and crew aboard a starship experience only minutes of passing time, though the ship continues to travel at its normal pace until it reaches its destination. When the ship arrives, the deviation drive returns the inside of the ship to the normal rate of time. A linear deviation drive does not change the distance traveled by a ship or its speed, but characters inside the ship experience only minutes for even the longest journeys.

Minimum Ship Size: Gargantuan.

Tactical Speed Bonus: None.

Purchase DC: 20 + one-half the base purchase DC of the starship.

Chronometric Shifter (PL 9)

The chronometric shifter is a type of engine that allows a starship to travel through time as well as space. The cruising speed of a starship is not modified; however, as the ship travels across the breadth of space, the time-distorting drive actually sends the ship backward in time. The upshot is that while time on the ship passes as normal, to outside observers the ship seems to disappear from one spot and then instantly appear in another. For those aboard the ship, travel time is calculated as normal, though the ship arrives at its destination instantaneously.

Minimum Ship Size: Gargantuan.

Tactical Speed Bonus: None.

Purchase DC: 60 (Military +3).

Warpdrive (PL 9)

Though not as efficient as the jump drive, the warpdrive is a special FTL system that bends the fabric of reality and allows for amazing travel times. A warpdrive allows a starship to travel through normal space surrounded by a bubble of bent reality, allowing it to detect and interact with objects in normal space. Unlike stardrives, drivewaves, and jump drives, warpdrives do not actually shunt the ship into a parallel dimension. A warpdrive reduces the distance traveled by a starship by a factor of 700 (in effect, the starship travels at 700 times its normal cruising speed).

Minimum Ship Size: Gargantuan.

Tactical Speed Bonus: None.

Purchase DC: 25 + one-half the base purchase DC of the starship.

Starship Defense Systems

The following defense systems can be installed in any starship capable of meeting its requirements. This section also introduces shields, which can increase the number of hit points a starship can expend during combat.

Ablative Heat Shielding (PL 5)

The ablative heat shielding on a starship consists of ceramic, plastic, and metal tiles coated with heat-diffusing substances. First used on the earliest starships designed to leave and re-enter the atmosphere, ablative heat shielding still remains one of the most

NEW DEFENSE SYSTEM: SHIELDS

Shields grant a starship bonus hit points that are lost first before any of the ship's normal hit points. Shields provide a number of bonus Hit Dice (20 hit points per Hit Die) equal to one-fourth the starship's overall Hit Dice (rounded down, minimum of 1). A critical hit bypasses shields and deals damage directly to the starship's normal hit points.

commonly used defense systems in later Progress Levels. All fire damage taken during atmospheric entry by a ship with ablative heat shielding is halved.

Purchase DC: 5 + one-quarter the base purchase DC of the starship.

Restriction: None.

Interceptor Missiles (PL 6)

Interceptor missiles are small, propelled projectiles that target incoming attacks. Though slow to react and ineffective against energy weapons, interceptor missiles are great for warding off missile attacks. A starship gunner or pilot can make an opposed attack roll against an incoming missile attack to cause that attack to automatically miss. An individual pilot or gunner can do this a number of times per round equal to his Dexterity modifier.

Purchase DC: 30.

Restriction: Restricted (+2).

Wormhole Screen (PL 6)

The wormhole screen is a relatively primitive energy shield that surrounds a starship, allowing it to travel safely through a wormhole. Though stable wormholes (such as those created by stardrives and jump drives) do not require such a shield, a naturally occurring wormhole can shred an unprotected ship due to its violent energies.

Purchase DC: 10 + one-half the base purchase DC of the starship.

Restriction: None.

Active Shielding (PL 7)

Active shielding is a primitive form of shielding that only covers certain portions of a ship at any given time. An engineer or other ship's crewmember must make a Computer Use check opposed by the incoming attack roll to maneuver the ship's shields into place.

Purchase DC: 15 + one-half the base purchase DC of the starship.

Restriction: Military (+3).

Magnetic Shields (PL 7)

The first true shields come from the technology used to provide defense against incoming ballistic attacks. Magnetic shields absorb damage only from missiles and weapons that deal ballistic damage.

Purchase DC: 15 + one-half the base purchase DC of the starship.

Restriction: Military (+3).

Nanite Cloud (PL 7)

A nanite cloud surrounds a starship with a constantly shifting field of nanites that swarm around the ship protectively. The nanite cloud is controlled remotely by the starship's communications

and sensor systems, which activate the nanites when they detect incoming missiles. When a missile attack is detected, the nanites cluster in one place to intercept the missile. A nanite cloud provides one-half cover against incoming missile attacks.

Purchase DC: 10 + one-half the base purchase DC of the starship.

Restriction: Restricted (+2).

Particle Shields (PL 8)

Like magnetic shields, particle shields develop from the technologies that create a particle field. Particle shields absorb damage only from weapons that deal concussion, electricity, fire, or nonspecific energy damage.

Purchase DC: 20 + one-half the base purchase DC of the starship.

Restriction: Military (+3).

Singularity Defense Array (PL 8)

Once the ability to master gravity makes its way to starship defense systems, the singularity defense array is born. A singularity defense array (or simply the singularity array) creates small blackholes that swallow up incoming attacks. A starship gunner or pilot can make an opposed attack roll against an incoming attack to cause that attack to automatically miss. An individual pilot or gunner can do this a number of times per round equal to her Dexterity modifier.

Purchase DC: 25 + one-half the base purchase DC of the starship.

Restriction: Restricted (+2).

Solid Defense Field (PL 8)

Combining the efforts of both magnetic fields and particle fields into the same generator, the solid defense field repels all kinds of attacks. A solid defense field causes all missiles and weapons that deal ballistic, concussion, electricity, fire, or nonspecific energy damage to take a -4 penalty on attack rolls against the starship.

Purchase DC: 15 + one-half the base purchase DC of the starship

Restriction: Military (+3)

Deflector Shields (PL 9)

Eventually, energy shield technology advances to the point where it can absorb damage from any type of weapon and cover all sides of the ship simultaneously.

Purchase DC: 20 + one-half the base purchase DC of the starship.

Restriction: Military (+3).

Starship Sensors

The following sensor systems can be installed on any starship capable of meeting their requirements.

Collision Detection Sensors (PL 6)

Collision detection sensors provide warnings when asteroids, starships, or other large bodies in space are about to collide with the starship. Collision detection sensors provide a +4 bonus to Defense against ram attacks.

Purchase DC: 20.

Restriction: None.

Missile Lock Alert (PL 6)

Far more than a simple tone or blinking light, the missile lock alert provides pilots with trajectory and momentum data on incoming missile attacks. Missile lock alerts provide a +4 bonus to Defense against all missile weapons.

Purchase DC: 24.

Restriction: None.

Stellar Navigation System (PL 6)

Capable of detecting shifts in stellar bodies light years away, a stellar navigation system allows a starship's navigator to more accurately plot interstellar travel courses. They provide a +6 equipment bonus on all Navigate checks made to plot courses in a starship.

Purchase DC: 18.

Restriction: None.

Daedalus Long-Range Targeting

Software (PL 7)

Any starship with a targeting system can have Daedalus long-range targeting software; the software does not take up one of the starship's sensor system slots. The Daedalus long-range targeting software provides information on distant targets and plots likely movements of targeted starships. The software increases the range increment of all of a starship's beam, projectile, and missile weapons by 1,000 feet. This effect stacks with other systems that expand a weapon's range increment.

Purchase DC: 22 (Huge), 27 (Gargantuan), 32 (Colossal).

Restriction: Restricted (+2).

Pilot Assistance Maneuvering

Software (PL 7)

Any starship with a sensor array can have pilot assistance maneuvering software. The software does not take up one of the starship's sensor system slots. Usually installed in sensor systems designed for military use, the pilot assistance maneuvering software helps a pilot predict the effects of intense maneuvers on the starship's stability and integrity. The software provides a +4 equipment bonus on all Pilot checks made by the starship's pilot or copilot.

Purchase DC: 20 (Huge), 25 (Gargantuan), 30 (Colossal).

Restriction: None.

Predictive Defense Software (PL 7)

Any starship with a sensor array can have predictive defense software. The software does not take up one of the starship's sensor system slots. Designed to provide pilots with an extra measure of defense in combat, the predictive defense software calculates likely trajectories and maneuvers of enemy craft on the field of battle. Whenever the pilot takes the total defense action, or if the pilot is fighting defensively, the starship gains an additional +2 bonus to Defense on top of the normal Defense bonus provided by those actions.

Purchase DC: 24 (Huge), 29 (Gargantuan), 34 (Colossal).

Restriction: Restricted (+2).

Starship Weapons

The following weapons systems can be installed on any starship capable of meeting their requirements.

TABLE 2-8: STARSHIP WEAPONS

Weapon	Damage	Critical	Type	Damage Increment	Range Fire	Rate of Ship Size	Minimum DC	Purchase Restriction
Progress Level 6: Fusion Age								
Fusion shells	10d8 (45) ¹	20	Ballistic/Fire	3,000 feet	Single	Huge	35	Res (+2)
Missile, internal burst	5d12 (32) ¹	19-20	Ballistic	—	Single	Gargantuan	40	Mil (+3)
Progress Level 7: Gravity Age								
Magnetic warp beam	12d12 (78)	20	Energy	4,000 feet	Single	Gargantuan	39	Res (+2)
Progress Level 8: Energy Age								
Molecular disruptor	14d12 (91)	19-20	Energy	6,000 feet	Single	Colossal	46	Mil (+3)
Phase-shift laser cannon	12d8 (54) ¹	20	Fire	4,000 feet	Single	Gargantuan	44	Mil (+3)
Progress Level 9: Matter Age								
Blink cannon	18d12 (117)	20	Ballistic	5,000 feet	Single	Colossal	54	Mil (+3)

¹ See the weapon description for details.

Fusion Shell Cannon (PL 6)

Fusion shells are projectiles that, upon impact, initiate a powerful fusion reaction. Unlike the fusion beam, fusion shell cannons do not initiate the fusion reaction until the point of impact, bypassing any shields or fields capable of deflecting energy attacks.

Missile, Internal Burst (PL 6)

Internal burst missiles bore into a targeted starship's armor before detonating, causing severe damage to many internal systems. Internal burst missiles ignore one-half of a target's hardness.

Magnetic Warp Beam (PL 7)

The magnetic warp beam fires an intense ball of highly magnetized energy particles that, upon impact, warp the hull of a starship and punch through to the interior.

Molecular Disruptor (PL 8)

The molecular disruptor fires a beam of energy that agitates the molecular bonds holding together a starship's armor, causing those bonds to break violently.

Phase-Shift Laser Cannon (PL 8)

Utilizing cutting-edge teleportation technology, the phase-shift laser cannon fires a beam of energy that vanishes just before impact and then rematerializes inside the starship. Phase-shift lasers ignore one-half of a target's hardness.

Blink Cannons (PL 9)

Blink cannons use ammunition outfitted with tiny warpdrives, which propel the projectiles to faster-than-light speeds. Blink cannons have the disconcerting effect of damaging a target before the cannon's muzzle flash can be seen.

STARSHIPS

The following starships serve as new base ship types for any spacefaring campaign. Each ship can function as either a stand-alone vessel, or can be further modified by replacement parts or starship templates.

Drone (PL 5)

Used in situations when sending a living pilot is too dangerous, a drone is an unmanned vessel capable of acting independently and without direct pilot control. Though some drones are controlled

by remote, many simply have an autopilot system that steers the drone to the best course of action. Since drones possess no crew, they are not as effective as manned vessels in combat but can serve as sensor or communications relays in dangerous areas of space.

Type: Ultralight	Size: Large (-1 size)
Subtype: Drone	Tactical Speed: 2,500 feet (5 sq.)
Defense: 10	Length: 10 feet
Flat-footed Defense: 10	Weight: 800 lb.
Autopilot Defense: 9	Targeting System Bonus: +0
Hardness: 20	Crew: 0 (Untrained +0)
Hit Dice: 1d20 (20 hp)	Passenger Capacity: 0
Initiative Modifier: +0	Cargo Capacity: 0 lb.
Pilot's Class Bonus: +1	Grapple Modifier: +4
Pilot's Dex Modifier: +0	Base Purchase DC: 32
Gunner's Attack Bonus: -4	Restriction: None

Attack: None

Attack of Opportunity: None

Standard PL 5 Design Specs:

Power Core: Power cell
Engines: Thrusters
Armor: Alloy plating
Defense Systems: None
Sensors: Class I sensor array
Communications: Radio transceiver
Weapons: None
Grappling Systems: None

Escape Pod (PL 5)

The escape pod is really more a piece of starship equipment than a ship in its own right. Resembling the early space capsules used by the first space explorers, an escape pod consists of a small life-support-capable cockpit with a set of thrusters attached to one end. An escape pod can carry up to four passengers in its cramped interior, plus a single pilot, and has enough consumables for five humans to survive for up to three days. Escape pods possess limited control computers and no weapons, and are used only for emergency escape. Most escape pods remain in the area of the ship they were launched from awaiting rescue, though all escape pods are capable of making planetfall if a suitable environment is nearby.

Type: Ultralight	Size: Large (-1 size)
Subtype: Escape pod	Tactical Speed: 2,500 feet (5 sq.)
Defense: 10	Length: 14 feet
Flat-footed Defense: 10	Weight: 2,000 lb.
Autopilot Defense: 9	Targeting System Bonus: +0
Hardness: 20	Crew: 1 (Untrained +0)
Hit Dice: 2d20 (40 hp)	Passenger Capacity: 4
Initiative Modifier: +0	Cargo Capacity: 60 lb.
Pilot's Class Bonus: +1	Grapple Modifier: +4
Pilot's Dex Modifier: +0	Base Purchase DC: 32
Gunner's Attack Bonus: -4	Restriction: None

Standard PL 6 Design Specs:

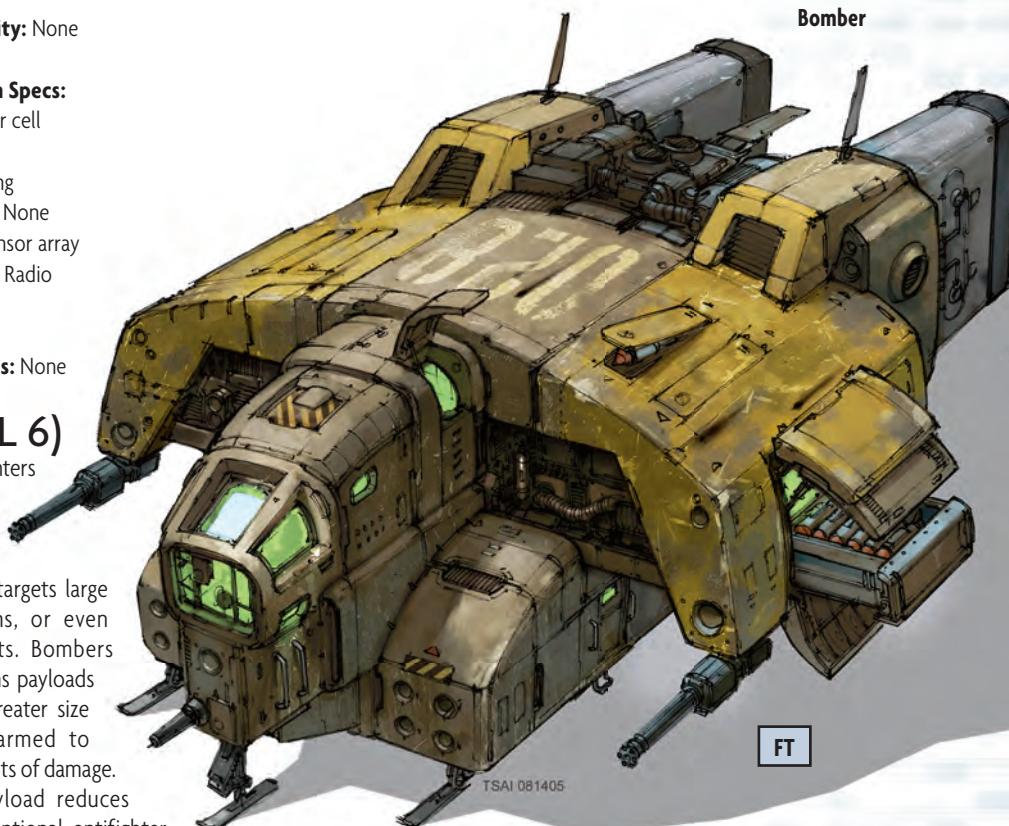
Power Core: Fission generator
Engines: Fusion torch, thrusters
Armor: Vanadium
Defense Systems: Decoy drone launcher, magnetic field, stealth screen
Sensors: Class III sensor array, targeting system
Communications: Laser transceiver, radio transceiver
Weapons: 2 fire-linked CHE missile launchers (8 missiles each), 1 nuclear missile launcher (8 missiles)
Grappling Systems: None

Attack: None**Attack of Opportunity:** None**Standard PL 5 Design Specs:**

Power Core: Power cell
Engines: Thrusters
Armor: Alloy plating
Defense Systems: None
Sensors: Class I sensor array
Communications: Radio transceiver
Weapons: None
Grappling Systems: None

Bomber (PL 6)

Similar in design to fighters and assault fighters, the bomber functions as an attack vessel that primarily targets large ships, space stations, or even ground-based targets. Bombers deliver heavy weapons payloads against a target of greater size and are generally armed to deliver massive amounts of damage. Carrying such a payload reduces the number of conventional antifighter weapons the bomber can carry, so a pair of fighters usually accompany most bombers on bombing runs to defend them against attack vessels.



Type: Ultralight	Size: Gargantuan (-4 size)
Subtype: Bomber	Tactical Speed: 3,500 feet (7 sq.)
Defense: 15	Length: 48 feet
Flat-footed Defense: 11	Weight: 63,000 lb.
Autopilot Defense: 8	Targeting System Bonus: +2
Hardness: 30	Crew: 2 (expert +8)
Hit Dice: 10d20 (200 hp)	Passenger Capacity: 0
Initiative Modifier: +4	Cargo Capacity: 2,000 lb.
Pilot's Class Bonus: +5	Grapple Modifier: +12
Pilot's Dex Modifier: +4	Base Purchase DC: 52
Gunner's Attack Bonus: +4	Restriction: Restricted (+2)

Attack:

2 fire-linked CHE missile launchers +2 ranged (9d12)

1 nuclear missile launcher +2 ranged

Attack of Opportunity: None**Drop Ship (PL 6)**

Used by military forces that continue to employ ground troops in combat, the drop ship is a shuttlecraft for soldiers and troopers descending from orbit into the battlefield. A drop ship is typically little more than a large passenger space and a cockpit, with a few defense weapons onboard to keep the ship from being blown out of the sky by enemy fighters. Additionally, pirates and privateers often use drop ships to land in enemy hangars and deploy raiding parties. All drop ships transport troops to and from orbit with speed and precision.

Type: Ultralight	Size: Gargantuan (-4 size)
Subtype: Drop ship	Tactical Speed: 3,500 feet (7 sq.)
Defense: 15	Length: 56 feet
Flat-footed Defense: 11	Weight: 132,000 lb.
Autopilot Defense: 8	Targeting System Bonus: +2
Hardness: 20	Crew: 2 (expert +8)
Hit Dice: 8d20 (160 hp)	Passenger Capacity: 20
Initiative Modifier: +4	Cargo Capacity: 6,000 lb.

Pilot's Class Bonus: +5	Grapple Modifier: +12
Pilot's Dex Modifier: +4	Base Purchase DC: 52
Gunner's Attack Bonus: +4	Restriction: None

Attack:

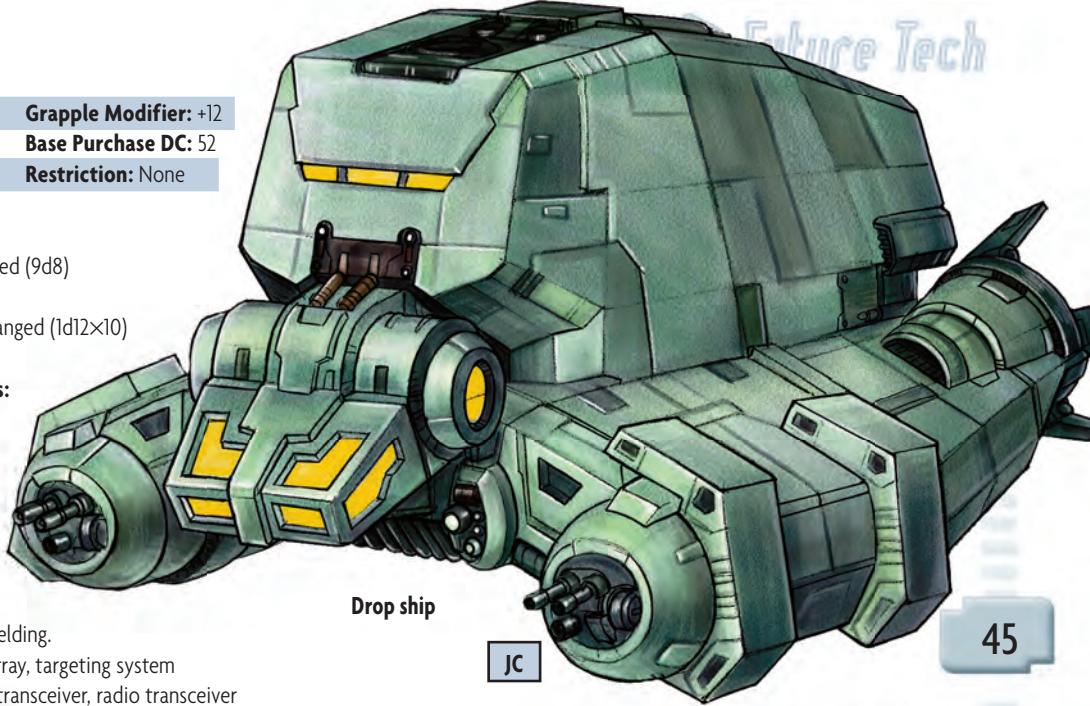
2 fire-linked lasers +2 ranged (9d8)

Attack of Opportunity:

Point defense system +2 ranged (1d12x10)

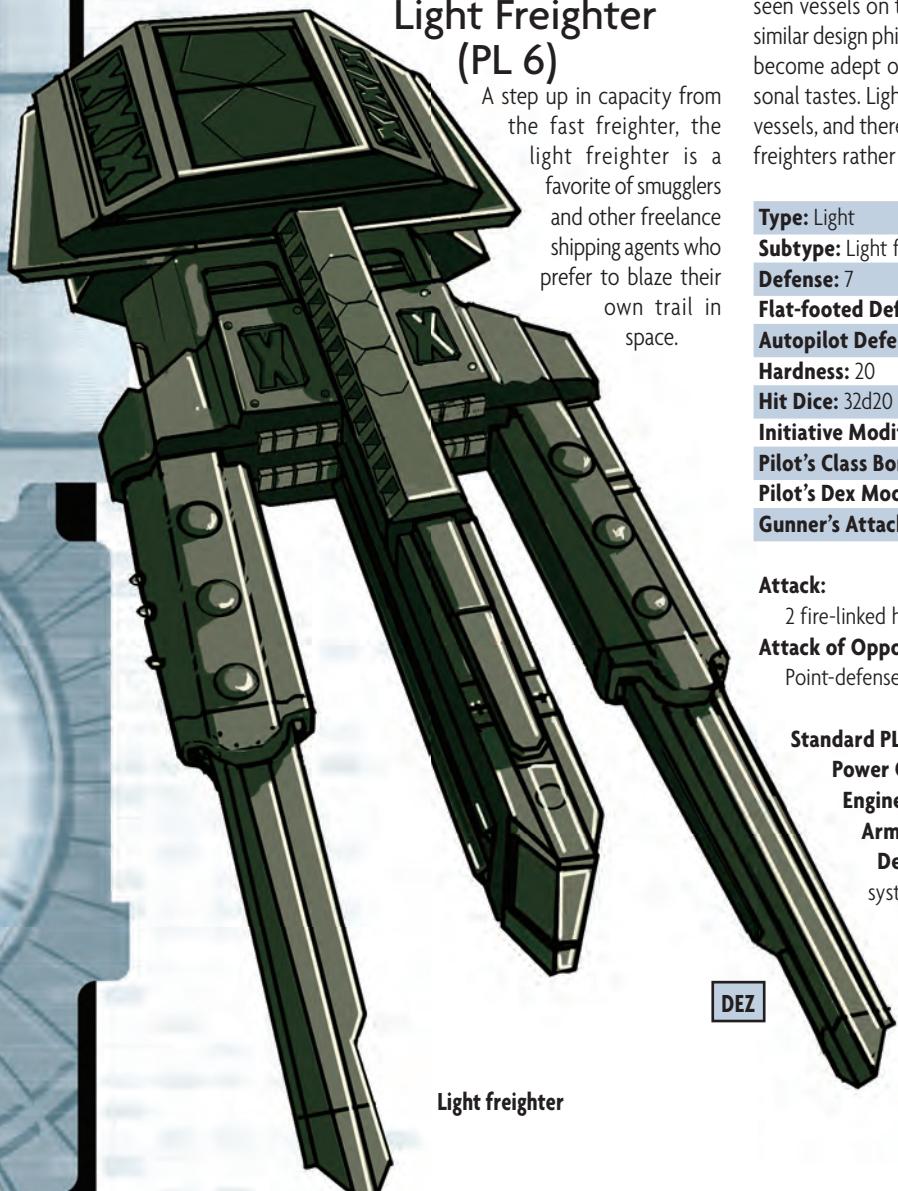
Standard PL 6 Design Specs:**Power Core:** Fission generator**Engines:** Ion engine, thrusters**Armor:** Polymeric**Defense Systems:**

Chaff launcher, point-defense system, radiation shielding.

Sensors: Class II sensor array, targeting system**Communications:** Laser transceiver, radio transceiver**Weapons:** 2 fire-linked lasers**Grappling Systems:** Grapplers

Drop ship

JC



Light Freighter (PL 6)

A step up in capacity from the fast freighter, the light freighter is a favorite of smugglers and other freelance shipping agents who prefer to blaze their own trail in space.

While most companies employ light freighters in their day-to-day shipping needs, the light freighter is one of the most commonly seen vessels on the space lanes. Since most light freighters share similar design philosophies, mechanics and chop-shop owners have become adept over the years at modifying them to fit their personal tastes. Light freighters make great personal and commercial vessels, and there are many spacers who actually live on their light freighters rather than rent or own a home planetside.

Type: Light	Size: Colossal (-8 size)
Subtype: Light freighter	Tactical Speed: 3,000 feet (7 sq.)
Defense: 7	Length: 140 feet
Flat-footed Defense: 5	Weight: 4,000 tons
Autopilot Defense: 5	Targeting System Bonus: +3
Hardness: 20	Crew: 8 (trained +4)
Hit Dice: 32d20 (640 hp)	Passenger Capacity: 18
Initiative Modifier: +2	Cargo Capacity: 2,000 tons
Pilot's Class Bonus: +3	Grapple Modifier: +16
Pilot's Dex Modifier: +2	Base Purchase DC: 56
Gunner's Attack Bonus: +2	Restriction: None

Attack:

2 fire-linked heavy lasers -3 ranged (12d8)

Attack of Opportunity:

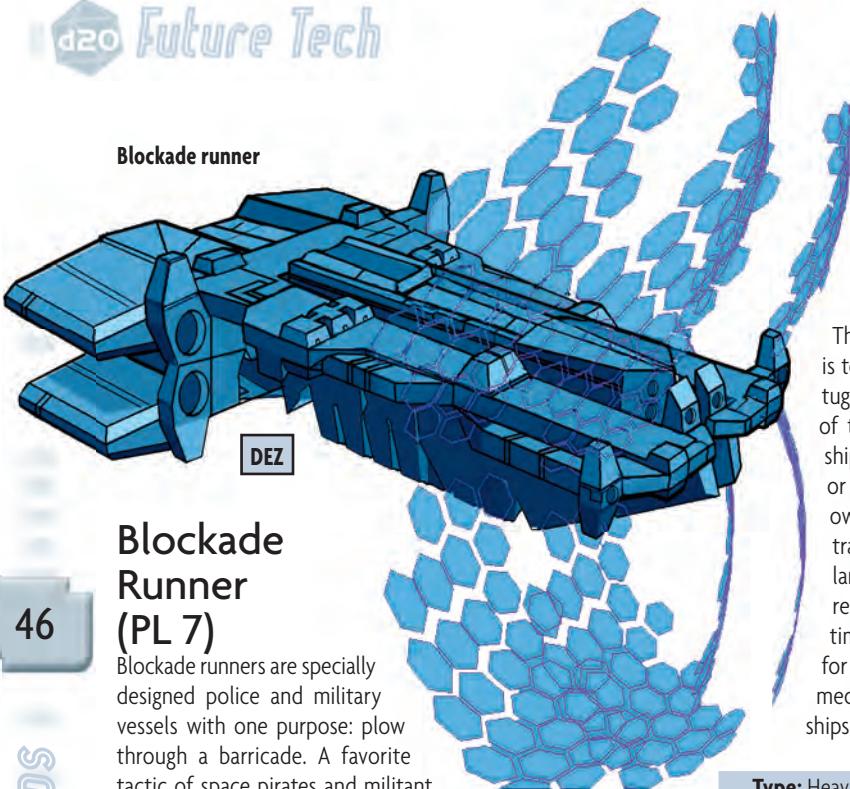
Point-defense system +3 (2d12x10)

Standard PL 6 Design Specs:**Power Core:** Fission reactor**Engines:** Fusion torch, thrusters**Armor:** Alloy plating**Defense Systems:** Magnetic field, point defense system, radiation shielding**Sensors:** Class III sensor array, targeting system**Communications:** Laser transceiver, radio transceiver**Weapons:** 2 fire-linked heavy lasers**Grappling Systems:** Grappler

DEZ

Light freighter

Blockade runner



Blockade Runner (PL 7)

Blockade runners are specially designed police and military vessels with one purpose: plow through a barricade. A favorite tactic of space pirates and militant governments is to quarantine a planet, either in hopes of preventing people or goods from escaping or to cut off all trade to the planet. Thus, many governments have begun to use blockade runners to forcefully penetrate the enemy lines and open a hole for other ships. Most blockade runners are heavily armored and boast impressive engines.

Type: Mediumweight	Size: Colossal (-8 size)
Subtype: Blockade runner	Tactical Speed: 4,000 feet (8 sq.)
Defense: 11	Length: 800 feet
Flat-footed Defense: 7	Weight: 38,250 tons
Autopilot Defense: 7	Targeting System Bonus: +5
Hardness: 30	Crew: 35 (expert +8)
Hit Dice: 225d20 (4,500 hp)	Passenger Capacity: 50
Initiative Modifier: +4	Cargo Capacity: 2,000 tons
Pilot's Class Bonus: +5	Grapple Modifier: +16
Pilot's Dex Modifier: +4	Base Purchase DC: 68
Gunner's Attack Bonus: +4	Restriction: Military (+3)

Attack:

4 fire-linked heavy mass cannons +1 ranged (20d12)
Battery of 4 mass reaction missiles +4 ranged (20d8/18-20)

Attack of Opportunity:

Point-defense system +5 ranged (3d12×10)

Standard PL 7 Design Specs:

Power Core: Mass reactor
Engines: Particle impulse engine, thrusters
Armor: Cerametal
Defense Systems: Chaff launcher, decoy drone launcher, improved autopilot system, light fortification, magnetic field, point-defense system, radiation shielding, repair drones, self-destruct system
Sensors: Class V sensor array, improved targeting system
Communications: Drivesat comm array, mass transceiver

Weapons: 4 fire-linked heavy mass cannons, battery of 4 mass reaction missile launchers (4 missiles)

Grappling Systems: Tractor beam emitter

Maintenance Tug (PL 6)

The maintenance tug is a massive vessel whose job is to build and repair other starships. A maintenance tug is a flying shipyard, capable of traveling the length of the stars in order to reach and repair damaged ships. Most maintenance tugs work for a government or organization, though many freelance mechanics own their own maintenance tugs, which they use as traveling shops. A maintenance tug can service very large starships, and even enormous star freighters request the aid of a maintenance tug from time to time. Most maintenance tugs have starship hangars for fighters and other lighter craft, allowing the ship's mechanics and engineers to service a large number of ships simultaneously.

Type: Heavy	Size: Colossal (-8 size)
Subtype: Maintenance tug	Tactical Speed: 3,000 feet (6 sq.)
Defense: 7	Length: 1,500 feet
Flat-footed Defense: 5	Weight: 150,000 tons
Autopilot Defense: 5	Targeting System Bonus: +3
Hardness: 20	Crew: 45 (trained +4)
Hit Dice: 300d20 (6,000 hp)	Passenger Capacity: 200
Initiative Modifier: +2	Cargo Capacity: 80,000 tons
Pilot's Class Bonus: +3	Grapple Modifier: +16
Pilot's Dex Modifier: +2	Base Purchase DC: 64
Gunner's Attack Bonus: +2	Restriction: None

Attack:

2 fire-linked lasers -3 ranged (9d8)
Battery of 3 lasers -1 ranged (6d8/19-20)

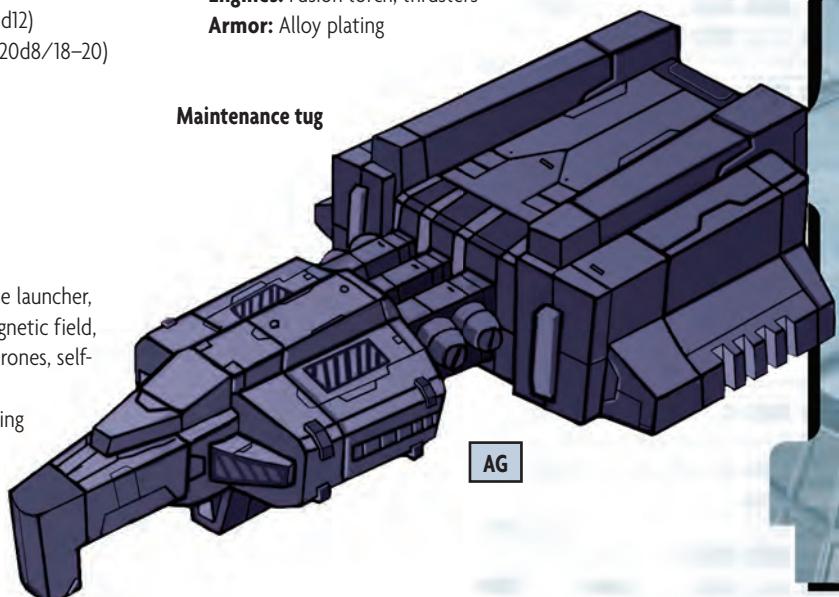
Attack of Opportunity:

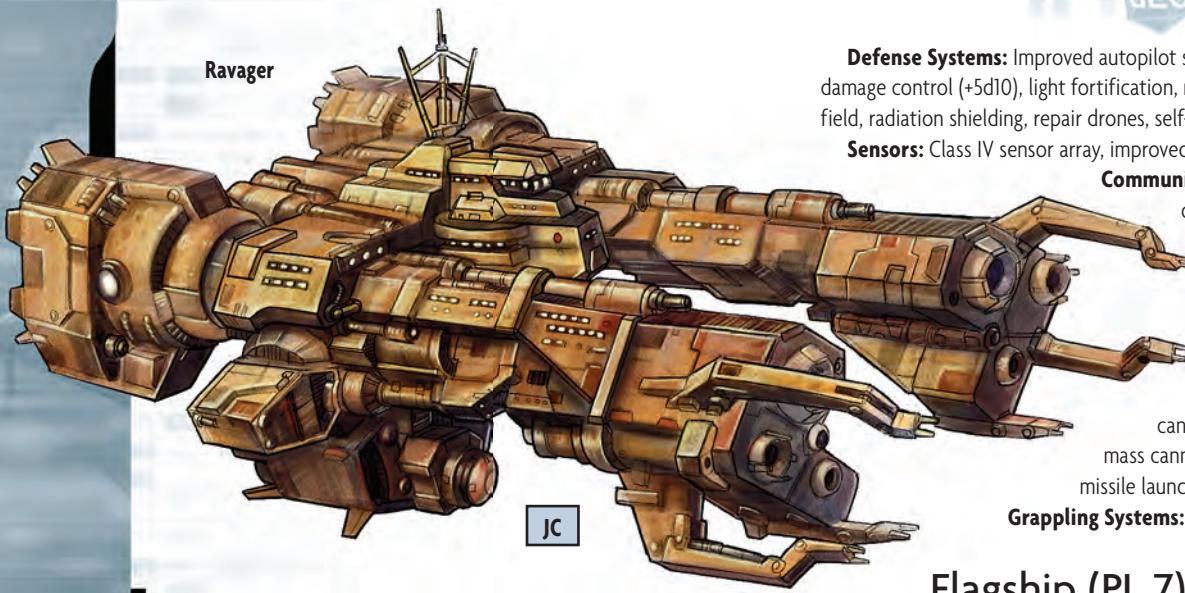
Point-defense system +3 ranged (4d12×10)

Standard PL 6 Design Specs:

Power Core: Fission generator
Engines: Fusion torch, thrusters
Armor: Alloy plating

Maintenance tug





Defense Systems: Improved autopilot system, improved damage control (+5d10), point defense system, radiation shielding, self-destruct system

Sensors: Class II sensor array, targeting system

Communications: Laser transceiver, radio transceiver

Weapons: 2 fire-linked lasers, battery of 3 lasers

Grappling Systems: Grapplers

Ravager (PL 7)

The ravager is a unique ship designed to pulverize any object in its path. Originally conceived as asteroid-busting ships capable of breaking down large chunks of rock into smaller, more manageable pieces, ravagers are now part of the arsenals of many military and fringe organizations. Since ravagers were originally designed to smash apart asteroids, comets, planetoids, and even small moons, they deal devastating amounts of damage to starships that get caught in their path. Though slow and bulky, ravagers unleash a torrent of destruction that few ships can withstand.

Type: Heavy	Size: Colossal (-8 size)
Subtype: Ravager	Tactical Speed: 3,000 feet (6 sq.)
Defense: 11	Length: 1,300 feet
Flat-footed Defense: 7	Weight: 160,000 tons
Autopilot Defense: 5	Targeting System Bonus: +5
Hardness: 40	Crew: 200 (expert +8)
Hit Dice: 400d20 (8,000 hp)	Passenger Capacity: 40
Initiative Modifier: +4	Cargo Capacity: 40,000 tons
Pilot's Class Bonus: +5	Grapple Modifier: +16
Pilot's Dex Modifier: +4	Base Purchase DC: 72
Gunner's Attack Bonus: +4	Restriction: Military (+3)

Attack:

- 2 fire-linked mass cannons +1 ranged (12d12)
- 2 fire-linked particle beams +1 ranged (18d8)
- 2 fire-linked heavy plasma cannons +1 ranged (27d8)
- Mass reaction missile launcher +1 ranged (20d8)

Attack of Opportunity: None

Standard PL 7 Design Specs:

- Power Core:** Antimatter reactor
- Engines:** Fusion torch, thrusters
- Armor:** Neutronite

Defense Systems: Improved autopilot system, improved damage control (+5d10), light fortification, magnetic field, particle field, radiation shielding, repair drones, self-destruct system

Sensors: Class IV sensor array, improved targeting system

Communications: Drivesat comm array, mass transceiver

Weapons: 2 fire-linked particle beams, 2 fire-linked heavy plasma cannons, 2 fire-linked mass cannons, mass reaction missile launcher (16 missiles)

Grappling Systems: Tractor beam emitter

Flagship (PL 7)

Similar in many respects to the battlecruiser or the dreadnought, the flagship is the centerpiece in any spacefaring armada. The flagship is the command center of the fleet, not only capable of delivering huge amounts of damage, but also possessing advanced sensors and communications systems that allow the fleet admirals to coordinate their forces over the course of battle. The flagship is also the centerpiece of any assault unit, dispensing its fighters in screens and often carrying the bombers that are deployed on attack runs. A flagship carries an impressive armament as well as the bulk of a fleet's command and control staff, making it a mobile command center that stands out as a symbol of the armada's might.

Type: Superheavy

Size: Colossal (-8 size)

Subtype: Flagship

Tactical Speed: 3,500 feet (7 sq.)

Defense: 11

Length: 5,500 feet

Flat-footed Defense: 7

Weight: 500,000 tons

Autopilot Defense: 7

Targeting System Bonus: +5

Hardness: 40

Crew: 3,000 (expert +8)

Hit Dice: 2,200d20 (44,000 hp)

Passenger Capacity: 3,000

Initiative Modifier: +4

Cargo Capacity: 200,000 tons

Pilot's Class Bonus: +5

Grapple Modifier: +16

Pilot's Dex Modifier: +4

Base Purchase DC: 76

Gunner's Attack Bonus: +4

Restriction: Military (+3)

Attack

- 2 fire-linked heavy mass cannons +1 ranged (15d12)
- 2 fire-linked heavy plasma cannons +1 ranged (27d8)
- 4 fire-linked heavy particle beams +1 ranged (32d8)
- Battery of four mass reaction missiles +4 ranged (20d8)
- Quantum cannon +1 ranged (16d8)

Attack of Opportunity

Point-defense system +5 ranged (5d12×10)

Standard PL 7 Design Specs:

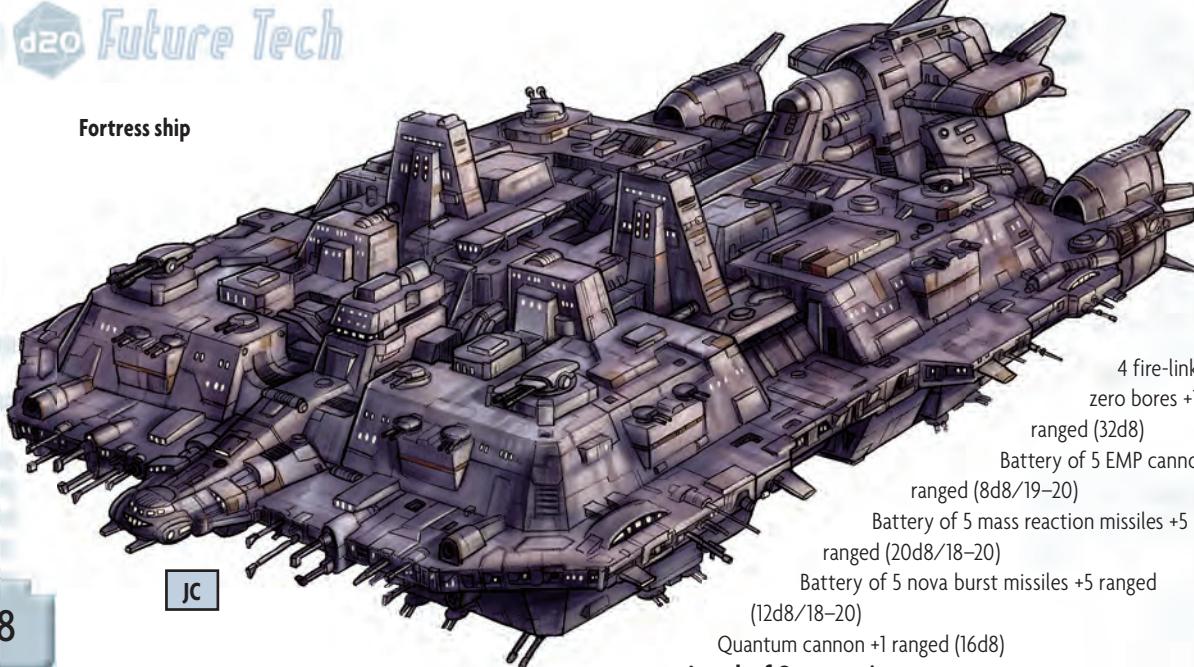
Power Core: Antimatter Reactor

Engines: Particle impulse engine, thrusters

Armor: Neutronite

Defense Systems: Decoy drone launcher, improved autopilot, improved damage control (+6d10), light fortification, magnetic

Fortress ship



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field, particle field, point defense system, radiation shielding, repair drones, self-destruct system, stealth screen

Sensors: Class V Sensor Array, improved targeting system

Communications: Drivesat comm array, mass transceiver

Weapons: 2 fire-linked plasma cannons, 2 fire-linked heavy mass cannons, 4 fire-linked heavy particle beams, battery of four mass reaction missiles, quantum cannon

Grappling Systems: Tractor Beam Emitter

Fortress Ship (PL 8)

The fortress ship is a sight to be feared. Though slow and bulky, it dominates the battlefield and can block out the sun with its immense form. Fortress ships are essentially floating cities, full of both military personnel and civilians, capable of moving through the stars and providing a place to live for thousands of passengers and crewmembers. The fortress ship is the home base of any stellar fleet. Though they resemble space stations more than starships, these vessels are capable of interstellar travel. Fortress ships are heavily defended and carry a massive complement of support ships within their berths. A fortress ship usually arrives after the battle is won, to establish a permanent presence in that system.

Type: Superheavy

Size: Colossal (-8 size)

Subtype: Fortress ship

Tactical Speed: 4,000 feet
(8 sq.)

Defense: 11

Length: 10,900 feet

Flat-footed Defense: 7

Weight: 6,000,000 tons

Autopilot Defense: 7

Targeting System Bonus: +3

Hardness: 40

Crew: 5,000 (expert +8)

Hit Dice: 4,500d20 (90,000 hp) **Passenger Capacity:** 20,000

Initiative Modifier: +4

Cargo Capacity: 2,000,000 tons

Pilot's Class Bonus: +5

Grapple Modifier: +16

Pilot's Dex Modifier: +4

Base Purchase DC: 80

Gunner's Attack Bonus: +4

Restriction: Military (+3)

Attack:

2 fire-linked heavy mass cannons +1 ranged (15d12)
2 fire-linked heavy plasma cannons +1 ranged (27d8)
2 fire-linked neutronium drivers +1 ranged (18d8)
4 fire-linked heavy particle beams +1 ranged (32d8)

4 fire-linked zero bores +1 ranged (32d8)
Battery of 5 EMP cannons +5 ranged (8d8/19-20)
Battery of 5 mass reaction missiles +5 ranged (20d8/18-20)
Battery of 5 nova burst missiles +5 ranged (12d8/18-20)
Quantum cannon +1 ranged (16d8)

Attack of Opportunity:

Point-defense system +5 ranged (5d12×10)

Standard PL 7 Design Specs:

Power Core: Zero-point cell

Engines: Gravitic redirector, thrusters

Armor: Neutronite

Defense Systems: Active shielding (22,500 hp), advanced damage control (+7d10), cloaking screen, decoy drone launcher, improved autopilot, magnetic field, medium fortification, particle field, point-defense system, radiation shielding, repair drones, self-destruct system

Sensors: Achilles targeting software, Class VIII sensor array, improved targeting system

Communications: Drivesat comm array, drive transceiver

Weapons: 2 fire-linked heavy mass cannons, 2 fire-linked heavy plasma cannons, 2 fire-linked neutronium drivers, 4 fire-linked heavy particle beams, 4 fire-linked zero bores, battery of 5 EMP cannons, battery of 5 mass reaction missiles, battery of 5 nova burst missiles, quantum cannon

Grappling Systems: Tractor beam emitter

SPACE STATIONS

Space stations are huge, relatively immobile structures designed to withstand the rigors of space. In game terms, a space station is really just a starship without complex engines. All space stations are Colossal-sized ships that possess only thrusters (if any engines) for movement, with a base tactical speed of 1,000 feet.

Spacedock (PL 5)

Spacedocks are the most rudimentary space stations and develop in the first days of space exploration. A spacedock consists of little more than a set of living areas connected by access hatches and tubes, with only a pressurized hatch and connection tube leading to a berthed ship. Most spacedocks can handle only one or two starships at a time and have no hangars or other interior landing facilities. Spacedocks often do not have any artificial gravity, though some might exploit the centrifugal force of their rotation. Most spacedocks serve as the first orbital platforms from which civilizations launch their explorations into the stars.

Type: Light	Size: Colossal (-8 size)
Subtype: Spacedock	Tactical Speed: None
Defense: 3	Length: 240 feet
Flat-footed Defense: 2	Weight: 80 tons
Autopilot Defense: 5	Targeting System Bonus: None
Hardness: 20	Crew: Varies (untrained +0)
Hit Dice: 30d20 (600 hp)	Passenger Capacity: 16
Initiative Modifier: +0	Cargo Capacity: 1,100 tons
Pilot's Class Bonus: +1	Grapple Modifier: +16
Pilot's Dex Modifier: +0	Base Purchase DC: 48
Gunner's Attack Bonus: -4	Restriction: None

Attack: None

Attack of Opportunity: None

Standard PL 5 Design Specs:

Power Core: Power cell
Engines: None
Armor: Alloy plating
Defense Systems: None
Sensors: Class I sensor array
Communications: Radio transceiver
Weapons: None
Grappling Systems: Grappler

Orbital Colony (PL 6)

The orbital colony is a space station designed to orbit a planetary body and act as a fully functioning living habitat for its passengers. An orbital colony is typically placed in orbit around a safe stellar body, such as a planet, where it acts as a kind of artificial moon (though usually nowhere near as large). Orbital colonies

take many forms, and though some engineers speculate that an orbital colony could be constructed like a ring around a planet, the amount of resources required to construct such a structure would be immense. Most orbital colonies simply occupy a fixed, geosynchronous orbit around a planet or moon.

Type: Superheavy	Size: Colossal (-8 size)
Subtype: Orbital colony	Tactical Speed: None
Defense: 3	Length: 4,700 feet
Flat-footed Defense: 2	Weight: 500,000 tons
Autopilot Defense: 5	Targeting System Bonus: +3
Hardness: 20	Crew: 400 (trained +4)
Hit Dice: 1,000d20 (20,000 hp)	Passenger Capacity: 6,000
Initiative Modifier: +2	Cargo Capacity: 300,000 tons
Pilot's Class Bonus: +3	Grapple Modifier: +16
Pilot's Dex Modifier: +2	Base Purchase DC: 72
Gunner's Attack Bonus: +2	Restriction: None

Attack:

2 fire-linked CHE missile launchers -3 ranged (9d12)
 Battery of four heavy lasers +0 ranged (8d8)

Attack of Opportunity:

Point-defense system +3 ranged (5d12×10)

Standard PL 6 Design Specs:

Power Core: Fusion Generator
Engines: None
Armor: Alloy Plating
Defense Systems: Damage control system (+5d10), point-defense systems
Sensors: Class II sensor array, targeting system



Communications: Laser transceiver, radio transceiver
Weapons: 2 CHE missile launchers, battery of 4 heavy lasers
Grappling Systems: Grappler

Military Base (PL 6)

Military bases are space stations that function as operation outposts for combat forces in remote parts of the universe. A military base often boasts its own squadron of defense fighters, and bases close to war zones occasionally keep a wing of long-range bombers on hand. Military base space stations are much like ground bases in that they often house both military personnel and their families, though the bases closer to combat usually have only military personnel onboard at any given time. Most military bases are heavily armed and defended and are capable of warding off attacks until the rest of the fleet arrives.

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Starships

Type: Superheavy	Size: Colossal (-8 size)
Subtype: Military base	Tactical Speed: None
Defense: 3	Length: 2,600 feet
Flat-footed Defense: 2	Weight: 270,000 tons
Autopilot Defense: 5	Targeting System Bonus: +3
Hardness: 30	Crew: 800 (expert +8)
Hit Dice: 1,200d20 (24,000 hp)	Passenger Capacity: 2,000
Initiative Modifier: +4	Cargo Capacity: 150,000 tons
Pilot's Class Bonus: +5	Grapple Modifier: +16
Pilot's Dex Modifier: +4	Base Purchase DC: 76
Gunner's Attack Bonus: +4	Restriction: Military (+3)

Attack:

2 fire-linked nuclear missile launchers -1 ranged (24d8)
 Battery of 4 heavy neutron guns +2 ranged (15d8/19-20)

Attack of Opportunity:

Point-defense system +3 ranged (5d12×10)

Standard PL 6 Design Specs:

Power Core: Fusion generator
Engines: None
Armor: Vanadium
Defense Systems: Damage control system (+5d10), magnetic field, point-defense systems, radiation shielding, self-destruct system
Sensors: Class III sensor array, targeting system
Communications: Laser transceiver, radio transceiver
Weapons: 2 fire-linked nuclear missile launchers, battery of 4 heavy neutron guns
Grappling Systems: Grappler

Deep Space Outpost (PL 7)

The deep space outpost is a station on the edge of known territory. Most deep space outposts serve as listening stations, with sensors pointed outward to warn of any incoming signals or vessels. Deep space outposts are employed early on in space exploration, first at the edge of the solar system and then steadily pushing out as civilization expands to nearby (and then distant) stars. Most deep space outposts are lightly crewed and almost completely self-sufficient, allowing their staff to stay on the edge of known space for lengthy periods of time.

Type: Light	Size: Colossal (-8 size)
Subtype: Deep Space Outpost	Tactical Speed: None
Defense: 3	Length: 600 feet
Flat-footed Defense: 2	Weight: 10,000 tons
Autopilot Defense: 5	Targeting System Bonus: +3
Hardness: 30	Crew: Varies (untrained +0)
Hit Dice: 60d20 (1,200 hp)	Passenger Capacity: 40
Initiative Modifier: +0	Cargo Capacity: 50,000 tons
Pilot's Class Bonus: +1	Grapple Modifier: +16
Pilot's Dex Modifier: +0	Base Purchase DC: 52
Gunner's Attack Bonus: -4	Restriction: None

Attack: None

Attack of Opportunity:

Point-defense system +3 ranged (2d12×10)

Standard PL 7 Design Specs:

Power Core: Fusion generator
Engines: None
Armor: Cerametal
Defense Systems: Point-defense system, repair drones
Sensors: Class IV sensor array, targeting system
Communications: Drivesat comm array, mass transceiver
Weapons: None
Grappling Systems: Tractor beam emitter

STARSHIP TEMPLATES

A starship template is a set of changes that can be laid over a starship to create a particular model of ship. Since the base ships, such as those presented above, represent only the most common and standard configurations for each type of vessel, starship templates help add variety and show the differences in starships made by different manufacturers or constructed with different design philosophies.

Thorn-Class Attack Drone Template (PL 6)

The *Thorn*-class template can be applied to any ultralight drone. The starship's design specs should be adjusted as follows.

Hit Dice: Increase by 1d20.
Engine Upgrade: Ion engines, thrusters (tactical speed +500 feet).
Armor Upgrade: Vanadium (hardness 30).
Defense System Upgrade: No change.
Sensors Upgrade: Targeting system.
Communications Upgrade: No change.
Weapons Upgrade: 2 fire-linked lasers (9d8 damage; range incr. 3,000 ft.)

Archer-Class Interceptor Template (PL 7)

The *Archer*-class template can be applied to any ultralight fighter or assault fighter. The starship's design specs should be adjusted as follows.

Hit Dice: Increase by 1d20.
Engine Upgrade: Particle impulse engine, thrusters (tactical speed +1,000 feet).

Armor Upgrade: Deflective (hardness 20 against attacks that deal ballistic damage, 40 against all other attacks).

Defense System Upgrade: Improved damage control (2d10), magnetic field, point-defense system.

Sensors Upgrade: Class V sensor array (+2 initiative), improved targeting system, Achilles targeting software (increases threat range of all weapon systems by 1), Daedalus long-range targeting software (increases range of all weapons by 1,000 feet).

Communications Upgrade: Mass transceiver.

Weapons Upgrade: 2 fire-linked plasma cannons (21d8 damage; range incr. 3,000 ft.; replaces PL 6 or PL 7 fire-linked weapon system).

Junker Template (PL 7)

The Junker template can be applied to any starship. The starship's design specs should be adjusted as follows.

Hit Dice: Decrease by 5d20 (minimum of 1d20).

Engine Upgrade: No change.

Armor Upgrade: Alloy plating (hardness 20).

Defense System Upgrade: Light fortification (25% chance to ignore a critical hit; replaces a PL 6 or PL 7 defense system).



Aleerin starfighter

Fleming-Class Espionage Ship Template (PL 8)

The *Fleming*-class template can be applied to any ultralight or light starship. The starship's design specs should be adjusted as follows.

Hit Dice: Increase by 5d20.

Engine Upgrade: Gravitic redirector, thrusters (tactical speed +1,500 feet).

Armor Upgrade: Ablative (hardness 40).

Defense System Upgrade: Cloaking screen (replaces a PL 6 or PL 7 defense system), self-destruct system, sensor jammer.

Sensors Upgrade: Class VII sensor array (+2 initiative), improved targeting system.

Communications Upgrade: Drive transceiver.

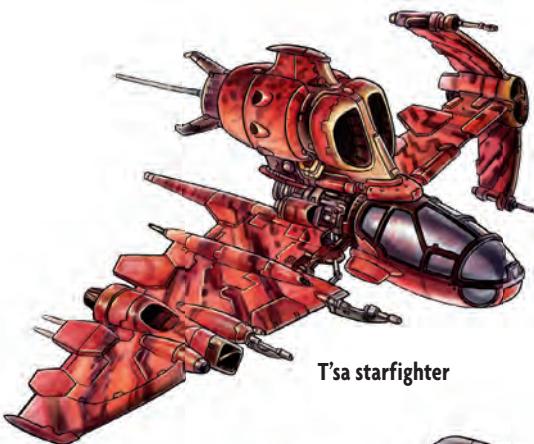
Weapons Upgrade: None.



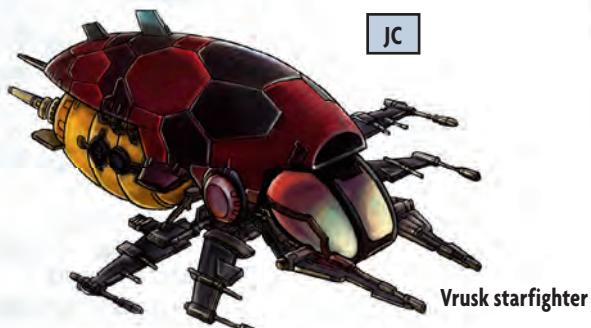
Dralasite starfighter



Fraal starfighter



T'sa starfighter



Vrusk starfighter



Yazirian starfighter

Judgment-Class Heavy Bomber Template (PL 8)

The *Judgment*-class template can be applied to any ultralight or light starship. The starship's design specs should be adjusted as follows.

Hit Dice: Increase by 4d20.

Engine Upgrade: Ion engines, thrusters (tactical speed +500 feet).

Armor Upgrade: Vanadium (hardness 30).

Defense System Upgrade: Point-defense system, self-destruct system, sensor jammer, stealth screen.

Sensors Upgrade: Class V sensor array (+2 initiative), improved targeting system, Achilles targeting software (increases threat range of all weapon systems by 1).

Communications Upgrade: Mass transceiver.

Weapons Upgrade: 2 fire-linked mass reaction missiles (30d8 damage, 16 carried).

Living Starship Template (PL 8)

The living starship template can be applied to any starship. The starship's design specs should be adjusted as follows.

Hit Dice: No change.

Engine Upgrade: Particle impulse engine, thrusters (tactical speed +1,000 feet).

Armor Upgrade: Polymeric (hardness 30).

Defense System Upgrade: Advanced damage control, light fortification (25% chance to ignore a critical hit).

Sensors Upgrade: Improve sensors by one step (for example, class III sensors become class IV sensors).

Communications Upgrade: No change.

Weapons Upgrade: No change.

Special: Living starships heal damage at a rate of 10 hit points per round. However, the threat range of any weapon attacking the living starship is increased by 1.

Ticonderoga-Class Fighter Carrier Template (PL 8)

The *Ticonderoga*-class template can be applied to any medium-weight or heavy starship. The starship's design specs should be adjusted as follows.

Hit Dice: Increase by 50d20.

Engine Upgrade: No change.

Armor Upgrade: Neutronite (hardness 40).

Defense System Upgrade: Point-defense system.

Sensors Upgrade: Achilles targeting software (increases threat range of all weapon systems by 1).

Communications Upgrade: Mass transceiver.

Weapons Upgrade: None.

Special: Half of the cargo capacity of the starship is changed to accommodate ultralight fighters, assault fighters, or bombers.

Aleerin-Engineered Template (PL 8)

The Aleerin-engineered template can be applied to any starship. The starship's design specs should be adjusted as follows.

Hit Dice: No change.

Engine Upgrade: Particle impulse engine, thrusters (tactical speed +1,000 feet).

Armor Upgrade: Neutronite (hardness 40).

Defense System Upgrade: Improved autopilot system, light fortification (25% chance to ignore a critical hit), repair drones.

Sensors Upgrade: Improved targeting system, Achilles targeting software (increases threat range of all weapon systems by 1).

Communications Upgrade: Drivesat comm array.

Weapons Upgrade: 2 fire-linked maser cannons (18d8 damage; range incr. 6,000 ft.; replaces PL 6 or PL 7 fire-linked weapon system).

Dralasite-Engineered Template (PL 7)

The Dralasite-engineered template can be applied to any starship. The starship's design specs should be adjusted as follows.

Hit Dice: No change.

Engine Upgrade: Induction engine, thrusters (tactical speed +1,000 feet).

Armor Upgrade: Cerametal (hardness 30).

Defense System Upgrade: Magnetic field, particle field, radiation shielding (can exceed the normal allotment of defense systems by one).

Sensors Upgrade: Improve sensors by one step (for example, class III sensors become class IV sensors).

Communications Upgrade: Mass transceiver.

Weapons Upgrade: Remove one weapons system.

Fraal-Engineered Template (PL 8)

The Fraal-engineered template can be applied to any starship. The starship's design specs should be adjusted as follows.

Hit Dice: No change.

Engine Upgrade: Gravitic redirector, thrusters (tactical speed +1,500 feet).

Armor Upgrade: Ablative (hardness 40).

Defense System Upgrade: Advanced damage control (+2d10, magnetic field, repair drones).

Sensors Upgrade: Improve sensors by one step (for example, class III sensors become class IV sensors).

Communications Upgrade: Drive transceiver.

Weapons Upgrade: No change.

T'sa-Engineered Template (PL 8)

The T'sa-engineered template can be applied to any starship. The starship's design specifications should be adjusted as follows.

Hit Dice: Increase by 2d20.

Engine Upgrade: Inertial flux engine, thrusters (tactical speed +1,500 feet).

Armor Upgrade: Deflective (hardness 20 against attacks that deal ballistic damage, 40 against all other attacks).

Defense System Upgrade: Advanced damage control (+2d10), improved autopilot system.

Sensors Upgrade: No change.

Communications Upgrade: Drivesat comm array.

Weapons Upgrade: No change.

Vrusk-Engineered Template

The Vrusk-engineered template can be applied to any starship. The starship's design specifications should be adjusted as follows.

Hit Dice: Increase by 5d20.

Engine Upgrade: Particle impulse engine, thrusters (tactical speed +1,000 feet).

Armor Upgrade: Ablative (hardness 40).

Defense System Upgrade: Advanced damage control, improved autopilot system, radiation shielding, repair drones.

Sensors Upgrade: Improved targeting system, pilot assistance maneuvering software.

Communications Upgrade: Mass transceiver.

Weapons Upgrade: 2 fire-linked plasma cannons (21d8 damage; range incr. 3,000 ft.; replaces PL 6 or PL 7 fire-linked weapon system).



Aleerin destroyer



Fraal destroyer



Vrusk destroyer

JC

Yazirian-Engineered Template

The Yazirian-engineered template can be applied to any starship. The starship's design specifications should be adjusted as follows.

Hit Dice: Increase by 4d20.

Engine Upgrade: Inertial flux engine, thrusters (tactical speed +1,500 feet).

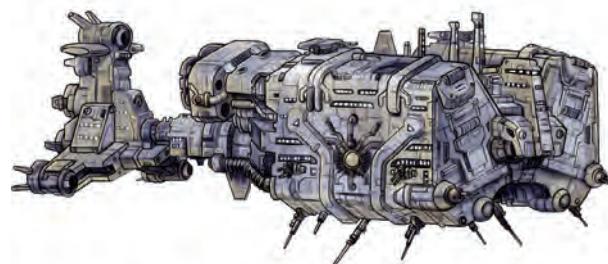
Armor Upgrade: Ablative (hardness 40).

Defense System Upgrade: Improved autopilot system, magnetic field, medium fortification (50% chance to ignore a critical hit), particle field.

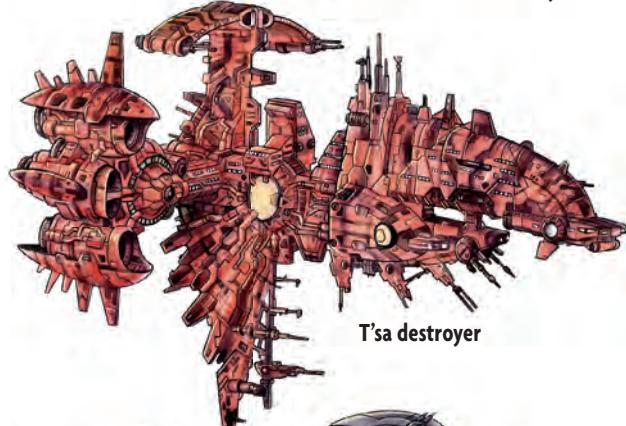
Sensors Upgrade: Improved targeting system, Achilles targeting software (increases threat range of all weapon systems by 1), Daedalus long-range targeting software (increases range of all weapons systems by 1,000 feet).

Communications Upgrade: Drivesat comm array.

Weapons Upgrade: 2 fire-linked heavy plasma cannons (27d8 damage; range incr. 4,000 ft.; replaces PL 6 or PL 7 fire-linked weapon system), plasma missile launcher (18d8; Crit 19–20; replaces PL 6 or PL 7 missile weapon).



Dralasite destroyer



T'sa destroyer



Yazirian destroyer



One of the aspects of science fiction film and literature that truly gives depth to the story is the setting. Films such as *Blade Runner* and *Star Wars* present rich background tapestries that make their worlds not only plausible, but also interesting. The little details the creators choose to include—how people pay for goods and services, how they present identification, how they protect themselves, what materials are still available (or how their absence has affected the world)—make their settings seem real.

Gamemasters can employ many of the same artifices in their descriptions of their settings. If the players understand the systems that make the game world function—the same way they understand the systems that make the real world function—the GM won't have to keep explaining every aspect of the system to the players. The game world will seem just as alive to them as the real world: The heroes place calls, order groceries, present identification, and so on, just as naturally as the players themselves do.

This chapter presents the GM with a number of common systems and the ways in which the systems change and evolve at each Progress Level. Some of these systems interact with others. Identification systems, for example, hand in hand with security systems, rapidly become a major part of nearly every other system. Communications systems affect everything from commerce to transportation. Some systems progress faster than others. The Progress Level of robotics, for example, might outstrip the Progress Level of home life, and some might even backslide. For example, it might be more cost-effective to ride horses on frontier planets, where the price of importing fuel for motorized vehicles would be exorbitant. But armed with the information below, GMs should be able to make a reasonable assessment of how these systems can work together to make their game worlds both more futuristic *and* realistic.

COMMUNICATION

Communication is one of the fastest-growing technologies in the world. As telephony advances to videophony and beyond, the

need for faster transmission and larger bandwidth also increases. Standard calling service includes mute, three-way calling, call waiting, caller I.D., and voice mail.

The “license” required for calling service is merely a collection of the user’s personal information—and that mainly for billing purposes. Service without the requirement of this information is very easy to obtain.

TABLE 3-1:
COMMUNICATIONS AND DATA TRANSFER

Item or Service	Size	Weight	Purchase	
			DC	Restriction
Progress Level 5: Information Age				
Calling service	—	—	6	Lic (+1)
Long distance				
Planetary	—	—	+1 / time zone	—
Progress Level 6: Fusion Age				
Long distance				
Interplanetary	—	—	+5	—
Interstellar	—	—	+10	—
Earpiece telephone	Fine	—	14	—
Subcutaneous telephone	Fine	—	15	—
Progress Level 7: Gravity Age				
Videophone (basic)	Small	2 lb.	15	—
Videophone (glasses)	Fine	—	16	—
Videophone (contacts)	Fine	—	17	—
Progress Level 8: Energy Age				
Holophone (basic)	Small	2 lb.	17	—
Holophone (cellular)	Dimin.	1 lb.	19	—

Telephony (PL 6)

Voice-dialing, which debuted during the Information Age, becomes the norm in the Fusion Age, as telephones shrink from handsets to earpieces.

Callers activate the telephone’s microphone manually and then have the option of speaking aloud the telephone number, or naming a party stored in the telephone’s memory, such as saying “Mom,” or “pizza delivery.” Telephones also come with preset voice codes for operator assistance, police, fire, ambulance, and customer service (for both the telephone hardware and the cellular telephone service).

Videophony (PL 7)

Primitive models of the videophone appeared as early as the Information Age, but they don’t reach universal usage until the Gravity Age. The first working models require a return to larger hardware, but swiftly revert to versions that project images onto the lens of glasses, or even onto contact lenses. And, of course, anyone who owns a computer can use its monitor to place and receive videophone calls.

The process for placing a call via a videophone is much like that for a telephone. The basic model of videophone allows a touch-screen interface and multichannel windowing (for calling multiple parties), and features the same options for memory slots and preset numbers. Complementary to the mute function for sound, videophones also offer a blank screen function, allowing users to prevent their images from being transmitted (or transmitting a still or recorded image instead of a live image).

Voice-dialing is necessary with the smaller screens, however (see Telephony).

Holophony (PL 8)

Though holograph technology enters use in the Information Age, the ability to project a three-dimensional, real-time image anywhere, at any time, with a lightweight transceiver, isn’t really possible until the Energy Age.

Placing or receiving a holophone call (via a desktop or wall-mounted base unit, or a handheld cellular) requires a horizontal surface on which to place the holophone. The unit transmits flawless holographic images of everything in a given space (a 10-foot square for the desktop or wall-mounted units, a 5-foot square for the cellular version). Holophone etiquette usually requires that some individuals in the transmission area move to accommodate the holographic images of parties on the other end.

The sound pickup is the same as for any speakerphone; anyone within about 15 feet of the unit can be heard, if not seen, and the closer they are, the clearer they sound. The receiving party’s holophone rings like a standard telephone, but also projects a small image (either of the caller, or some prerecorded scene) as a form of caller I.D.

A form of split-screen calling is available, in which the holophone projects correspondingly smaller images (half-size for two parties, one-third-size for three parties, and so on) in separate parts of the same receiving area.

IDENTIFICATION AND SECURITY

As long as there is money, the world will need security systems. And hand in hand with security technology is identification technology. Traditional lock-and-key arrangements become less and less popular as a variety of scanners, keyed to different genetic information—fingerprints, retinal prints, and eventually DNA—prove harder to duplicate.

Already in the Information Age, security cameras are omnipresent in everyday society, even if the public can’t always see them. In the Fusion Age and later, more advanced systems appear, not only watching the public’s every movement, but scanning their security badges, retinas, and one day taking DNA samples from their blood, or even from the trace amounts of saliva in their exhalations. And as such identification systems become mandatory in certain public areas (and common in high-security private areas), security systems become transparent; a person is scanned and cleared (or not cleared) without directly interacting with a security device.

These same systems apply to commerce. One’s identification can be linked directly to one’s financial accounts, allowing individuals to pay for goods and services by waving their I.D. badge over a scanner, glancing into a retinal reader, and so on.

Shortcomings in the electronic aspect of such systems persist, however. Any such system relies on electricity and maybe mechanical components (in the case of locks and similar devices)—both of which can be overcome with Disable Device checks. Further, a Computer Use check and the proper tools can fool a scanner’s processor into thinking that an authorized user has submitted the correct data. (The normal rules for such checks apply; see Chapter Two: Skills in the *d20 MODERN Roleplaying Game*.)

TABLE 3–2: IDENTIFICATION AND SECURITY

Item or Service	Size	Weight	Purchase	
			DC	Restriction
Progress Level 5: Information Age				
Home security contract	—	—	8/month	Lic (+1)
Office security contract	—	—	10/month	Lic (+1)
Progress Level 6: Fusion Age				
I.D. badge	Fine	—	4	Lic (+1)
Badge scanner	Tiny	2 lb.	15	Lic (+1)
Progress Level 7: Gravity Age				
Retinal scanner	Tiny	1 lb.	16	Lic (+1)
Progress Level 8: Energy Age				
Cell reader	Small	4 lb.	16	Lic (+1)
Breath reader	Medium	16 lb.	20	Lic (+1)
Progress Level 9				
Bioelectric reader	Large	44 lb.	25	Lic (+1)
Biomagnetic imager	Small	8 lb.	26	Ill (+4)

Personal Data Identification (PL 6)

Every human being has some unique physical features (fingerprints and palm prints, for example), as well as other features that help verify a person's I.D. (height, weight, hair color, eye color, and so on). All of this information can be recorded onto I.D. badges and read by scanners no larger than cellular phones. In some situations, the badges can be worn on the owner's clothing and scanned without the owner having to lift a finger; this is common in high-security areas. The range of such devices is never more than 20 feet, and rarely more than 5 feet.

The drawback of such an identification system is the same as for conventional metal keys: It is only as secure as the badge. If someone steals another person's badge, the thief can gain access to the real owner's home, vehicle, bank accounts, and so on. Of course, the scanner system is best used in conjunction with a security contract, which alerts the authorities of suspicious activities, such as excessive charges or unusual entries.

These I.D. badges are extremely difficult to fake because the data is so thorough. Forgery checks made to duplicate such a badge take a -16 penalty.

Retinal Identification (PL 7)

Retinal scans are possible as early as the Information Age, but are rarely used except by the most technologically inclined organizations. Retinal scans become more common in the Gravity Age; every citizen is scanned shortly after birth and retinal records are stored in police databases all over the world. These records are also stored in certain public databases, with the citizen's implied consent, if the citizen makes purchases using his retinal scan as identification. And, in the same way that many businesses store their customers' purchase histories to track sales, retinal scanners automatically read customers' "eyeprints" the moment they enter the store so that suggestions about new products can be made to them based on their previous buying trends. The range of such devices is never more than 30 feet and rarely more than 10 feet.

Retinal systems are extremely difficult to bypass without using someone else's eyes—a grisly prospect. Eye surgery (a DC 20 Treat Injury check) can replace the cornea, but this leaves behind scars

that trigger an alert when the individual is scanned. (Anyone who undergoes such surgery is required by law to report for a rescan as soon after the surgery as the doctor deems safe.)

Genetic Identification (PL 8)

DNA readers require a bit more interaction from the individual—usually by means of a small blood or skin cells sample. The individual typically inserts a digit (the thumb being common) in the reader, which takes a sample and compares it to a database. The process takes only a move action and causes no discomfort nor damage.

Somewhat larger systems speed up the process by reading the DNA from traces of saliva in the individual's exhalations at a range of about 5 feet. Obviously, it only works on creatures that breathe, and an individual can certainly hold her breath while she passes the reader—which is why, in public places, readers are usually monitored first-hand by security guards instructing individuals to breathe out.

Though rare, incidents involving falsified DNA samples arise—mainly through individuals using pilfered genetic material. Forging such samples is virtually impossible.

Bioelectric Identification (PL 9)

Bioelectric readers rapidly replace DNA readers due to their ability to work at greater distances. The scanner detects and measures each individual's unique biomagnetic field at a distance of up to 40 feet. Such fields are nearly impossible to alter, though black-market biomagnetic imagers can create a false field for up to half an hour. Because a specific, valid biomagnetic field is required (otherwise the system registers an unlicensed field), the imager must first record a valid field, which can be faked reasonably well with a DC 30 Computer Use check.

ADVERTISING AND MARKETING

The rapid growth of communication technology not only makes it possible for people to reach each other across interstellar distances, it makes it possible for marketers to send advertising almost anywhere as well. Cheap microchips make it possible for products to literally sell themselves right off the shelves and to play their own commercials—from annoying jingles to litanies of product specifications and comparisons—even after the customer has taken them home.

The technology to do all of these things exists in the Information Age, but is considered too impractical for mass distribution. In the Fusion Age, though, nearly unlimited energy causes production costs to drop considerably, enabling advertising companies to send their product messages straight to every potential customer. And as technology advances, marketers capitalize on the public's desire to defray the cost of communication systems, subsidizing utility bills in exchange for the customer's agreement to allow companies to transmit their ads through the customer's telephones, videophones, and so on. Standard ring tones rapidly give way to product tones. ("You have an inbound call—courtesy of Toner Motors. Dial 9765 to test-drive the Willow today!") Eventually, the marketing subsidy becomes just another part of daily existence, and most people don't realize they have the option of not taking advantage of the subsidy. This ultimately blurs the line

TABLE 3–3: ADVERTISING AND MARKETING

Item or Service	Size	Weight	DC	Purchase Restriction
Marketing subsidy ¹	—	—	—11	—

1 This service is available only in the Fusion Age and later.

between industries, because every major corporation has its own communications division specifically to make sure the public hears its message.

Similarly, with the development of identification and security technologies, advertising and marketing can target an individual customer's precise needs by cross-referencing her I.D. information with her buying records. Products literally call out to passing customers: "Hey, Mrs. Dunn! Buying Tastee-Wheat again? Did you know that 57 percent of Tastee-Wheat customers prefer new Golden Bran?"

Talking Products (PL 6)

Products with tiny voice chips start as a marketing gimmick during the Information Age, but become all too common during the Fusion Age. Almost every product on the market—from flour to running shoes—has a voice chip in the packaging or the product itself. These chips play simple prerecorded jingles or other advertising spots, making the packaging its own commercial. As shoppers stroll through the aisles, any product they examine plays its message. Though the chip has only a limited operational life, it usually lasts well after the customer purchases the product and takes it home. Since most people routinely remove the chips after purchasing a product, companies also implant the chips in customer response cards and proof-of-purchase seals, which are often returned to the company, thus recycling the chips and saving money.

Walk-Up Ads

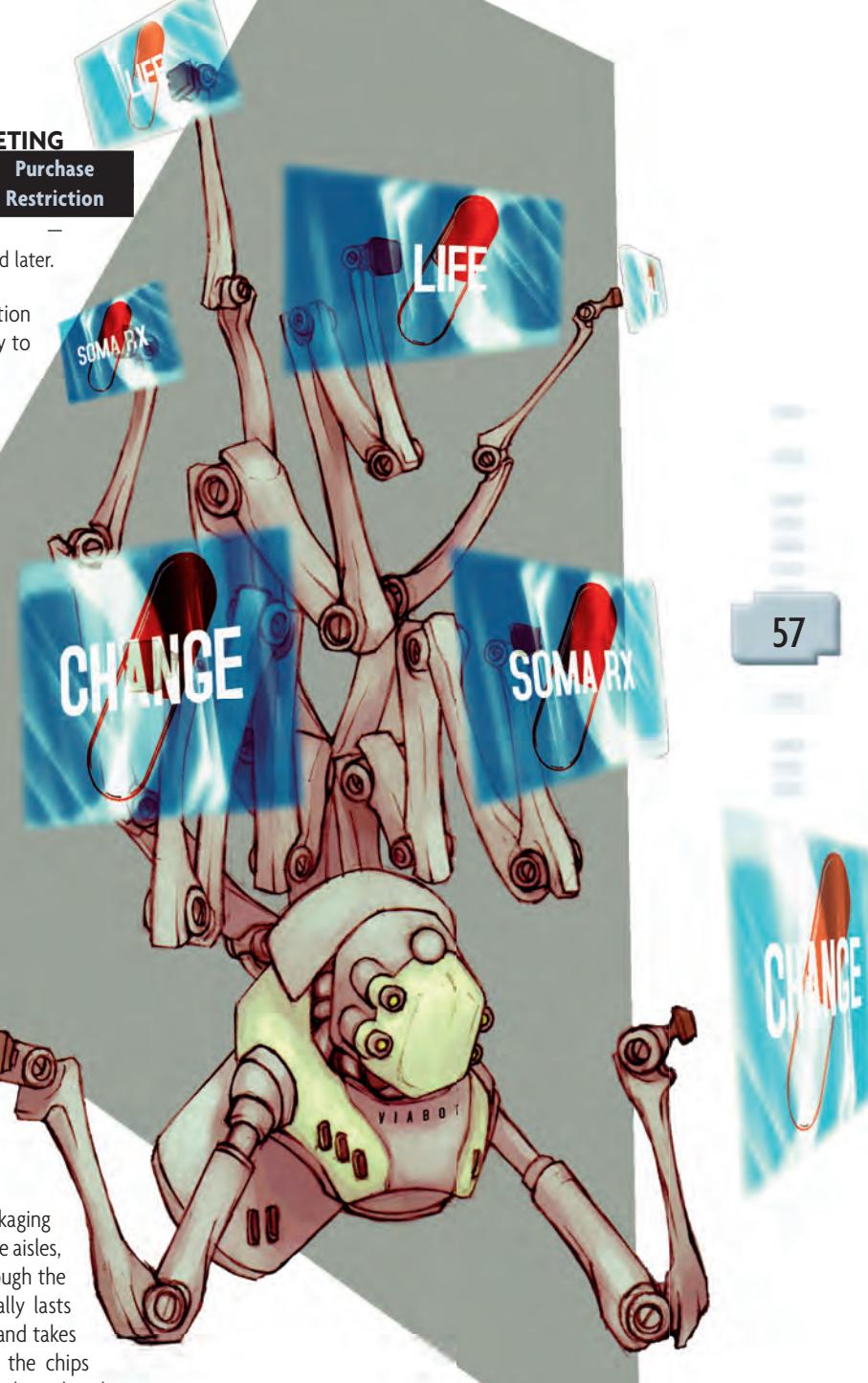
A byproduct of the talking product is the *walking* product: a robot built to resemble a product, which wanders throughout the store extolling the virtues of the product to the shoppers. Though considered amusing and whimsical by some consumers—mainly children and their parents—many others find them annoying. Walk-up robot ads are frequently vandalized. Likewise, they are often stolen—sometimes for a prank, sometimes by collectors.

Pinpoint Marketing (PL 7)

Retinal identification combined with advances in communication technology give rise to pinpoint marketing. Each shopper

is discreetly scanned upon entering a store, his buying patterns instantly analyzed and holographic ads generated within the shopper's field of view, specifically targeted not only to the shopper's tastes, but also calling the shopper by name. (In the case of clothing, the holographic ad often depicts the shopper wearing the product.)

This system is very popular with pranksters, however, because it is relatively easy to hack the ads. Endless streams of insults and holograms with the shopper wearing unflattering clothing (or none at all) are common. The abuse of pinpoint marketing reached its zenith, though, when hackers began using the system to simulate



In the future, advertising is everywhere

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hallucinations, inducing artificial schizophrenia in unpopular political figures, corporate officers, and celebrities. Reprogramming the pinpoint marketing system involves computer hacking (see Computer Use on page 51 in the *d20 MODERN Roleplaying Game*). The system has exceptional security (Computer Use DC 35), and is comparable to a massive corporate network (Computer Use DC 25) for the purpose of finding a particular user's data.

Pop'n'Touch Ads

Ever at the forefront of marketing developments, the VRNet bombards its users with advertising. The Internet's pop-up ads give way to pop'n'touch ads: ads that require a virtual touch to follow their links (or to close them). Unscrupulous marketers make them particularly difficult to touch, though; closing such ads requires a melee touch attack against Defense 15.

Holomarketing (PL 8)

The next evolutionary step after pinpoint marketing is holomarketing: interactive holographic commercials that play around the shopper, either in the store, or in the shopper's home. Commonly tied to holophone systems (see Table 3-1: Communications and Data Transfer, page 55), holocommercials play so often and so ubiquitously that the average citizen sees almost two hundred products every 8 hours. This phenomenon of endless streams of commercials comes to be known as the "Holomall."

The Holomall relies on users accessing products' virtual showrooms: three-dimensional displays where shoppers can interact with millions of products in their virtual forms, which significantly reduces shopping time. Common items still require that the shopper pick up the items or have them delivered, but less common items take half the usual time to purchase: one half-hour for each 1 point of the item's purchase DC.

HEALTH CARE

Health care and medicine advance with deliberate speed—progress in medicine moves forward, but medical organizations perform copious tests to ensure their safety before releasing new treatments and cures. Even then, the prices are so high that only the truly wealthy can afford the best medicines, and only those with health insurance can afford the nongeneric brands. Thus, health care is a high priority—especially for those who take exceptional risks on a regular basis (such as the heroes).

Basic health care includes standard checkup visits to a doctor—essentially, any time the hero wants to purchase a prescription pharmaceutical legally, or just consult with a physician, this is the

fee he pays. Health insurance, on the other hand, provides the hero with a price break on treatments and medication (−2 to the purchase DC) in return for a monthly fee.

Taking into account that inflation adjusts all prices gradually upward, the cost of basic health care never changes all that much. What changes is the services offered, and what additional services are available. Mainly, these revolve around obtaining transport to the nearest hospital.

Medevac (PL 6)

Medevac operations date from the Information Age, but faster vehicles in the Fusion Age mean that paramedic airlifts stand a better chance of saving a patient's life. Once a paramedic team receives notification that a patient is in danger—usually by a Health-Alert chip (see page 16)—response time ranges from 1d4+2 minutes in heavily populated areas (such as cities), 2d4+10 minutes in areas of average population (such as small towns), to 2d20+20 minutes in sparsely populated areas (such as in the country). Service in wilderness areas is nonexistent.

Medifreeze (PL 7)

Medifreeze units enable the mortally wounded to put off death just a little longer. Worn as a harness, the Medifreeze monitors the wearer's vital signs. If the wearer is in danger of dying (at −1 hit points or lower), the unit induces a partial cryogenic freeze in the wearer. At the same time, the built-in Health-Alert notifies the nearest paramedic team of the wearer's condition. The character remains unconscious and unable to take actions, but doesn't lose another hit point for 1 hour (instead of 1 round, as usual).

The Medifreeze unit has three modes: alert, freeze, and off. Alert mode sounds an alarm, and if the wearer (or someone nearby) doesn't deactivate the unit within 1 round, it activates as normal to freeze the wearer. Freeze mode acts as described above. Switching between modes is a move action.

Mediport (PL 8)

The practice of transporting sick and injured persons to care facilities makes a great stride forward with the invention of the teleporter in the Energy Age. The Mediport cuts in half the total response time to reach the patient and then transport her to the hospital. Along with the paramedics and their gear, the Mediport includes a transportal (see page 103 of *d20 Future*). The attendants, after stabilizing the patient, can teleport her directly to the hospital emergency room rather than risk losing her on the trip back.

The process improves at PL 9, when transport disks become available, eliminating the need for a vehicle. Paramedics teleport directly to the patient (guided by the patient's Health-Alert chip), instantaneously, no matter where the patient is, carrying with them another transport disk for the return trip.

The major danger of the Mediport system is the chance of teleport mishap (see Teleportation on page 102 in *d20 Future*). Also, unscrupulous paramedic companies sometimes engage in the practice of rerouting other companies' signals (see Computer Hacking on page 52 of the *d20 MODERN Roleplaying Game*) sending their rivals to the wrong destination and answering the Health-Alert call themselves.

TABLE 3-4: HEALTH CARE

Item or Service	Size	Weight	Purchase DC	Restriction
Progress Level 5: Information Age				
Basic health care	—	—	8	Lic (+1)
Health insurance	—	—	5/month	Lic (+1)
Progress Level 6: Fusion Age				
Medevac (service)	—	—	15	—
Progress Level 7: Gravity Age				
Medifreeze	Small	8 lb.	21	—
Progress Level 8: Energy Age				
Mediport (service)	—	—	18	—

HOME LIFE

Most advances in technology aren't considered truly valuable—at least not to the average person—until they become available for use in the home. Generally, these advances involve time-saving devices, such as self-cleaning toilets and self-inventorying refrigerators; or old appliances combined in new ways, such as alarm televisions and hamper-washer-dryers. Much of the progress in home appliances can be traced to the gradual shrinkage of home living space, coupled with advances in communication technology.

The most useful advance in home life technologies is the fabricator: a machine that makes nearly anything out of blocks of raw components, all in the space of a few minutes.

Autogrocer (PL 6)

The earliest development in the field of true home shopping is actually a step backward to the Industrial Age and early Information Age, when grocers delivered their wares directly to their customers' homes. This process gradually fell out of popularity until the advent of Internet home shopping, when shoppers could order all of their weekly groceries online for home delivery.

The autogrocer system simplifies this process even further, by monitoring the customer's supply of sundry goods with the aid of microchips. The autogrocer informs the customer when he might need more of a given product, and allows the customer to instantly place an order for more, which the store then delivers within 2d4 hours.

Fabricator (PL 7)

Fabricators are machines that reassemble blocks of elemental compound into common household substances, such as detergent, soap, diapers, and so on. Fabricators can only create inorganic and simple organic substances, however—no foods or pharmaceuticals—and only noncomplex items; a fabricator cannot create an item with working parts, such as a clock or a gun. Each block of compound can create up to 8 pounds of other materials, at a rate of 1 minute per pound.

All fabricators come with factory-installed inhibitor circuits to prevent users from fabricating illegal items, but it takes only a DC 10 Repair check to bypass the circuit—despite the fact that it's a felony to do so.

TABLE 3-5: HOME LIFE

Item or Service	Size	Weight	DC	Purchase Restriction
Progress Level 5: Information Age				
Home shopping	—	—	+1	Lic (+1)
Progress Level 6: Fusion Age				
Autogrocer base unit	Small	5 lb.	17	Lic (+1)
Progress Level 7: Gravity Age				
Fabricator unit	Large	88 lb.	28	—
Compound (block)	Small	16 lb.	12	—
Biomaterial add-on	Tiny	2 lb.	15	—
Garbage add-on	Small	13 lb.	12	—
Progress Level 8: Energy Age				
Biofabricator unit	Large	128 lb.	34	—
Biocompound (block)	Medium	44 lb.	18	—

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Futuristic medevac

Clever third-party manufacturers of fabricator accessories also release add-on kits that enable the machines to create a limited number of bio-organic or restricted substances—mainly alcohol and pharmaceuticals. Again, users commonly install a biomaterial add-on and bypass the inhibitor circuit, in effect creating their own distilleries and drug labs. Used in this manner, these add-ons eat up the compound blocks at almost four times the normal rate: One block of elemental compound can create only 2 pounds of materials.

Another popular third-party add-on is the garbage converter, which allows the user to replace the block of elemental compound with garbage as a form of recycling (and also avoiding the cost of compound blocks). Items made from garbage are vastly inferior, however; they have half the usual hardness of the regular item, and confer a -5 penalty on any attempts to use them as part of a skill or ability check.

Biofabricator (PL 8)

Eventually, makers of fabricators create machines that safely recreate bio-organic material, such as meat and dairy products. Ordering groceries becomes a thing of the past when one can simply program the biofabricator to create anything from a single glass of fresh milk to a fully cooked, six-course meal for twelve. Biofabricators also become more efficient; each block of bio-organic compound can create up to 40 pounds of materials.

The biofabricator has the same built-in restrictions that the fabricator had, but stricter laws on fabricator manufacture make the entire machine shut down if the inhibitor circuit is bypassed—which, in the end, only makes it slightly more difficult (a DC 15 Repair check).

Garbage converters are also available for the bioconverter, but any food or drink they produce is at best bland—and in many cases, bad-tasting.

TRAVEL

From planetary travel to teleportation, this section presents information on travel by aircraft and transportal, including rules regarding safety and security regulations.

TABLE 3-6: TRAVEL

Item or Service	Purchase DC	Restriction
Progress Level 6: Fusion Age		
Planetary		
Domestic, coach	16	Lic (+1)
Domestic, first class	20	Lic (+1)
International, coach	21	Lic (+1)
International, first class	25	Lic (+1)
Interplanetary		
Orbital, coach	24	Lic (+1)
Orbital, first class	28	Lic (+1)
Interplanetary, coach	27	Lic (+1)
Interplanetary, first class	31	Lic (+1)
Medical exam	8	—
Progress Level 7: Gravity Age		
Interstellar		
Small cabin	16/month	—
Large cabin	18/month	—
Small suite	18/month	—
Medium suite	20/month	—
Large suite	22/month	—
Progress Level 8: Energy Age		
Transportal		
Common destination	24	—
Uncommon destination	30	—
Unusual destination	36	—
No transportal at destination	n/a	—

Planetary Travel (PL 6)

Travel anywhere on the same planet—from a short commuter flight to a jaunt halfway around the globe—falls under the heading of planetary travel. With the widespread use of fusion generators and high-altitude passenger craft—essentially suborbital starships—the average commercial flight takes only half as much time as in the Information Age, and each craft can hold about twice as many passengers. (These vessels are essentially haulers converted for passenger use—and minus the weapons; see Chapter Seven: Starships in *d20 Future*.)

The classifications of passenger accommodations (first class and coach) carry over from the Information Age, as do the nature of the accommodations themselves. First class accommodations include meal and drink service and certain other amenities, while coach passengers contend with meager snack meals (if any), a limited drink selection, and, of course, much smaller seating space.

Interplanetary Travel (PL 6)

Travel between planets in the same solar system, or their satellites, falls into the interplanetary category, which encompasses both orbital and interplanetary flights. A flight from a planet to its

moon, for example, is an orbital flight, and a flight from a planet (or its moon or satellite) to a destination on a different planetary body within the same solar system is an interplanetary flight.

The greatest amount of fuel in any spaceflight is expended during takeoff (and the long, slow climb out of the planet's gravity well); therefore, ships undergoing interplanetary flight find it more efficient to depart from a point where the gravity is considerably lower. Such low-gravity points are known as Lagrange points. Thus, travel lines always require a connecting flight from a planet to a Lagrange point, in order to keep overall costs down. (Lagrange points are places in orbit around any celestial body with at least one satellite where the forces of gravity cancel each other out, causing objects of low mass to remain in equilibrium. There are five such points in any system with two bodies orbiting a common center of gravity.)

Amenities aboard interplanetary flights are slightly better than aboard planetary flights, mainly because the trip takes much longer. Coach accommodations aboard interplanetary flights are comparable to first-class accommodations aboard planetary flights. First-class accommodations on an interplanetary flight usually include a small sleeping berth with a private toilet and shower facility. Though not much larger than about 10 feet square, these accommodations are usually referred to as "cabins."

The same sort of equipment restrictions apply to interplanetary travel as apply to planetary travel. The main difference is that interplanetary travelers are required to undergo physical examinations to ensure they are not carrying any infectious diseases to other worlds (which can have catastrophic effects). In any event, passengers are inoculated with a broad spectrum of antibiotics before they are allowed to board the ship.

Interstellar Travel (PL 7)

Aside from the fact that it generally takes much, much longer, interstellar travel—flights between destinations orbiting different stars (or to destinations not orbiting any stars at all)—isn't much different from interplanetary travel. Passengers must abide by the same rules and regulations and undergo the same medical examinations and inoculations as for interplanetary travel. In lieu of a luggage compartment, the vessel has a cargo hold that can accommodate nearly any substance, organic or otherwise. Of course, all cargo is scanned for signs of explosive or biological agents, and the cargo hold is off-limits to passengers who aren't accompanied by a purser.

Because these journeys are much longer than other types of travel (the voyage from Earth to Alpha Centauri, Earth's nearest stellar neighbor, lasts over 4 years at light speed), passengers generally rent travel space as though they were renting an apartment. (See *Lifestyle* on page 122 of the *d20 Modern Roleplaying Game*.) Entertainment aboard the ship is limited by the ship's free space, and so those who can afford to rent larger cabins usually have a more enjoyable journey.

Jump Stations

When jump gates are available (see page 101 in *d20 Future*), they not only radically reduce the overall travel time between the departure and destination points, but make convenient places for spacers to set up businesses catering to interstellar travelers. Ships routinely stop at jump stations for short layovers (from a few days to a week), mainly to give the passengers and crew some time to stretch their legs and enjoy a change of scenery. (If a passenger is in a hurry, he can usually transfer to another ship leaving for more or less the same destination.)

Teleportation Stations (PL 8)

Matter transporters completely revolutionize mass transit, from going to the local shops to traveling to distant stars. As airports gave way to starports, starports give way to teleportation stations: travel hubs consisting of a number of transportals (see page 103 in *d20 Future*). “Passengers” buy tickets and wait in terminals much as they have done since the first commercial airplane flight, but rather than boarding a flying machine, they simply walk through a transportal keyed to a specific destination. In fact, the only reason for waiting is the recharge time required between each use of the device.

Of course, black market teleportation stations appear as soon as the schematics for the transportal reach the VRNet. Anyone with a bit of technical know-how and the funds to buy the components

can build a transportal literally in their den, and then charge pricey sums to send travelers through—no questions asked.

Safety and Security

Security is even tighter on transportal travel, even though it is inherently safer than any other form of travel. This scrutiny is largely driven by public distrust of being disassembled and transmitted as an electronic signal that can be lost (or even intercepted). The public is particularly concerned about one end of the “signal path” being shut down (perhaps by a bomb) while travelers are en route, despite the fact that the transmission is more or less instantaneous. This fear results in stringent security measures, including background checks and thorough luggage inspections, before any traveler comes within 500 feet of a transportal.

SAFETY AND SECURITY

The same general rules for travel safety and security apply in the Fusion Age as apply in the Information Age. The following rules summarize the regulations that apply when traveling aboard a passenger ship.

EQUIPMENT

The authorities have several strict rules concerning the kinds of equipment typically carried by heroes.

Firearms

- Firearms (including energy and ballistic weapons) must be checked with the airline as luggage; firearms are not allowed in a passenger’s carry-on luggage—even if the passenger has a license for the weapon.
- Firearms must be declared at the time of check-in, orally or in writing, in accordance with the airline’s procedures.
- Firearms must be transported unloaded.
- Firearms must be transported in a hard-sided container.
- A firearms container must be locked; only the passenger may retain the key or combination.
- All checked baggage is subject to inspection. If during an inspection it becomes necessary to open the container, airlines are required to locate the passenger and the passenger is required to unlock the container for further inspection. The firearm cannot be transported if the passenger cannot be located to unlock the container.
- The maximum weight of weapons, including ammunition, cannot exceed 11 pounds.
- BB guns, compressed air guns, pellet guns, starter pistols, and firearms parts can be transported only in checked luggage.
- Flare guns, gun lighters, and gunpowder cannot be transported in carry-on luggage or checked luggage.

Ammunition

- Ammunition is similarly prohibited from carry-on luggage. Ammunition cannot be transported loose. It must be in the manufacturer’s packaging or other packaging suitable for transport. Ammunition must be packed in a separate container from the weapon.

Chemical Agents and Explosives

- Chemical repellants can be carried in checked luggage if the volume is less than 4 ounces and has less than a 2% active ingredient. (The pepper spray canisters in the *d20 MODERN Roleplaying Game*, for example, exceed these limitations.)
- Explosives in any quantity are strictly prohibited on any flight, even in checked luggage.

Melee Weapons and Tools

- Melee weapons and tools of any type are prohibited from

carry-on luggage. These items must be packed in checked luggage. Sharp objects packed in checked luggage should be sheathed or securely wrapped to prevent injury to baggage handlers and security screeners.

- Bladed items, including knives, razor blades, box knives, scissors with pointed tips, and cooking implements may only be transported in checked luggage.

Armor

- Passengers cannot wear body armor of any type aboard the vessel. Body armor must be packed in checked luggage, in properly identified containers or packaging.

Sporting Goods

- Sporting goods, such as baseball and cricket bats, golf clubs, hockey sticks, lacrosse sticks, pool cues, ski poles, and spear guns may only be transported in checked luggage.

SKILL CHECKS IN FLIGHT

Certain skill checks are impaired, or outright impossible, aboard an aircraft in flight. Others are unchanged. The differences are summarized below.

- *Computer Use*: Contrary to real-world air safety rulings, passengers are allowed to cellular telephones while the vessel is in flight, including computer modems.
- *Disable Device*: Passengers most likely do not have any tools available during the flight, conferring a -4 penalty on Disable Device checks.
- *Investigate*: For the same reason that passengers do not have the tools to perform Disable Device checks without a penalty, passengers are not allowed to bring evidence kits along in their carry-on luggage. Investigate checks therefore take a -4 penalty.
- *Listen*: The dull roar of airplane engines confers a -2 penalty on all Listen checks, but fusion engines run much more quietly; no penalty applies.
- *Move Silently*: This skill is not affected, though the Listen check to detect someone moving silently might be, depending on the type of vessel.
- *Repair*: Because passengers are not allowed tools in their carry-on luggage, they only have access to the very basic tool kits found in the airplane’s emergency kits. Treat this as a multipurpose tool, conferring a -2 penalty on Repair checks (instead of a -4 penalty for having no tools).
- *Treat Injury*: Airplanes are equipped with fairly extensive medical kits, including defibrillators. There is enough medical equipment in an airplane to perform rudimentary surgery, conferring a -2 penalty on Treat Injury checks to perform surgery (rather than the usual -4 for having no equipment at all).

CHAPTER FOUR

MECHA



Towering above the landscape like the fabled Titans, mecha are formidable creations that can deal devastating amounts of damage in ways that conventional warriors and vehicles cannot. Given their enormous humanoid forms, they often resemble monsters sent to wreak havoc on civilization. As advanced combat machines, mecha occupy a unique role on the combat landscape; they are as versatile as their pilots, as tough as tanks, and as heavily armed as many starships. This chapter expands upon the mecha rules in Chapter Nine: Mecha of *d20 Future*, providing new options for mecha construction as well as new ways to treat mecha during game play.

NEW MECHA COMBAT RULES

Standard mecha combat works in much the same way as combat between characters. Just as characters have many options available to them during combat, the pilots of mecha must be equally as versatile if they are to emerge victorious. All mecha pilots can use the following new rules in combat, and certain supplemental rules have been included for the Gamemaster's benefit.

Mecha Copilot Actions

Some mecha have a copilot cockpit, allowing another character to ride along inside the mecha and help operate it. Though the basic rules information on page 165 of *d20 Future* detail several potential actions for the copilot, the following section expands upon these. Each action's entry describes rules for use, including activation time.

Fire Weapons: As an attack action, the copilot can fire any of the mecha's ranged weapons. This action does not grant the mecha additional attacks. Each ranged weapon can be fired only once (regardless of whether it is fired by the operator or copilot). The copilot can fire only in the direction the weapon is facing when he takes his action, though he can delay his action to act simultaneously with the operator in order to fire in the appropriate direction.

Operate Sensors: The copilot can operate the onboard sensor systems (provided the mecha has any installed) as a move action. The copilot can use the sensors to learn any information they normally provide, making a Computer Use check as explained in the description of the sensors.

Aid Another: The copilot can use the aid another action to provide a bonus on one of the operator's skill checks. This action functions in exactly the same way as the standard aid another action; the copilot must make at least a DC 10 skill check with the appropriate skill, which provides a +2 bonus on the operator's skill check.

Emergency Repairs: The copilot can make emergency repairs to a damaged mecha to keep certain systems running temporarily. Using the Repair skill, the copilot can reroute power, shut down nonessential systems, engage autorepair devices, divert the flow of chemicals and coolants, and perform any number of small but useful actions that temporarily repair damaged systems. Whenever a mecha system or piece of equipment installed in one of the mecha's slots is damaged (either through critical hits or through intentional targeting), the copilot can attempt to return that system to functional status, if only temporarily. The copilot makes a DC 25 Repair check as an attack action; if successful, the damaged or destroyed equipment becomes functional for a number of rounds equal to the copilot's Intelligence modifier (minimum of 1 round).

Boost Weapon Damage: By funneling power to mounted weapons and increasing energy efficiency, the copilot can provide a temporary boost to one weapon's damage. As an attack action, the copilot makes a DC 25 Computer Use check; if successful, the copilot increases that weapon's damage dice by one step; d6 becomes d8, d8 becomes d10, d10 becomes d12, and so on. This increase in damage applies only until the next round; if the weapon is not used within 1 round, the bonus disappears and the copilot must once again take this action to boost the weapon's damage. This action can be used only on mounted weaponry and cannot affect carried, held, or thrown weapons.

Send/Jam Communications: As a free action, a copilot of a mecha with a comm system can send a transmission in the normal way. Additionally, as a move action the copilot can attempt to jam the communications of another mecha within a range of 1 mile. The copilot makes a Computer Use check to send out jamming static and data noise on all frequencies; to break through that jamming, the operator (or any copilots) of the targeted mecha must make a Computer Use check, with a DC equal to the result of the jamming copilot's original Computer Use check, otherwise no transmissions can be sent.

Provide Targeting Data: As a full-round action, any copilot of a mecha with a sensor system can provide targeting data for the operator's attacks, revealing holes in the enemy's defenses or weaknesses in its armor. The copilot makes a DC 15 Computer Use check to provide a +2 equipment bonus on the operator's attack rolls this round.

Throwing Large Objects

As towering juggernauts that dwarf even buildings, mecha can pick up and hurl large objects as improvised weapons. In urban environments, mecha fling vehicles and even chunks of destroyed buildings at their opponents; in less-developed areas, pieces of earth and stone are equally suitable. Throwing large objects is similar to using any thrown weapon in character combat: The mecha must first pick up the object, and then make a ranged attack against an enemy. The differences in character and mecha combat become evident both in the range of these objects and in the damage they deal.

First, the mecha must be at least one size category larger than the target object to throw it as a ranged weapon, and it must have an empty hand to grasp the object. Though objects that are the same size as the mecha can be picked up, they are too bulky or unwieldy to be thrown effectively in combat. The range increment of the thrown object is determined by the object's size and mass, and a thrown object can target enemies at a maximum of five range increments. The mecha then makes a ranged attack against its target, subtracting 2 from the attack roll for each range increment beyond the first, and if successful the object strikes its target and deals damage. If the object being thrown is two size categories (or more) smaller than the mecha, the mecha's Strength modifier is added to the damage.

Stationary objects, such as pieces of buildings or vehicles without drivers, can be picked up as a move action. If a vehicle or object is moving, the mecha must make a touch attack against that object to attempt to grab it. If the object is inanimate and has no pilot or driver, the mecha successfully grabs the object and can use it as an improvised weapon. If the object is a piloted vehicle, the mecha pilot and the pilot of the vehicle make opposed skill checks (Drive or Pilot, as appropriate for each vehicle); if the mecha pilot is successful, the vehicle has been grabbed and can be thrown, otherwise the vehicle escapes and can continue moving normally.

Consult Table 4-1 for sample objects, range increments, and damage.

TABLE 4-1: THROWING LARGE OBJECTS

Object	Size	Increment	Range Damage
Large mecha	Large	30 feet	6d6
Motorcycle	Large	30 feet	4d6
Small car	Large	30 feet	5d6
Stone/concrete fragment	Large	35 feet	5d6
Street lamp	Large	35 feet	4d6
Huge mecha	Huge	60 feet	9d6
Standard car or van	Huge	60 feet	8d6
Stone/concrete chunk	Huge	65 feet	8d6
Telephone pole	Huge	70 feet	8d6
Helicopter or airplane	Gargantuan	130 feet	11d6
Gargantuan mecha	Gargantuan	120 feet	12d6
Tank	Gargantuan	120 feet	12d6
Yacht	Gargantuan	140 feet	10d6

Sundering Mecha Equipment

When two mecha are engaged in combat, they attempt to destroy the opponent's weapons and equipment to whittle them down to more manageable size. Though damaging mecha equipment in combat can be difficult, the loss of that object's use can be devastating. Similar to striking a held object in character combat, attacking a specific piece of equipment requires targeting a small portion of the opposing mecha's body. The character declares which piece of equipment is being targeted and makes a normal attack roll against that object.

The size of the mecha and that of the targeted equipment determine the object's Defense and hit points. A piece of equipment on a mecha has a base Defense determined by its size and slot; consult Table 4-2 for those values. Objects in the torso or back slots cannot be targeted for sundering, because they are usually tightly integrated into the mecha's main body and an attack against them would be like a normal attack against the mecha. The equipment's final Defense value is equal to:

Base Defense + mecha's armor bonus to Defense + pilot's Dexterity modifier + pilot's class bonus to Defense + any miscellaneous modifiers to equipment Defense

Armor bonus to Defense is not calculated into the Defense of any held object, nor in any touch attack. Any combat actions that would add to a pilot's Defense score, such as fighting defensively, also modify this number.

On a successful hit, the attacker rolls damage as normal, subtracting the equipment's hardness (determined by the material of the target mecha's superstructure) before applying the damage. When a piece of equipment reaches half its hit points, it is considered damaged and ceases to function, and when it reaches 0 hit points it is destroyed (see descriptions of damaged and destroyed equipment on page 170 of *d20 Future*). Most pieces of mecha equipment have a number of hit points based on their size; objects carried by Large mecha have an average of 30 hit points, objects carried by Huge mecha have an average of 60 hit points, objects carried by Gargantuan mecha have an average of 90 hit points, while objects carried by Colossal mecha have an average of 120 hit points. More fragile components (such as sensors and computers) might have half as many hit points, while sturdier elements of a mecha might have twice that many hit points. Damage dealt to a piece of mecha equipment does not subtract from the mecha's total hit points.

TABLE 4-2: MECHA EQUIPMENT BASE DEFENSE

Slot	Large	Huge	Gargantuan	Colossal
Helmet	11	10	9	8
Visor	12	11	10	9
Cranium	12	11	10	9
Arms	10	9	8	6
Hands	11	10	9	8
Shoulders	10	9	8	6
Belt	12	11	10	9
Legs	10	9	8	6
Boots	11	10	9	8

Damaging Equipment Slots

When a piece of mecha equipment is destroyed (by reducing it to 0 hit points), that slot on the mecha can be further damaged in order

to render it useless. First, the attacker targets the equipment slot, which must either have a destroyed piece of equipment or have no equipment installed in it. The Defense rating for this slot is the same as for a piece of equipment that would be installed in that slot. If the attack succeeds, roll damage as normal and subtract hardness (determined by the mecha's superstructure). Each slot on a mecha has the equivalent of 10% of the mecha's total maximum hit points (not its current total). Additionally, half of any damage dealt (after subtracting hardness) to a mecha equipment slot is also applied to the mecha's total hit points. Thus, if 40 points of damage are dealt to an equipment slot, the mecha takes 20 points of damage to its total hit points. When that slot reaches half its hit points, the slot is considered damaged; when it reaches 0 hit points, it is destroyed (see descriptions of damaged and destroyed slots on page 170 of *d20 Future*).

Blowing off Limbs

On occasion, destroying the equipment slots on a mecha will result in limbs being blown off entirely. When this happens, the equipment on those limbs is completely destroyed; new limbs and equipment must be purchased before they will function again. To blow off a limb, all the equipment slots on that limb must be destroyed; this means all hand and arm slots, as well as one shoulder slot, for the arms, and all leg and boot slots, as well as one belt slot, for the legs. Once all the equipment slots are destroyed, the limb is blown off. If a leg is blown off, the mecha falls to the ground and cannot walk or move until a new leg is attached.

Replacing a limb requires a Wealth check with a purchase DC equal to one-half the mecha's total purchase DC. Attaching the replacement limb requires 24 hours of work and a DC 35 Craft (mechanical) check. The limb comes with functional slots just like those on the original limb, though any replacement equipment must be purchased and installed separately.

Disabled/Destroyed Mecha

When a mecha reaches the end of its bonus hit points, it ceases to function. What happens to the mecha at that point depends on a number of factors. In all cases, the mecha is immediately disabled. The pilot can no longer use any of its systems, cannot move the mecha as normal, and cannot make attacks in the mecha until it is repaired. The pilot can still eject (if using an escape pod) or simply leave the cockpit and fight normally.

However, certain situations make disabled mecha considerably more dangerous to the pilot (and copilot, if there is one). Once a mecha reaches the end of its bonus hit points, the danger to the pilot increases. Not only does the pilot no longer have the cache of hit points to rely on, but also internal hazards can wreak havoc on the pilot as he tries to escape. There is a 10% chance of toxic fumes and gases venting from damaged systems into the cockpit, and a 20% chance of cockpit fires. Use the standard rules for toxic gases (using cyanogen gas from Table 2-5: Poisons in the *d20 Modern Roleplaying Game*) and fires to adjudicate such situations.

On occasion, a totally destroyed mecha ruptures and explodes, dealing massive damage to both the pilot and any adjacent characters and mecha. Unstable power cores are particularly susceptible to this problem, though even the safest and most efficiently designed mecha sometimes explode. If a mecha reaches the end of its bonus hit points as the result of an attack that deals 50 or more points of damage (after subtracting hardness), the mecha explodes 1d4 rounds later, dealing 12d6 points of damage to the

pilot and any copilots or passengers. Additionally, any characters, vehicles, or objects within 60 feet of the mecha take 10d6 points of damage (Reflex DC 15 half). Certain types of power cores deal more damage when exploding and at greater range, as described in each power core entry.

MECHA AS WALKING TANKS

The *d20 Future* game assumes that mecha are giant suits of powered armor that, though piloted, depend heavily on the pilot to determine their statistics. This view is more in line with the Japanese take on mecha, wherein the machine is inextricably linked to the pilot and acts as more of a protective shell than as a vehicle. Another way to look at mecha is not as suits of powered armor, but rather giant, walking tanks. This approach does not base the mecha's statistics on the pilot's abilities but rather assumes that the mecha is an independent machine. If this view of mecha fits your game better, the base mecha rules can be modified to better suit this style of play.

Treating mecha as walking tanks alters only the derivation of their statistics. The mecha functions in combat as normal and uses the character combat system as its basis. A mecha of this type has statistics similar to those of characters, but derived differently.

Creating a mecha as a walking tank uses the same methods as applying bonuses under the existing system, but rather than using the pilot's statistics, these bonuses are determined by the mecha's size. In essence, the mecha has its own Strength score, its

own base hit points, and its own Defense. Some statistics, such as attack rolls and Defense, are still based on the pilot character, just like the statistics for vehicles and starships. Use the following methods for deriving mecha statistics:

Size: The mecha's size remains unchanged.

Superstructure: The mecha's superstructure remains unchanged.

Armor: The mecha's armor remains unchanged.

Armor Penalty: The mecha's armor penalty remains unchanged.

Strength: Consult Table 4-3: Mecha as Vehicles to determine the mecha's base Strength, and then apply the mecha's Strength bonus (based on its size and other equipment) to derive the final value.

Speed: The mecha's speed remains unchanged.

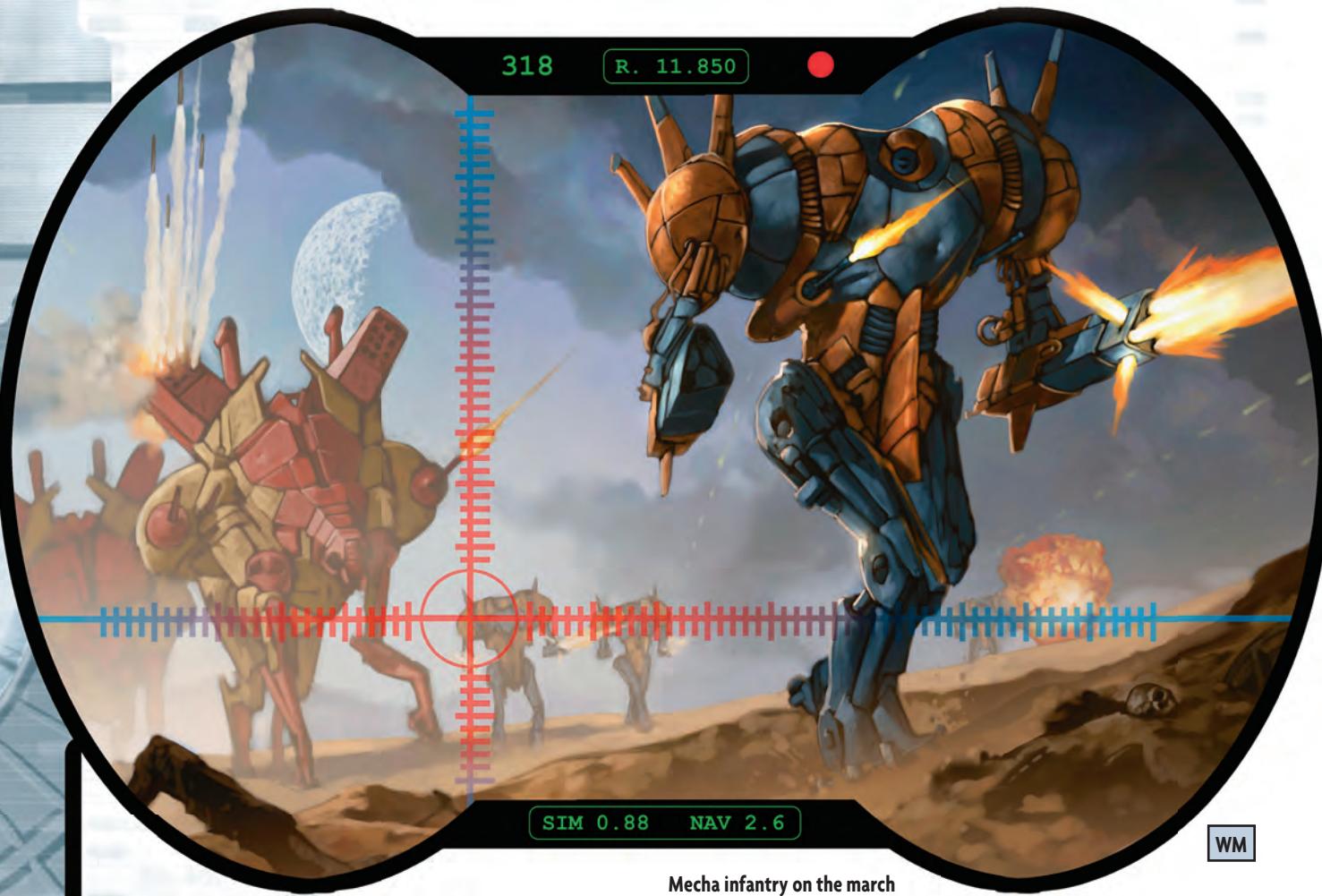
Hit Points: Consult Table 4-3 to determine the mecha's base hit points, then apply the mecha's bonus hit points (based on its size and other equipment) to derive the mecha's total hit points.

Hardness: The mecha's hardness remains unchanged.

Defense: Consult Table 4-3 to determine the mecha's base Defense. Add the mecha's armor bonus to Defense. Add the pilot's Dexterity modifier and class Defense bonus to determine the mecha's total Defense.

Reach: The mecha's reach remains unchanged.

Dexterity: Consult Table 4-3 to determine the mecha's base Dexterity. Add the pilot's Dexterity bonus to determine the mecha's final Dexterity score.



Mecha infantry on the march

Initiative: Use the Dexterity penalty of the mecha, based on the mecha's base Dexterity score. The pilot's Initiative modifier also applies.

Attacks: Use the Strength and Dexterity modifiers of the mecha, and apply the pilot's base attack bonus and Dexterity bonus (ranged attacks only). Apply any other attack rolls modifiers from mecha equipment.

Fighting Space: The mecha's fighting space and reach remain unchanged.

Saves: The mecha has a Fortitude save bonus equal to its Strength bonus, and uses the pilot's Reflex and Will saves (the former of which is modified by the mecha's Dexterity).

Ability Scores: The mecha uses its own Strength and Dexterity as detailed above, has a Constitution equal to its Strength, and uses the pilot's Intelligence, Wisdom, and Charisma scores.

TABLE 4-3: MECHA AS VEHICLES

Mecha Size	Base Str	Base Dex	Defense	Hit Points
Colossal	36	2	2	240
Gargantuan	30	6	6	120
Huge	24	10	8	40
Large	18	10	9	20

The final statistics block for a mecha created in this fashion should look as follows. Assume the pilot has a base attack bonus of +2, a class Defense bonus of +4, a base Reflex save of +3, and a base Will save of +1, and the following ability scores: Str 10, Dex 12, Con 11, Int 14, Wis 12, Cha 13.

Tempest (PL 7): Gargantuan-sized mecha; HP 570; Init -1; Spd 50 ft, fly 150 ft (average); Defense 23, touch 9, flat-footed 21; BAB +2; Grap +24; Atk +27 melee (2d8+22, slam or 6d10+22, XJ-A Python electrowhip) or +4 ranged (12d6, Tsunami 480 plasma cannon or 15d6, M-87 Talon missiles or by weapon); FS 20 ft. by 20 ft.; Reach 15 ft.; SV Fort +22, Ref +2, Will +2; AP 14; Str 54, Dex 6, Con 54, Int 14 Wis 12 Cha 13

Standard Equipment Package: Pilot's cockpit (torso and belt), Mark III Oracle targeting system (visor), Class IV sensor system (cranium), jet-assist wings (back), Tsunami 480 plasma cannon (left hand, left shoulder, and helmet), Bulwark tactical shield (left arm), M-87 Talon missile launcher (right shoulder), 4-pack of M-87 Talon missiles (right arm), XJ-A Python electrowhip (right hand), HV-5 Haven escape pod (torso), life support system (left leg), thruster boots (boots), 50-hp structural enhancement (1 slot equivalent), comm system (no slots).

NEW MECHA BASE MODELS

One base model exists for each size category of mecha, each representing the standard mecha of that size. However, entrepreneurial engineers often deviate from the standard design practices and create mecha of drastically different designs. Though the four bodies detailed in *d20 Future* are sufficient for almost all mecha, the following new bodies can be used instead to create unique mecha of alternative configurations.

Large Scout Walker Mecha

Designed to traverse hazardous terrain and travel long distances quickly, the scout walker mecha body is a stripped-down version of the large mecha, designed to be lightweight and durable. The scout walker forgoes arms and resembles a squat body and head mounted on long, spindly legs. Most scout walker mecha bear light weaponry and have solid defense capabilities, allowing them to dart quickly behind enemy lines, survey the landscape, and report back with their findings. Variations on the scout walker mecha begin appearing early in PL 6 and become increasingly effective, as well as more maneuverable, in later PLs.

Combat Statistics: A Large scout walker mecha adds a +8 equipment bonus to a character's Strength score. It imposes a -1 size penalty on attack rolls and to Defense. Depending on the material used, a Large scout walker mecha has 80 bonus hit points, which are added to the character's total and subtracted first when the character takes damage. It takes a -4 penalty on Hide checks.

A Large scout walker mecha has a single slam attack that deals 1d8 points of damage (plus the character's increased Strength modifier). Its base speed is 40 feet, and its reach is 10 feet.

Base Purchase DC: 44.

Equipment Slots: A Large scout walker mecha has 9 equipment slots available. These slots are located as follows.

Helmet: 1 slot	Left leg: 1 slot
Back: 2 slots	Right leg: 1 slot
Shoulders: 1 slot	Boots: 1 slot
Torso: 2 slots	

Large Heavy Assault Mecha

Appearing on battlefields near the end of PL 6, the Large heavy assault mecha packs an extreme amount of firepower in a relatively small package. These mecha come outfitted with many more slots in prime locations for mounting weaponry and defense systems, often sacrificing important onboard systems to increase the overall payload. Instead of expensive advanced computer systems or elaborate defense technology, the Large heavy assault mecha bristles with weaponry. Many military units replace their tanks and other artillery vehicles with heavy assault mecha, sending them plunging into battle where their slower predecessors once dominated the battlefield.

Combat Statistics: A Large heavy assault mecha adds a +8 equipment bonus to a character's Strength score. It imposes a -1 size penalty on attack rolls and to Defense. Depending on the material used, a Large heavy assault mecha has 100 bonus hit points, which are added to the character's total and subtracted first when the character takes damage. It takes a -4 penalty on Hide checks.

A Large heavy assault mecha has a single slam attack that deals 1d8 points of damage (plus the character's increased Strength modifier). Its base movement is 30 feet, and its reach is 10 feet.

Base Purchase DC: 44.

Equipment Slots: A Large heavy assault mecha has 9 equipment slots available. These slots are located as follows.

Helmet: 1 slot	Right hand: 1 slot
Back: 1 slot	Shoulders: 1 slot
Left arm: 1 slot	Torso: 1 slot
Left hand: 1 slot	Boots: 1 slot
Right arm: 1 slot	

Huge Command Mecha

In much the same way that battlefield commanders issue orders from the safety and privacy of a central command post, they use Huge command mecha not only as powerful combat machines but also as the personal mecha of commanders, general, admirals, and other military leaders. Originally conceived as mobile command posts, these mecha boast impressive communications arrays and targeting systems that relay combat data to other mecha units to more efficiently coordinate a battle plan. Most command mecha have at least one copilot or passenger station, usually reserved for a tactical officer or lieutenant who works as the commander's personal aide.

Combat Statistics: A Huge command mecha adds a +16 equipment bonus to a character's Strength score. It imposes a -2 size penalty on attack rolls and to Defense. Depending on the material used, a Huge command mecha has 200 bonus hit points, which are added to the character's total and subtracted first when the character takes damage. It takes a -8 penalty on Hide checks.

A Huge command mecha has a single slam attack that deals 2d6 points of damage (plus the character's increased Strength modifier). Its base speed is 40 feet, and its reach is 10 feet.

Base Purchase DC: 46.

Equipment Slots: A Huge command mecha has 13 equipment slots available. These slots are located as follows.

Helmet: 2 slots	Right hand: 1 slot
Visor: 1 slot	Shoulders: 1 slot
Back: 1 slot	Torso: 2 slots
Left arm: 1 slot	Belt: 1 slot
Left hand: 1 slot	Boots: 1 slot\
Right arm: 1 slot	

Huge Infantry Mecha

The counterpart to the command mecha and the elite combat unit of the PL 6 battlefields, the Huge infantry mecha is both an all-purpose warrior mecha and a support unit for front-line ground troops. These infantry mecha spare no expense in arms and armor and are frequently called upon to travel the length of the battlefield to get to the area they are needed most. Huge infantry mecha are the most mobile mecha of their size, allowing them to be versatile yet pack a significant punch. Most Huge infantry mecha are outfitted with weapons and defense systems, leaving the communications and sensor suites to their command mecha.

Combat Statistics: A Huge infantry mecha adds a +16 equipment bonus to a character's Strength score. It imposes a -2 size penalty on attack rolls and to Defense. Depending on the material used, a Huge infantry mecha has 250 bonus hit points, which are added to the character's total and subtracted first when the character takes damage. It takes a -8 penalty on Hide checks.

A Huge infantry mecha has a single slam attack that deals 2d6 points of damage (plus the character's increased Strength modifier). Its base movement is 50 feet, and its reach is 15 feet.

Base Purchase DC: 48.

Equipment Slots: A Huge infantry mecha has 15 equipment slots available. These slots are located as follows.

Helmet: 1 slot	Right hand: 1 slot
Visor: 1 slot	Shoulders: 2 slots
Back: 2 slots	Torso: 1 slot
Left arm: 2 slots	Belt: 1 slot
Left hand: 1 slot	Boots: 1 slot
Right arm: 2 slots	

Gargantuan Deep Space Mecha

As humanity expands into the stars, the need increases for mecha that can operate on other worlds. In fact, many battlefields stretch over hostile planets and across entire solar systems. Most Gargantuan deep space mecha are equipped to fight not only in the frigid depths of space, but also on remote worlds with environments that are inhospitable to human life. These mecha often act as scouts and perform intelligence gathering in areas that are too dangerous for lighter scout walkers.

Combat Statistics: A Gargantuan deep space mecha adds a +24 equipment bonus to a character's Strength score and a -2 penalty to Dexterity. It imposes a -4 size penalty on attack rolls and to Defense. Depending on the material used, a Gargantuan deep space mecha has 500 bonus hit points, which are added to the character's total and subtracted first when the character takes damage. It takes a -12 penalty on Hide checks.

A Gargantuan deep space mecha has a single slam attack that deals 2d8 points of damage (plus the character's increased Strength modifier). Its base speed is 50 feet, and its reach is 15 feet.

Base Purchase DC: 54.

Equipment Slots: A Gargantuan deep space mecha has 20 equipment slots available. These slots are located as follows.

Helmet: 2 slots	Right hand: 1 slot
Visor: 1 slot	Shoulders: 2 slots
Cranium: 1 slot	Torso: 4 slots
Back: 2 slots	Belt: 1 slot
Left arm: 1 slot	Left leg: 1 slot
Left hand: 1 slot	Right leg: 1 slot
Right arm: 1 slot	Boots: 1 slot

Gargantuan Siege Mecha

Designed to take on everything from entrenched fortresses to small starships, the Gargantuan siege mecha functions as the main muscle in any invasion force. In addition to providing great strength of arms, these massive battle platforms act as one-mecha armies. Gargantuan siege mecha lay waste to large swaths of enemy forces and devastate enemy mecha. Many of these mecha are outfitted with a configuration of weapons and sensor systems specifically for use against other mecha; these "mecha-hunters" are the bane of mecha pilots and can take down opposing mecha quickly.

Combat Statistics: A Gargantuan siege mecha adds a +24 equipment bonus to a character's Strength score and a -2 penalty to Dexterity. It imposes a -4 size penalty on attack rolls and to Defense. Depending on the material used, a Gargantuan siege mecha has 400 bonus hit points, which are added to the character's total and subtracted first when the character takes damage. It takes a -12 penalty on Hide checks.

A Gargantuan siege mecha has a single slam attack that deals 2d8 points of damage (plus the character's increased Strength modifier). Its base speed is 50 feet, and its reach is 15 feet.

Base Purchase DC: 54.

Equipment Slots: A Colossal mecha has 21 equipment slots available. These slots are located as follows.

Helmet: 1 slot	Right hand: 1 slot
Visor: 1 slot	Shoulders: 2 slots
Cranium: 1 slot	Torso: 2 slots
Back: 2 slots	Belt: 1 slot
Left arm: 2 slots	Left leg: 2 slots
Left hand: 1 slot	Right leg: 2 slots
Right arm: 2 slots	Boots: 1 slot

Colossal Sentinel Mecha

One of the most common mecha body types used for defense purposes, the Colossal sentinel mecha looms over the landscape like a vigilant god, waiting to impose its will on any who would dare attack its terrain. Pairs of these Colossal sentinel mecha flank the heavily guarded entrances to enormous city-states, while others roam the landscape in search of enemy forces. Colossal sentinel mecha are primarily defense in nature, able to take a significant beating and still hold their ground. Many Colossal sentinel mecha support conventional troops, and though the battlefield is a significantly different place in PL 7 and 8 when these enormous machines become commonplace, they still fill a role as walls against which waves of enemies break.

Combat Statistics: A Colossal sentinel mecha adds a +32 equipment bonus to a character's Strength score and a -4 penalty to Dexterity. It imposes a -8 size penalty on attack rolls and to Defense. Depending on the material used, a Colossal sentinel mecha has 1,000 bonus hit points, which are added to the character's total and subtracted first when the character takes damage. It takes a -16 penalty on Hide checks.

A Colossal sentinel mecha has a single slam attack that deals 4d6 points of damage (plus the character's increased Strength modifier). Its base speed is 60 feet, and its reach is 15 feet.

Base Purchase DC: 60.

Equipment Slots: A Colossal mecha has 23 equipment slots available. These slots are located as follows.

Helmet: 2 slots	Right hand: 1 slot
Visor: 1 slot	Shoulders: 2 slots
Cranium: 1 slot	Torso: 4 slots
Back: 2 slots	Belt: 2 slots
Left arm: 1 slot	Left leg: 2 slots
Left hand: 1 slot	Right leg: 2 slots
Right arm: 1 slot	Boots: 1 slot

Colossal Walking Fortress Mecha

The most advanced and dangerous mecha have Colossal walking fortress mecha bodies. Focusing almost entirely on offensive power, the Colossal walking fortress mecha are the battleships of the mecha world. They often have more weapons than they can wield at any one time, contain a versatile array of armaments capable of punching through any defenses, and display an unwavering ability to devastate almost any enemy military force. A clash between two Colossal walking fortress mecha leaves a huge radius of destruction in its wake, and when one mecha emerges victorious from such a terrific conflict, the other is usually in no condition to keep fighting. When militaries field entire regiments of Colossal walking fortress mecha, only a barren wasteland remains after the battle.

Combat Statistics: A Colossal walking fortress mecha adds a +32 equipment bonus to a character's Strength score and a -4 penalty to Dexterity. It imposes a -8 size penalty on attack rolls and to Defense. Depending on the material used, a Colossal walking fortress mecha has 800 bonus hit points, which are added to the character's total and subtracted first when the character takes damage. It takes a -16 penalty on Hide checks.

A Colossal walking fortress mecha has a single slam attack that deals 4d6 points of damage (plus the character's increased Strength modifier). Its base speed is 60 feet, and its reach is 15 feet.

Base Purchase DC: 64.

Equipment Slots: A Colossal mecha has 30 equipment slots available. These slots are located as follows.

Helmet: 2 slots	Right arm: 2 slots
Visor: 1 slot	Shoulders: 4 slots
Cranium: 1 slot	Torso: 4 slots
Back: 3 slots	Belt: 2 slots
Left arm: 2 slots	Left leg: 2 slots
Left hand: 2 slots	Right leg: 2 slots
Right hand: 2 slots	Boots: 1 slot

MECHA MODIFICATIONS

Not all mecha are created equally, a fact that is apparent by looking at the work produced by any mecha manufacturer or chop shop. Some modifications drastically change the way the mecha functions, while others simply modify the body in a way that it differs significantly from the standard. The following mecha modifications can be applied to any mecha.

Adding New Equipment Slots

Though most base models come with a number of equipment slots that determine the base cost of the mecha, it is possible to modify a mecha to have more than its standard number of slots.

TABLE 4-4: ADDING EQUIPMENT SLOTS

Original Slots	New Slots	Craft Check DC	Time Taken	Raw Materials Purchase DC
1	2	25	12 hours	20
2	3	30	24 hours	22
3	4	35	36 hours	26
4	5	40	48 hours	30
5	6	45	72 hours	34
6	7	50	96 hours	40

No body part of any mecha can have more than one additional slot, though each body part can have an increased number of slots. Each additional slot increases the purchase DC of the mecha by 1. Use this method when calculating the overall cost of a mecha being purchased already built.

If a character wishes to modify an existing mecha to include more equipment slots or to build a mecha from scratch, the process is more complicated. First, the character must purchase the base model at its normal purchase DC, then select the body parts to have extra slots. The character must also purchase raw materials and spare parts used in the modification. The character then makes a Craft (mechanical) check against a DC determined by the original number of slots for the body part being added to. The time taken to perform this modification is also based on the number of slots originally possessed by that body part; see Table 4-4: Adding Equipment Slots for the Craft check DC, time taken, and raw materials cost.

Transforming Mecha

Some mecha can reconfigure themselves to take on entirely different forms with entirely different weapons and equipment. In essence, these mecha are two separate machines that share the same basic superstructure. These transforming mecha can have drastically different forms, even turning into other vehicles and starships, while still maintaining the same operator and basic computer systems. Mecha of any given size can transform only into mecha and vehicles of that same size; thus, Gargantuan mecha can transform only into other Gargantuan mecha or Gargantuan starships. The operator of the mecha triggers the transformation, which requires a full-round action to complete. Transforming mecha can only be purchased or built from the ground up; the transforming option cannot be added to an existing mecha that does not already have that option.

Mecha that transform into other mecha have two distinct bodies. These two mecha bodies need not have the same weapons or equipment, though often they do for ease of operation and logistics. The only restriction in the two forms of a mecha is that their superstructure must use the same material. Choose two mecha forms; the more expensive of the two provides the base purchase DC, with a +4 modifier for the transformation ability.

Mecha can also have a vehicular or starship alternate form. This alternate form must be of the same size category as the mecha, but behaves in exactly the same way as a mecha alternate form. Again, the base purchase DC is determined by the more expensive of the two forms, with a +4 modifier for the transformation ability.

COLOSSAL TRANSFORMING MECHA

From a logistics standpoint, all mecha of Colossal size have a much greater array of vehicles and starships to choose from for their alternate forms. However, Gamemasters should make sure the alternate form is of similar size and mass to the mecha form before allowing that form to be chosen. Current physics dictate that an object has a fixed mass, and though the transformation module can account for small variations in size, at a certain point these alternate forms begin to stretch credulity. Typically, starships larger than the Light subtype are unsuitable for alternate forms.



Metabots

Some mecha have the capability to come together and form larger mecha. Known as metabots, these combined, larger mecha function as any other mecha would, but have several copilots who work in tandem to produce more potent effects. A metabot is more than simply the sum of its parts; the smaller mecha combine to create a powerful new form that is devastating to smaller targets.

Only mecha created or purchased at the same time can combine to create a metabot, whose form is chosen at that time. All mecha combining to form a metabot must be of the same size and must have the metabot link equipment (see page 77). Additionally, all the metabots must be present and able to form the metabot for the process to work; if any are destroyed or missing, the metabot cannot be formed.

The metabot is essentially a completely new mecha, and while it need not have the same equipment or weapons as its component mecha, it often does for simplicity's sake. The metabot form, chosen at the time of purchase or construction, is built exactly as a standard mecha, with one exception. The metabot gains a number of copilot cockpits equal to one less than the number of component mecha for free; so, a metabot composed of five component mecha gains four free copilot cockpits. However, additional copilot cockpits and passenger cockpits must be installed in equipment slots as normal, and there must be enough to handle copilots and passengers from the component mecha. All remaining equipment slots can be filled as normal.

Forming a metabot is a full-round action and must be initiated by all the operators of the mecha forming the metabot in the same round. When the metabot is formed, one operator is chosen as the new metabot's operator; the remaining operators become copilots. If any of the mecha have copilots or passengers of their own, they become copilots or passengers aboard the metabot. If any of the mecha have taken damage prior to forming the metabot, that damage is also subtracted from the metabot's hit point total. Similarly, if the metabot takes damage and then breaks down into its component mecha, that damage is divided evenly among the smaller mecha upon separation. Likewise, if any equipment slots have been damaged or destroyed, those damaged slots are distributed among the component mecha. The metabot can be disassembled into its component mecha as a full-round action, and does so whenever any one of the component mecha operators wishes.

In combat, the single operator of the metabot (determined either at the time of creation or purchase, or when the metabot is formed) controls the metabot's movement and melee attacks. The operators of all the component mecha become copilots and can perform any of the normal copilot actions for the metabot. If the metabot's bonus hit points are depleted, the operator of the metabot takes all remaining damage as normal. If a metabot is reduced to 0 bonus hit points, it breaks down into its component mecha and distributes the damage evenly among them.

MECHA GEAR

The technology behind mecha is as varied and limitless as the technology that powers any other weapon of war. New weapons, armors, defense systems, and sensor arrays are constantly being invented that provide new options for outfitting mecha with the latest and greatest equipment. The following new gear options are available for all mecha.

Mecha Superstructure

The following new type of superstructure is available for mecha construction.

Cerametal (PL 7)

The same ceramic compound used in some starships, cerametal superstructures provide toughness and durability at a fraction of the weight of other materials. Though not quite as tough as some metals, cerametal's reduced weight makes the sacrifice in hardness a solid trade. Most mecha have some cerametal parts in non-essential sections, but the cerametal superstructure is more rare.

Hardness: 30.

Base Purchase DC Modifier: +8.

Mecha Armor

The following new types of armor are available for mecha construction.

Belenus Heat-Diffusing Armor (PL 6)

Designed for use in areas of extreme high temperatures, Belenus armor deflects heat and keeps the armor cool. Many mecha operating on planets close to their suns or on worlds with high volcanic activity have Belenus armor installed to protect them from the intense ambient heat. In combat, the Belenus armor system provides a +8 bonus on all saves against fire or heat.

Equipment Bonus: +6.

Armor Penalty: -5.

Speed Penalty: None.

Purchase DC: 10 + one-half the mecha's base purchase DC.

Darkstar Stealth Armor (PL 6)

Darkstar stealth armor plating is based on the stealth materials used in PL 5 aircraft. Using sensor-deflecting metals and a signal-scrambling polymer coating, stealth armor not only provides protection against incoming attacks, but also imposes a -5 penalty on all Computer Use checks to use sensors to scan or detect the mecha.

Equipment Bonus: +5.

Armor Penalty: -4.

Speed Penalty: None.

Purchase DC: 8 + one-half the mecha's base purchase DC.

Ion-Diffusing Armor (PL 6)

Ion damage can completely incapacitate a mecha. To counter this effect, engineers created special armor that grounds the mecha and prevents ion damage from harming its internal systems. Ion-diffusing armor provides ion resistance 10, automatically reducing all ion damage sustained by the mecha.

Equipment Bonus: +8.

Armor Penalty: -6.

Speed Penalty: -5 feet.

Purchase DC: 10 + one-half the mecha's base purchase DC.

Chromatic Antilaser Armor (PL 7)

The advent of energy weapons prompted mecha engineers to construct special armor plating that dilutes the damage inflicted by laser weapons. Chromatic antilaser armor coats the entire armor surface with high-density crystal fragments that intercept incoming laser beams and diffuse their energy. Chromatic antilaser

armor provides laser resistance 10, automatically reducing all laser damage sustained by the mecha.

Equipment Bonus: +10.

Armor Penalty: -8.

Speed Penalty: -10 feet.

Purchase DC: 10 + one-half the mecha's base purchase DC.

Nanofluidic Armor (PL 7)

An incredible advancement in nanotechnology, nanofluidic armor is first theorized for use in PL 5 but does not become common until PL 7. Nanofluidic armor consists of layered alloy plating separated by a thin coating of nanite-maintaining lubricant. When the nanites sense an impact against the top armor plating, they rapidly flow to the point of impact and increase the armor's density there a hundredfold, preventing the damage from penetrating to the inner plating.

Equipment Bonus: +10.

Armor Penalty: -6.

Speed Penalty: None.

Purchase DC: 20 + one-half the mecha's base purchase DC.

Photonic Antiplasma Armor (PL 7)

Plasma weapons wreak havoc on mecha, necessitating a countermeasure in the form of antiplasma armor. Each segment of armor plating is outfitted with microscopic electromagnetic emitters, attuned perfectly to avoid disrupting other mecha systems. Using advanced electromagnetic emission techniques, photonic antiplasma armor disrupts the flow of plasma energy at the point of impact and diffuses it harmlessly. Photonic antiplasma armor provides plasma resistance 10, automatically reducing all plasma damage sustained by the mecha.

Equipment Bonus: +10.

Armor Penalty: -8.

Speed Penalty: None.

Purchase DC: 15 + one-half the mecha's base purchase DC.

Mecha Movement Systems

The following new types of movement systems are available for mecha construction.

Tank Treads (PL 5)

Based on the method of movement made popular by PL 5 military vehicles, tank treads replace the mecha's legs and boots with a pair of tracked treads. Powerful wheels propel the treads at high speeds, causing the mecha to maintain its high rate of movement while still keeping excellent balance. The mecha gains a +4 bonus on all checks involving stability, such as resisting bull rush attempts and trip attacks, and has its base land speed increased by 10 feet. The tank treads have one equipment slot on Large mecha, two on Huge Mecha, and four on Gargantuan and Colossal mecha.

Equipment Slots: Replaces all leg and boot equipment slots.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 8 + one-quarter the mecha's base purchase DC.

Restriction: None.

Deep Space Thrusters (PL 6)

Designed for mecha that undertake space travel frequently, these thrusters give the mecha the ability to keep up with starships and travel the length of a solar system (or even throughout the galaxy) at comparable speeds. Deep space thrusters only work in outer space; their solid propellant reacts poorly with atmosphere. These thrusters give the mecha a space tactical speed of 2,000 feet (4 squares).

Equipment Slots: 2, must be torso, back, or leg.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 12 + one-quarter the mecha's base purchase DC.

Restriction: None.

Maneuvering Thrusters (PL 6)

Similar in function to jet-assist wings, but more versatile in their placement, maneuvering thrusters work with the mecha's flight control systems to provide greater agility in flight. These thrusters turn and fire in tandem with the operator's controls, working seamlessly with the mecha's flight systems and improving its flight maneuverability by one category (clumsy to poor, poor to average, and so on).

Equipment Slots: 2.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 10 + one-quarter the mecha's base purchase DC.

Restriction: None.

Spider Legs (PL 6)

Spider legs allow bipedal mecha to be more stable while walking upright. They are a set of four flexible appendages that completely replace the mecha's existing legs, eliminating all leg and boot equipment slots. Each set of spider legs provides the mecha with a +8 bonus on all checks involving stability, such as resisting bull rush attempts and trip attacks. The mecha's base land speed is reduced by 10 feet, and the four spider legs each have one leg equipment slot.

Equipment Slots: Replaces all leg and boot equipment slots.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 10 + one-quarter the mecha's base purchase DC.

Restriction: None.

Antigrav Cushion (PL 7)

The antigrav cushion produces a negative gravity field just below the mecha's feet that causes the mecha to hover in the air slightly. When the field is activated, the mecha rises 10 feet off the ground, at which point it can walk or move normally; it can also move over

rough terrain at no penalty and can walk across water or other liquids as though they were part of a solid surface.

Equipment Slots: 1, must be boots.

Activation: Free action.

Range: Personal.

Target: You.

Duration: 5 rounds.

Saving Throw: None.

Purchase DC: 8 + one-quarter the mecha's base purchase DC.

Restriction: None.

Mecha Sensor Systems

The following new types of sensor systems are available for mecha construction.

Laser Painter (PL 5)

The laser painter is a simple device that allows a mecha to indicate a target on the battlefield. It projects a harmless, nearly invisible laser beam at a target, which then directs guided missiles or incoming air strikes. This system is required for any laser-guided weapons.

Equipment Slots: 1.

Activation: Free action.

Range Increment: 100 feet.

Target: Single target within 1,000 feet (ranged touch attack).

Duration: 1 round.

Saving Throw: None.

Purchase DC: 16.

Restriction: None.

Sensor Baffler (PL 6)

The sensor baffler is a device that throws up an interference field around a mecha to prevent scanning by enemy sensors. All Computer Use checks made to use sensors on a mecha with this equipment take a -10 penalty.

Equipment Slots: 1.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 24.

Restriction: None.

SatCom (Satellite Communications) Array (PL 6)

This communications and sensor suite allows the mecha to communicate over much longer distances than normal. The SatCom array boosts any sensor systems aboard the mecha to a range of 1,000 miles, provided that the mecha is on a planet or in a solar system with satellites that can be used as communications and sensor relays.

Equipment Slots: 1.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 22.

Restriction: None.

Mecha Defense Systems

The following new types of defense systems are available for mecha construction.

Chaff (PL 5)

Used by combat aircraft almost since their inception, chaff is a cloud of reflective metal material that confuses enemy radar. It is lightweight and disperses quickly and efficiently, surrounding the mecha with a confusing cloud. While chaff is active, all missile attacks against the mecha take a -4 penalty.

Equipment Slots: 1.

Activation: Move action.

Range: Personal.

Target: You.

Duration: 2 rounds.

Saving Throw: None.

Purchase DC: 20.

Restriction: Licensed (+1).

Flares (PL 5)

Designed to distract missiles that seek their targets based on heat signatures, flares rocket off in random directions to confuse targeting systems and draw away the missiles. When flares are activated, the mecha operator can make an opposed attack roll against any incoming missile attack; if successful, the missile targets the flare instead of the mecha.

Equipment Slots: 1.

Activation: Free action.

Range: Personal.

Target: You.

Duration: 1 round.

Saving Throw: None.

Purchase DC: 18.

Restriction: None.

Depolarizing Charge (PL 6)

A countermeasure designed to oppose weapons that attach themselves to the mecha, the depolarizing charge sends a jolt of electromagnetic energy across the surface of the mecha that causes any enemy weapons that have secured themselves to the mecha to detach and fall off.

Equipment Slots: 1.

Activation: Move action.

Range: Personal.

Target: You.

Duration: 1 round.

Saving Throw: None.

Purchase DC: 18.

Restriction: None.

Energy Shields (PL 7)

One of the first types of projected shields, energy shields use pulses of deflective energy to provide a defense against energy of all types. Energy shields provide a +4 deflection bonus to Defense against all electricity, fire, and ion attacks.

Equipment Slots: 2.

Activation: Free action.

Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: Licensed (+1).

Mass Shields (PL 7)

Combining the power to manipulate gravity with the ability to repel physical objects (similar to the way a tractor beam functions), mass shields make an excellent defense against ballistic weapons and melee attacks. Particle shields provide a +4 deflection bonus to Defense against all ballistic, slashing, bludgeoning, or piercing attacks.

Equipment Slots: 2.
Activation: Free action.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: Licensed (+1).

Blackhole Singularity Shield (PL 8)

The blackhole singularity shield is a special defense system that harnesses the power of gravity to deflect incoming attacks. This shield system uses gravity manipulation technology to produce miniature black holes (singularities) that swallow up incoming attacks. As a full-round action, the mecha operator can prime the singularity shield. For the remainder of the round, the operator can make an opposed attack roll against any incoming weapon; if successful, the incoming attack deals no damage.

Equipment Slots: 2, must be torso, shoulders, or back.
Activation: Full-round action.
Range: Personal.
Target: You.
Duration: 1 round.
Saving Throw: None.
Purchase DC: 36.
Restriction: Military (+3).

Mecha Weapons

The following new types of weapons are available for mecha construction.

Barrage Rapid-Fire Rocket Launcher (PL 5)

The rapid-fire rocket launcher packs a large number of small missiles into a single launcher, which then unleashes them at once to devastating effect. This weapon allows the mecha to target an area rather than a single mecha, blanketing the battlefield with a hail of deadly missiles. The entire magazine is expended at the time of use, necessitating a reload every time it is fired.

Equipment Slots: 2 for launcher, must be back or shoulders; 1 per magazine of rockets.
Activation: Attack action.
Range Increment: 200 feet.
Target: Autofire only.

Duration: Instantaneous.
Saving Throw: As per autofire.
Purchase DC: 28 for missile launcher and 1 magazine; 16 for each replacement magazine.
Restriction: Military (+3).

Buzzsaw Grapple Defense System

(PL 5)

A unique melee weapon designed to damage foes in close combat, the buzzsaw grapple defense system integrates a pair of whirling blades mounted on the mecha body that can deal severe damage when engaged in a grapple. As a free action, any mecha grappling or being grappled by another mecha can activate these saw blades. They automatically deal 5d6 points of slashing damage to the grappling or grappled opponent. The attacking mecha does not add its Strength modifier to this damage.

Equipment Slots: 2, must be torso, shoulders, back, or belt.
Activation: Free action.
Range: Touch.
Target: Grappling or grappled opponent.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: None.

Chain Cutter (PL 5)

The chain cutter works much like a standard chainsaw. It is composed of a length of razor-sharp crystal carbon chain, mounted on a pneumatic firing mechanism and weighted at one end. On a successful melee attack, the chain cutter wraps itself around a portion of an opposing mecha's body and then quickly retracts, causing the chain to slice through the enemy mecha and dealing 6d6 points of slashing damage. The attacking mecha does not add its strength modifier to this damage. The chain cutter deals an extra 2d6 points of damage when targeting a specific piece of equipment.

Equipment Slots: 1, including hand or arm.
Activation: Attack action.
Range: Touch.
Target: Single target within reach.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 6 + one-quarter the mecha's base purchase DC.
Restriction: None.

Hunter Laser-Guided Missile (PL 5)

Hunter laser-guided missiles function exactly as other missile weapons, except they can use targeting from laser painters to increase accuracy. When a Hunter missile attacks a target that is being marked by a laser painter, the missile gains a +4 bonus on attack rolls. Hunter missiles deal 10d6 points of damage, half of which is fire damage and the other half of which is slashing damage.

Equipment Slots: 2 for launcher, must be hand, arm, or shoulders; 1 per 6-missile pack.
Activation: Attack action.
Range Increment: 200 feet.
Target: Single target within 2,000 feet.

Duration: Instantaneous.

Saving Throw: Reflex half (DC 17).

Purchase DC: 22 for launcher and 6 missiles; 14 for each 6-missile pack.

Restriction: Restricted (+2).

Shock Tether (PL 5)

The shock tether is a tightly coiled wire that fires from a pressurized launcher at nearby targets. Attaching itself magnetically to the target, the shock tether delivers 8d6 points of electricity damage to the target (on a critical hit, this is the only damage that is doubled). The attacker can then detach the shock tether, or leave it in place; if left in place, it continues to deal 8d6 points of electricity damage each round until removed. The tether, with hardness 10 and 20 hit points, can be broken by the target. The shock tether can be removed by a depolarizing charge.

Equipment Slots: 1, including hand, arm, or shoulders.

Activation: Attack action.

Range: 30 feet (ranged touch attack).

Target: Single target within 150 feet.

Duration: Instantaneous.

Saving Throw: None.

Venom Corrosive Spray (PL 5)

Another close-combat weapon developed specifically for mecha combat, the corrosive spray labeled Venom is a composite of several harmful chemicals that are stored safely in the mecha body. When released, they spray out against the body of another mecha and begin corroding it slowly. The spray deals 8d6 points of acid damage and can only be used against targets at short range.

Equipment Slots: 1.

Activation: Attack action.

Range: Touch.

Target: Single target within reach.

Duration: Instantaneous.

Saving Throw: Reflex half.

Purchase DC: 16.

Restriction: Licensed (+1).

Purchase DC: 18.

Restriction: None.

A-17 Axel Driller Missile (PL 6)

Axel driller missiles are specially designed to strike a target and, using a sophisticated drilling mechanism, to bore down into the mecha's superstructure. When a successful attack is made against a mecha using driller missiles, no damage is dealt initially, but 2 rounds later the missiles explode on the inside of the mecha, ignoring half of the mecha's hardness and all fire resistance when calculating damage.

Equipment Slots: 1 for launcher, must be hand, arm, or shoulders; 1 per 4-pack of missiles.

Activation: Attack action.

Range Increment: 200 feet.

Target: Single target within 2,000 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 26 for missile launcher and 4 missiles; 14 per additional 4-missile pack.

Restriction: Military (+3).

Flashlock Grenade Launcher (PL 6)

The flashlock grenade is a ceramic sphere roughly 12 inches in diameter that contains several chemicals separated by thin ceramic walls. When the grenade is fired from its pneumatic launcher and strikes a solid target, the ceramic shatters. The chemical combine, then expand in size and produce a thick gel capable of immobilizing even the largest targets. The gel hardens almost immediately, imposing a -8 penalty to the target's Dexterity and preventing all movement. A successful DC 40 Strength check can free a target from the hardened gel (requires a full-round action).

Equipment Slots: 2 for launcher, must be arm, hand, or shoulders; 1 per 10-round magazine.

Activation: Attack action.

Range Increment: 60 feet.

Target: Single target within 600 feet (ranged touch attack).

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 24 for launcher, 12 for 10-round magazine.

Restriction: None.

GM-LT9 Seeking Missile (PL 6)

Seeking missiles are dangerous weapons that integrate advanced computer and sensor systems, making them very accurate and very expensive. The GM-LT9 model seeking missile is one of the most advanced missile systems in existence. Once locked on a target, it seeks it out with single-minded purpose. The seeking missile cannot be fooled by chaff or flares and is considered a mastercraft weapon, granting a +1 bonus on all attack rolls.

Equipment Slots: 2 for launcher, must be hand, arm, or shoulders; 1 per 4-missile pack.

Activation: Attack action.

Range Increment: 300 feet.

Target: Single target within 3,000 feet.

Duration: Instantaneous.

Saving Throw: Reflex half (DC 17).

Purchase DC: 26 for launcher and 4 missiles; 20 for 4-missile pack.

Restriction: Military (+3).

IC-6 Subduer Ion Cannon (PL 6)

The IC-6 subduer ion cannon is a deceptively potent weapon. The weapon fires an ion beam that deals 5d6 points of ion damage to a target. Unlike normal damage, ion damage is not subtracted from the target's hit point total, but instead is added to previous ion damage. When the ion damage total of a target exceeds its hit points (or bonus hit points for mecha), that target shuts down entirely and cannot move or act until the ion damage fully dissipates. Ion damage ignores hardness and causes no physical damage; it dissipates at a rate of 5 points per round. Ion cannons do not harm living targets (though they can cause some mild discomfort) and count as electricity damage for the purpose of electricity resistance.

Equipment Slots: 2, including hand, arm, or shoulders.

Activation: Attack action.

Range Increment: 170 feet.

Target: Single target within 1,700 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 24.

Restriction: None.

IC-A Heavy Ion Cannon (PL 6)

The IC-A heavy ion cannon functions in exactly the same way as the subduer ion cannon, but instead deals 8d6 points of ion damage on a successful hit.

Purchase DC: 26.

Magbarb (PL 6)

Magbars are dangerous weapons that resemble small discs with a magnetic field generator strapped to one side. When hurled at a target, they magnetically attach themselves to the target's body. They deal 8d6 points of initial damage, and deal an extra 6d6 points of damage each round thereafter for the following 5 rounds. Magbars can be removed with a depolarizing charge.

Equipment Slots: 1 for each magbarb, must be hand or arm.

Activation: Attack action.

Range Increment: 80 feet.

Target: Single target within 400 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 18.

Restriction: Restricted (+2).

Radiation Beam (PL 6)

The radiation beam focuses an alternating, high-intensity beam of various types of radiation (including gamma rays and alpha particles) to penetrate a target's armor and cause harm to the pilot and any other copilots or passengers. A successful hit from the radiation beam deals 5d6 points of damage and bombards the mecha's interior with harmful radiation. This radiation damage is treated as a 1-round exposure to moderately radioactive materials.

Equipment Slots: 2, including shoulder, hand, or arm.

Activation: Attack action.

Range Increment: 100 feet.

Target: Single target within 1,000 feet.

Duration: Instantaneous.

Saving Throw: Fortitude (DC 18) against radiation.

Purchase DC: 22.

Restriction: Military (+3).

Sapper Tag (PL 6)

Sapper tags attach themselves to a target and begin to drain power by tapping into its central power source. Each tag resembles a small ovoid disc with wires protruding from its top and bottom. When thrown at a target, it magnetically attaches and then deals 8d6 points of ion damage to the target each round until it is removed. Sapper tags can be removed by a depolarizing charge.

Equipment Slots: 1 per tag, including hand or arm.

Activation: Attack action.

Range Increment: 80 feet.

Target: Single target within 400 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 20.

Restriction: None.

Tangleweb Array (PL 6)

A tangleweb array is composed of several tiny metal spheres fired simultaneously at a target. If they hit, they immediately sprout hundreds of tiny filaments that coil around the target and bind it tight. This initiates a trip attack, using the attacking mecha's attack roll and the tangleweb array's Strength of 36 to resolve the trip attack. A tripped target is immobilized until the array is removed. The tangleweb array can be removed by a depolarizing charge.

Equipment Slots: 1 for launcher, must be hand, arm, shoulders, torso, or belt; 1 per 4-pack of ammunition.

Activation: Attack action.

Range Increment: 100 feet.

Target: Single target within 1,000 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 16.

Restriction: None.



Avalanche Variable-Charge Energy Cannon (PL 7)

The Avalanche variable-charge energy cannon works on the same principle as energy weapons with the variable charge gadget. The Avalanche's standard energy bolt, which deals a base of 10d6 points of damage, can be charged up by priming the weapon as a full-round action; for each round of priming, the damage of the weapon increases by 2d6. If the weapon is primed more than three times, it explodes, destroying the weapon and dealing 16d6 points of damage to the mecha wielding it.

Equipment Slots: 2, including hand, arm, or shoulders.

Activation: Attack action to fire; full-round action to prime.

Range Increment: 150 feet.

Target: Single target within 1,500 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 24.

Restriction: Military (+3).

CryoVac Missile Launcher (PL 7)

The CryoVac missile integrates cutting edge cryogenic technologies with powerful artillery. Each missile contains a tiny cryonic field emitter that, upon impact, delivers a high-intensity bolt of freezing cryogenic energy into the target. A hit deals 12d6 points of cold damage and reduces the target's speed by one-half for 1 round as it freezes the locomotion mechanisms temporarily. Multiple hits with CryoVac missiles do not stack their movement penalties but still deal normal damage.

Equipment Slots: 1 for launcher, must be hand, arm, or shoulders; 1 per 4-pack of missiles.

Activation: Attack action.

Range Increment: 200 feet.

Target: Single target within 2,000 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 22 for missile launcher and 4 missiles; 10 for 4-missile pack.

Restriction: Military (+3).

F-40 Singularity Rifle Mk. 3 (PL 7)

The singularity rifle fires a tiny, high-gravity black hole encased in a magnetic force field that delivers crushing gravity at the point of impact. Singularity rifles deal 18d6 points of damage upon impact and must recharge for 1 round between shots to regenerate the force field and singularity.

Equipment Slots: 2, including hand, arm, or shoulders.

Activation: Attack action.

Range Increment: 180 feet.

Target: Single target within 1,800 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 26.

Restriction: Military (+3).

P-7 Rail Gun (PL 7)

Operating on similar principles as hand-held rail guns, the P-7 fires a high-speed bolt propelled by an electromagnetic wave within the rail gun itself. The P-7 rail gun deals 12d6 points of slashing damage to its target and is especially useful over long distances.

Equipment Slots: 2 for rail gun, including hand, arm, or shoulders; 1 per 6-bolt pack.

Activation: Attack action.

Range Increment: 250 feet.

Target: Single target within 2,500 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 22.

Restriction: Licensed (+1).

R55 Gravity Trap (PL 7)

The R55 gravity trap is yet another advancement in gravity-altering technology. It is a small spherical device that magnetically attaches to a target upon impact, then throws up a high-gravity field that hinders movement and operation. A target struck by a gravity trap moves at half its normal speed, and takes a -4 penalty to Dexterity and a -4 penalty on all attack rolls until the gravity trap is removed. A gravity trap can be removed by a depolarizing charge.

Equipment Slots: 2 for launcher, including hand, arm, or shoulders; 1 per 6-trap pack.

Activation: Attack action.

Range Increment: 100 feet.

Target: Single target within 1,000 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 20.

Restriction: None.

RX "Rex" Cutting Laser (PL 7)

The RX cutting laser, nicknamed "Rex" by its proponents, is a focused solid-beam laser. This cutting laser can be used as a single-shot weapon or as an autofire weapon. When it is focused on a single target, it deals 15d6 points of damage. As an autofire weapon, it deals 12d6 points of damage to anyone in a 10-foot-square area (Reflex DC 15 negates). The Rex cutting laser generates a significant amount of heat and must cool down for 1 round (during which time it cannot be used) after each shot. Failure to allow the weapon to cool causes it to overheat and become damaged, with the cutting laser ceasing to function until it is repaired.

Equipment Slots: 2, including hand, arm, or shoulders.

Activation: Attack action.

Range Increment: 250 feet.

Target: Single target within 2,500 feet, or autofire.

Duration: Instantaneous.

Saving Throw: Reflex DC 15 negates.

Purchase DC: 26.

Restriction: Restricted (+2).

BT-11 Laser Glaive (PL 8)

Similar in function to the laser scythe, the BT-11 laser glaive is composed of a laser beam suspended in a magnetic field in the shape of a medieval polearm. Its crystal carbon shaft must be wielded two-handed. It is considered a mastercraft weapon, granting a +1 bonus on all attack rolls. Damage with a successful melee attack depends on the size of the wielding mecha: Large 3d10, Huge 5d10, Gargantuan 7d10, and Colossal 9d10. On a successful critical hit, the damage is tripled. Half of the damage is slashing damage and the other half is fire damage. The mecha applies one-and-one-half times its Strength bonus on damage rolls when wielding the weapon.

The laser glaive's size category is one larger than the mecha's size category. Additionally, the laser glaive grants an extra 10 feet of reach to the wielding mecha.

Equipment Slots: 2, must be hand or arm.

Activation: Attack action.

Range: Touch.

Target: Single target within reach.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 14 + one-quarter the mecha's base purchase DC.

Restriction: None.

Pulsemaser (PL 8)

The pulsemaser is a particularly nasty, combination microwave-and-laser weapon that alternates the intensity, width, frequency, and angle of a combined beam to penetrate armor more effectively. In all other ways the pulsemaser is just like a normal laser weapon, except it ignores half of a target's hardness when dealing damage.

Equipment Slots: 1, must be hand, arm, or shoulder.

Activation: Attack action.

Range Increment: 150 feet.

Target: Single target within 1,500 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 24.

Restriction: Restricted (+2).

V-14 Antimatter Cannon (PL 8)

A deadly and potentially reckless weapon, the V-14 antimatter cannon fires tiny particles of antimatter that, upon impact, consume matter and produce a massive output of energy in the form of a dangerous explosion. The antimatter cannon deals 10d12 points of damage on a normal hit. On a critical hit, the splash damage from the antimatter impact also deals 6d12 points of damage to all squares adjacent to the target.

Equipment Slots: 2, including hand, arm, or shoulder.

Activation: Attack action.

Range Increment: 200 feet.

Target: Single target within 2,000 feet.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 28.

Restriction: Military (+3).

Miscellaneous Equipment

The following new types of miscellaneous equipment are available for mecha construction.

Dexterity Booster (PL 5)

Through advanced articulation and shock-absorption techniques, the dexterity booster reduces the movement and maneuverability penalties associated with larger mecha. The dexterity booster provides a +2 equipment bonus to the mecha operator's Dexterity. This piece of equipment can be installed in multiple slots, its effects stacking with other dexterity boosters.

Equipment Slots: 1, must be shoulders, arms, hands, legs, or boots.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 8 + one-quarter the mecha's base purchase DC.

Restriction: None.

Hand Replacement (PL 5)

Some mecha do not have traditional humanoid hands, forgoing gripping and lifting power in exchange for mounted weaponry. The hand replacement occupies one hand slot and puts two open hand equipment slots in its place. That hand can no longer be used to grasp objects, grapple, or lift, nor can the mecha stow any equipment that is permanently attached to that hand slot.

Equipment Slots: 1, must be hand.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 4 + one-quarter the mecha's base purchase DC.

Restriction: None.

Metabot Link (PL 5)

Your mecha can link up with other mecha to form a metabot. Only mecha with this piece of equipment installed can do so, making the link a requirement for all component mecha in a metabot.

Equipment Slots: 1.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 16.

Restriction: None.

Power Core, Nuclear (PL 5)

Your mecha has a nonstandard nuclear power core capable of providing power to more equipment than the standard mecha power core. This feature grants a bonus equipment slot, which can be placed on any body part except the hands. However, if the mecha explodes (such as when it is destroyed, or by the use of a self-destruct mechanism) the resulting explosion deals 16d6 points of damage to the pilot and 12d6 points of damage to all characters and objects within a 90-foot radius.

Equipment Slots: None.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 10 + one-quarter the mecha's base purchase DC.

Restriction: Restricted (+2).

Self-Destruct System (PL 5)

A self-destruct system installed on a mecha allows the user to turn the mecha into a massive explosive device. The self-destruct system causes the mecha to explode, dealing damage as detailed under the rules for exploding mecha (and modified based on whether or not the mecha has a nonstandard power core).

Equipment Slots: 1.

Activation: Full-round action.

Range: Personal.

Target: You.

Duration: Instantaneous.

Saving Throw: None.

Purchase DC: 20.

Restriction: Restricted (+2).

Speed Booster (PL 5)

The speed booster allows the mecha's legs (or other means of ground propulsion) to work more efficiently and with greater results. The mecha's base land speed is increased by 10 feet. This piece of equipment can be installed multiple times, with its effects stacking.

Equipment Slots: 2, must be boots or legs.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 4 + one-quarter the mecha's base purchase DC.

Restriction: None.

Strength Booster (PL 5)

The strength booster reinforces the mechanisms that give the mecha its incredible lifting and pushing power. A mecha with the strength booster device gains a +8 equipment bonus to its Strength.

Equipment Slots: 2, must be arms.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 6 + one-quarter the mecha's base purchase DC.

Restriction: None.

Chameleonic Coating (PL 6)

A coating of liquid crystal similar to the spray-on LCD, chameleonic coating allows the mecha to alter the colors it displays on its surface in order to hide more efficiently. This coating not only grants a +10 equipment bonus on all Hide checks in the mecha, but also allows the mecha to display any color schemes, logos, or insignia the operator chooses.

Equipment Slots: None.

Activation: Move action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 6+ one-quarter the mecha's base purchase DC.

Restriction: None.

Power Core, Fusion (PL 6)

Your mecha has a nonstandard fusion power core capable of providing power to more equipment than the standard mecha power core. This feature grants two bonus equipment slots, which can be placed on any body part except the hands (the bonus slots need not be on the same body part). However, if the mecha explodes (such as when it is destroyed, or by the use of a self-destruct mechanism) the resulting explosion deals 20d6 points of damage to the pilot and 16d6 points of damage to all characters and objects within a 120-foot radius.

Equipment Slots: None.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 14 + one-quarter the mecha's base purchase DC.

Restriction: Restricted (+2).

Repair Drones (PL 6)

These tiny robots swarm over damaged mecha and perform repairs based on their advanced programming. Once deployed, repair drones repair 30 points of damage every minute (3 points per round). A DC 15 Computer Use check directs the drones to repair one piece of equipment or equipment slot at the same rate.

Equipment Slots: 2.

Activation: Move action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 22.

Restriction: None.

Integrated AI (PL 7)

The computer systems aboard a mecha with this piece of equipment contain an artificial intelligence (AI) capable of controlling the mecha. The AI might be cold and emotionless or charismatic and talkative, depending on its personality. The AI acts exactly as a copilot, follows orders from the operator, and has the following skills: Computer Use +10, Craft (mechanical) +5, Repair +10.

Equipment Slots: 1, must be helmet, visor, or cranium.

Activation: Free action.

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 18.

Restriction: Licensed (+1).

Power Core, Singularity (PL 7)

Your mecha has a nonstandard controlled singularity power core capable of providing power to more equipment than the standard mecha power core. This feature grants three bonus equipment slots, which can be placed on any body part except the hands (the bonus slots need not be on the same body part). However, if the mecha explodes (such as when it is destroyed, or by the use of a self-destruct mechanism) the resulting explosion deals 24d6 points of damage to the pilot and 20d6 points of damage to all characters and objects within a 180-foot radius.

Equipment Slots: None.**Activation:** Free action.**Range:** Personal.**Target:** You.**Duration:** Persistent.**Saving Throw:** None.**Purchase DC:** 18 + one-quarter the mecha's base purchase DC.**Restriction:** Restricted (+2).

Power Core, Zero-Point Energy (PL 8)

Your mecha has a nonstandard zero-point energy power core capable of providing power to more equipment than the standard mecha power core. This feature grants four bonus equipment slots, which can be placed on any body part except the hands (the bonus slots need not be on the same body part). However, if the mecha explodes (such as when it is destroyed, or by the use of a self-destruct mechanism) the resulting explosion deals 30d6 points of damage to the pilot and 25d6 points of damage to all characters and objects within a 240-foot radius.

Equipment Slots: None.**Activation:** Free action.**Range:** Personal.**Target:** You.**Duration:** Persistent.**Saving Throw:** None.**Purchase DC:** 24 + one-quarter the mecha's base purchase DC.**Restriction:** Restricted (+2).

SAMPLE MECHA

The following sample mecha are derived from the rules presented in this chapter.

Hive (PL 6)

The Hive is the mecha of choice for most squad leaders on the PL 6 battlefield. It boasts impressive onboard communications and the ability to link to orbital satellites and download information from central command, and can act as a staging platform for guided missile strikes behind enemy lines.

A Hive installed with the standard equipment package (see below) has a purchase DC of 51.

Size: Huge (command mecha) (-2 size)**Superstructure:** Vanadium**Armor:** Resilium**Armor Penalty:** -5**Strength Bonus:** +16**Speed:** 40 ft.**Bonus Hit Points:** 200**Hardness:** 20**Bonus to Defense:** +6**Reach:** 10 ft.**Dexterity Penalty:** +0**Base Purchase DC:** 50

Standard Equipment Package: Pilot's cockpit (torso and belt), Class III sensor array (helmet), Mark II Oracle targeting system (helmet), SatCom satellite communications array (visor), life support system (back), Hunter missile launcher (left arm and left hand), 6 hunter missiles (right arm), Warpath recoilless rifle (right hand), self-destruct system (shoulders), HV-5 Haven escape pod (torso), LX-10 antishock array (boots), comm system (no slots).

Scarab (PL 6)

The Scarab is a light scout mecha designed to slip behind enemy lines, gather information, and then slip back out. It focuses most of its equipment on stealth and sensor baffling, though it does boast a chaingun and self-destruct system for when it is forced to join the fight. Scarabs are often used to slip behind enemy emplacements and paint targets with a laser, allowing guided air strikes or sending targeting data to fellow mecha.

A Scarab installed with the standard equipment package (see below) has a purchase DC of 49.

Size: Large (scout walker) (-1 size)**Superstructure:** Vanadium**Armor:** Darkstar stealth**Armor Penalty:** -4**Strength Bonus:** +8**Speed:** 60 ft.**Bonus Hit Points:** 80**Hardness:** 20**Bonus to Defense:** +5**Reach:** 10 ft.**Dexterity Penalty:** +0**Base Purchase DC:** 48

Standard Equipment Package: Pilot's cockpit (torso and back), Class III sensor array (helmet), sensor baffle (back), M-9 chaingun (shoulders), laser painter (torso), self-destruct (left leg), life-support system (right leg), speed booster (boots), comm system (no slots).





Boulder (PL 7)

The Boulder is a heavy assault mecha designed to penetrate entrenched enemy positions and destroy them. Nicknamed a “bunker buster” after a type of explosive found in PL 5, the Boulder has an array of weapons that unleash massive damage against heavily fortified enemies while enduring a punishing counterassault.

A Boulder installed with the standard equipment package (see below) has a purchase DC of 63.

Size: Gargantuan (siege mecha) (-4 size) **Bonus Hit Points:** 400
Superstructure: Cerametal **Hardness:** 30
Armor: Neovulcanium **Bonus to Defense:** +10
Armor Penalty: -10 **Reach:** 15 ft.
Strength Bonus: +32
Dexterity Penalty: -2
Speed: 55 feet
Base Purchase DC: 62

Standard Equipment Package: Pilot's cockpit (torso and belt), Mark V Oracle targeting system (visor), Class V sensor system (helmet), Delphi defense suite Mk. 2 (cranium), light fortification (back), LX-20 antishock array (back), strength booster (left arm and right arm), P-7 rail gun (left arm and left hand), M-300 Rhino mass cannon (right arm and shoulders), RX “Rex” cutting laser (right hand and shoulders), Chrysanthemum laser array (torso), tank treads (replaces leg and boot slots, provides 4 equipment slots), mass shields (tank treads), energy shields (tank treads), comm system (no slots).



Sledgehammer (PL 7)

The Sledgehammer is a heavy weapons mecha, designed to provide large amounts of firepower in a small package. The Sledgehammer sacrifices its hands in favor of two powerful weapons, and trudges across the battlefield ever in search of new targets.

A Sledgehammer installed with the standard equipment package (see below) has a purchase DC of 49.

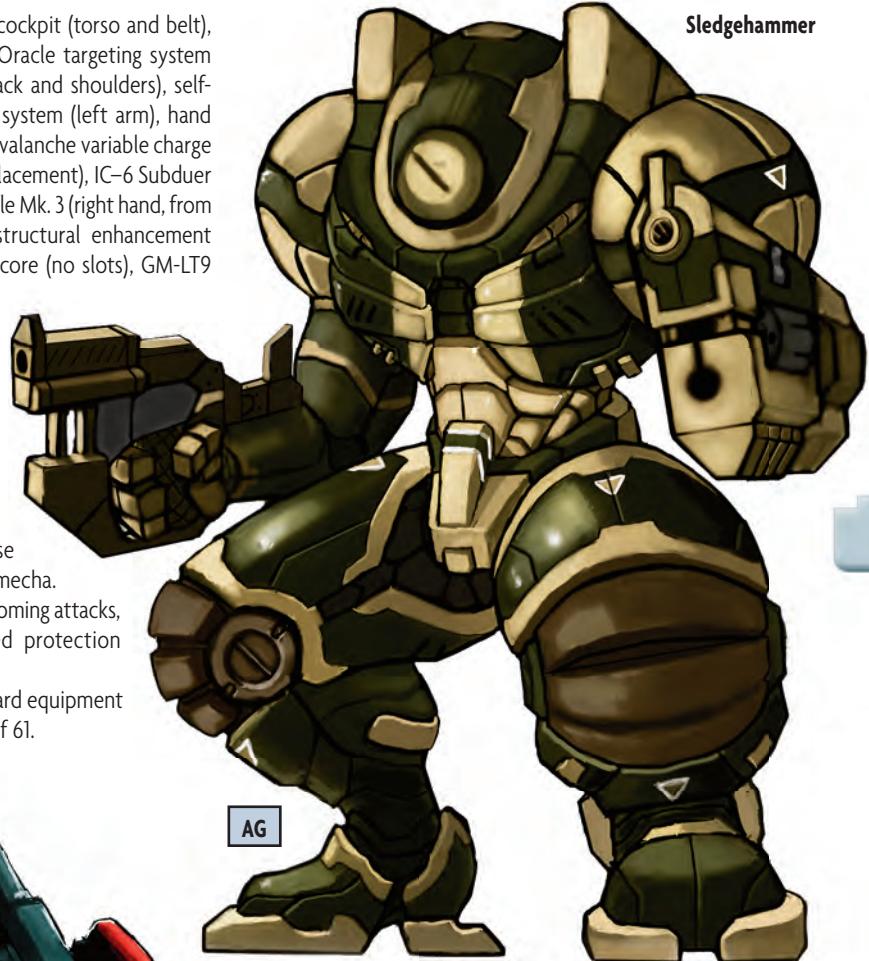
Size: Huge (infantry mecha) (-2 size) **Bonus Hit Points:** 300
Superstructure: Neovulcanium
Hardness: 20
Armor: Crystal carbon
Bonus to Defense: +10
Armor Penalty: -8
Reach: 10 ft.
Strength Bonus: +16
Dexterity Penalty: +0
Speed: 50 ft., fly 100 ft. (clumsy)
Base Purchase DC: 48

Standard Equipment Package: Pilot's cockpit (torso and belt), Class IV sensor array (helmet), Mark III Oracle targeting system (visor), jet pack (back), energy shield (back and shoulders), self-destruct system (left arm), life support system (left arm), hand replacement (left hand and right hand), Avalanche variable charge energy cannon (left hand, from hand replacement), IC-6 Subduer ion cannon (right arm), F-40 singularity rifle Mk. 3 (right hand, from hand replacement), chaff (shoulders), structural enhancement (1 slot equivalent, boots), fusion power core (no slots), GM-LT9 Seeker missile launcher (shoulders, from fusion power core), comm system (no slots).

Final Judge (PL 8)

The Final Judge is a powerful mecha designed to be a mobile heavy weapons platform. It boasts an incredibly strong power core and can dish out immense punishment against smaller and weaker mecha. Its singularity shield absorbs almost all incoming attacks, and it grants its operator unparalleled protection against enemy forces.

A Final Judge installed with the standard equipment package (see below) has a purchase DC of 61.



Size: Colossal (sentinel mecha) (-8 size) **Bonus Hit Points:** 1000

Superstructure: Megatanium

Armor: Nanofluidic Armor

Armor Penalty: -6

Strength Bonus: +32

Speed: 60 ft.; fly 200 feet (average)

Hardness: 30

Bonus to Defense: +10

(+18 with shield)

Reach: 15 ft.

Dexterity Penalty: -4

Base Purchase DC: 60

Standard Equipment Package: Pilot's cockpit (torso), space skin (1 slot equivalent, cranium), blackhole singularity shield (back), BT-11 laser glaive (left arm and left hand), pulsemaser (right arm and right hand), V-14 antimatter cannon (shoulders), afterburner system (torso), life support system (torso), maneuvering thrusters (belt), medium fortification (2 slot equivalent, left leg and right leg), deep space thruster (left leg and right leg), ramjet thruster boots (boots), zero-point power core (no slots), comm system (no slots), Barricade tactical shield (left arm, bonus from zero-point power core), Chrysanthemum laser array (torso, bonus from zero-point power core), self-destruct system (torso, bonus from zero-point power core), integrated AI (helmet, bonus from zero-point power core).



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CHAPTER FIVE

ROBOTICS

The chapter on robotics in *d20 Future* barely scratches the surface of what is possible with robots. Countless books and films depict robots and androids in all shapes and sizes—from the Darwinian robot crabs in the short story “Crabs Take Over the Island” (by Anatoly Dnieprov) to the “Three Laws” robots in Isaac Asimov’s classic *I, Robot*; from the hulking monstrosity in *The Phantom Creeps* to the replicants of *Blade Runner*—and of course the myriad array of “droids” in the *Star Wars* films.

This chapter presents guidelines for playing a broader range of robots than are given in the robot rules in *d20 Future*, plus additional robot accessories and some feats designed especially for use by robots. Finally, the end of this chapter provides sample robots, available for purchase by future heroes, or simply for the GM to use as foes for the heroes to defeat.

What the reader won’t find in this chapter is cybernetics: the equipment that blurs the line between human and machine. For more information on cybernetic gear, see *d20 Cyberscape*.

PLAYING ROBOT HEROES

Robots make popular heroes for many reasons, not the least of which is that their construct traits make them inherently superior to their fleshy counterparts.

A character who is immune to mind-influencing effects, poison, sleep, paralysis, stunning, disease, necromancy effects, and most effects that require a Fortitude save is awfully tempting—and those are just some of the advantages of a robot. Though there are drawbacks to playing a robot, as well, they are usually outweighed by the benefits.

Unfortunately, there aren’t a lot of guidelines to help GMs correctly answer the player question: “Can I play a robot?” The *d20 Future* rules for robot heroes allow only biodroids and bioreplicas, both of which are balanced for a +0 level adjustment—meaning that they make for good 1st-level characters. But players sometimes want something a little different: a character made of

liquid metal, or even a biomorph or armature robot. The rules in this chapter will help GMs determine just how much a particular robot hero could impact their campaigns.

Robot Level Adjustments

Because robots are just another kind of construct, they conform to the same rules for level adjustments that apply to constructs in *DUNGEONS & DRAGONS*. If the construct's ability allows it to do something that an ordinary human could not (without special equipment), and is not balanced by some other, built-in factor, then it is probably worth a level adjustment.

For example, a robot has no Constitution score, making it immune to most effects that require a Fortitude saving throw—but it also does not gain bonus hit points from its Constitution and does not heal naturally; it must be repaired. If the robot were immune to effects that required a Fortitude saving throw, but still had a Constitution score (and all the associated benefits), that would be an advantage over living beings.

The basic biondroid and bioreplica robots presented in *d20 Future* have level adjustments of +0. The rules below allow GMs to judge whether additions to those robots should alter the base level adjustment, or whether another type of robot the GM has chosen to allow should have a level adjustment of greater than +0.

Estimating Level Adjustments

Level adjustments aren't so much calculated as estimated. There are no hard and fast rules that state that Ability X is worth more of an adjustment than Ability Y, but less than Ability Z. It is not an exact science. As a result, players should never estimate level adjustments for their robot characters without their GMs' active participation and guidance. The rules here are the best possible guides, but they still aren't perfect.

When estimating level adjustments, keep in mind that an ability is an advantage only if it is something no one else can do—which usually means that, as the robot rises in effective level, some of its abilities might become less useful. (The ability to fly, for example, might become less special when everyone in the group can afford a jetpack. Until it is, though, a flying robot has a distinct advantage over ground-bound characters.)

The following are samples of robot abilities that affect a robot's level adjustment—or an explanation of why an ability doesn't affect level adjustments. This is not an exhaustive list.

Construct Traits: The construct type is automatically worth a +1 level adjustment.

Unbalanced Ability Scores: The two types of robot frames that can be played as heroes (biondroids and bioreplicas) include rules for determining most of the robot's ability scores randomly, just like other types of heroes. However, the average "off-the-shelf" robot (as opposed to one created by the player or GM) can reflect some extreme design choices that make for a wildly unbalanced set of ability scores. Of course, the purchase cost for high scores often make the robot exorbitantly pricey, but if the GM doesn't require the player to actually purchase the robot he wishes to play (see "The Wealth Check Ceiling" sidebar), such considerations are meaningless.

Not having a Constitution score is a benefit for any character, so that alone warrants a +1 level adjustment. In general, though, the ability scores of off-the-shelf robots are naturally balanced—but that assumes a Medium-size robot. The larger a robot gets, the stronger it gets, and the loss of Dexterity is not commensurate.

If the robot has a particularly high ability score in some other ability (especially Strength or Dexterity), it should also carry at least an additional +1 level adjustment.

Size: Robots do not receive a level adjustment for their size. Their level adjustment is based instead on their Strength scores (which are influenced by their size) and their reach (see below).

Equipment Bonus to Defense: Integrated armor is the equivalent of natural armor for robots. An equipment bonus of +1 or better from integrated armor is worth a +1 level adjustment, plus an additional +1 for every 5 points of equipment bonus to Defense beyond the first 5.

Speed: A robot's modes of travel can affect level adjustment in a variety of ways.

Swim: A robot with a swim speed generally does not gain a level adjustment. If the campaign involves a lot of travel by water (on or under), a robot with a swim speed should include a +1 level adjustment.

Fly: A robot with a fly speed gets a +1 level adjustment if its maneuverability is worse than good, or a +2 level adjustment if its maneuverability is good or better.

Manipulator Damage: Manipulators are the robot equivalent of natural weapons. In most cases, robot manipulators do not deal more damage than the extremities of a comparably sized creature (and usually deal less). However, if a robot has more "natural" attacks in a single round than a Strong or Tough hero of equal Hit Dice (for example, see the Intruder Mk. VI on page 88), the robot gains a +1 level adjustment. If the robot has more than twice as many such attacks as a Strong or Tough hero of equal Hit Dice, the robot gains a +2 level adjustment.

Reach: Beyond 5 feet, every additional 5 feet of reach is worth an additional +1 level adjustment: +1 for 10 feet, +2 for 15 feet, and so on. Robots of Tiny or smaller size are worth a -1 level adjustment.

Skills and Sensor Systems: A robot with three or more equipment bonuses on skill checks (due to sensor systems, as opposed to external equipment that any character could use) gets a +1 level adjustment.

Damage Reduction: This ability is worth a +1 level adjustment if the robot ignores up to 5 points of damage, and +2 for every 5 points of damage above 5. (So, +3 for DR 10/—, +5 for DR 15/—, and so on.)

Special Abilities: Special abilities are the trickiest robot abilities to estimate for level adjustments. Keep in mind that even a long list of special abilities does not necessarily equal a level adjustment; most robots (and characters) can only use one special ability per round. Further, a single feature is not always worth a level adjustment, since ordinary characters can often achieve the same general result through class features, equipment, or other factors. In general, though, a special ability that a character of a standard race cannot duplicate is worth a +1 level adjustment. Below are several examples to illustrate how to assign level adjustments to robots.

Ability Score Damage: This special ability is worth a +1 level adjustment unless the affected ability score is Constitution, in which case the level adjustment rises to +2.

Blindsight: This special quality is worth a +1 level adjustment.

Darkvision: Darkvision is relatively common among many standard races, and can, in any case, be mimicked by certain affordable equipment. Darkvision is not worth a level adjustment.

THE WEALTH CHECK CEILING

It would be ridiculous to ask players with robot heroes to pay for their robots using their robot's Wealth. Conversely, though, someone has to have paid for the robot, at some point. This is an especially important consideration if the robot in question has a high purchase DC.

To resolve this situation, the GM has a couple of options. First, she can require that one of the other heroes in the group must pay for the robot. This is a useful solution if the player doesn't want to take the Rogue Robot feat (see Rogue Robot on page 85).

Alternately, the GM can allow the player to make a Wealth check for his own robot hero, using the party's average Wealth. The player cannot take 20 on this roll, though he can take 10. Make a note of the result. If the check succeeds, the player can use the robot as designed. If the check fails, the player must dispose of accessories or downgrade armor, locomotion, manipulators, and other robot components until the robot's purchase DC matches the result of the Wealth check. (By using this method, none of the characters, including the robot, lose any points from their Wealth bonus.)

Poison: As with ability score damage, this special ability is worth a +1 level adjustment unless the affected ability score is Constitution, in which case the level adjustment rises to +2.

Resistance to Energy: This special quality is worth a level adjustment of +1/2 per energy type (rounded up). Therefore, electricity resistance 10 by itself is worth a +1 level adjustment (1/2 rounded up), and electricity resistance 10, fire resistance 10, and sonic resistance 10 together are worth a +2 level adjustment. Each resistance greater than 10 is worth an additional +1 level adjustment, so electricity resistance 10, fire resistance 20, and sonic resistance 10 together are worth a +3 level adjustment.

Scent: If the robot's sensor system grants it the scent special quality, this is worth a +1 level adjustment.

Robot Advantages

Being constructs, robots have a large number of traits reflecting their inorganic composition, most of which are great advantages in a game system built around organic life forms. (These advantages are summarized in Chapter Ten: Robotics in *d20 Future*.) A robot can go where humans can't, do what humans can't, and do both generally faster and longer than a human can.

In addition to their construct traits, robots have built-in accessories that give them the equivalent of special abilities: everything from integrated cell phones to light-bending "invisibility units." Such accessories, too, in many cases, affect the robot's "value," relative to a human character with the same ability scores, skills, feats, classes, and talents. Equipment, in general, doesn't affect a character's effective level, but when it enables the character to do things an ordinary character couldn't do, and can't simply be taken away with a successful disarm attempt, it makes the robot character considerably more effective.

In some cases, robots can also be reprogrammed to have different skills and feats. (See Skill Software and Feat Software in Chapter Ten: Robotics in *d20 Future*.) This feature means that, with a few hours' work and a successful Computer Use check,

a robot can switch its role in a group—from, say, medical expert to infiltration expert—to suit whatever situation the group is about to face. This adaptability isn't a huge advantage, of course; too often, groups don't have enough time before an encounter to plan what skill and feat sets they need. However, it is an advantage that ordinary characters do not have.

Likewise, robots have a hidden advantage in that they are the only "race" whose members can be brought back from the dead (via Repair checks and reinstalling the robot's "brain" in a different body). Not only can a destroyed robot be rebuilt or replaced and have the same skills, feats, classes, and even memories installed—just like rebuilding a crashed computer and restoring the old software from a backup—the robot's brain can be installed in a different, perhaps even better, new body.

Robot Drawbacks

Of course, because they're only electronic devices—albeit sophisticated ones—robots suffer from some drawbacks that don't impact humans at all. Weapons that utilize electromagnetic pulse, for example, damage robots, but do little more than cause a small and temporary loss of sensation in organic beings.

And, despite memory backups and the availability of replacement parts, robots can be permanently destroyed—their bodies disassembled and their memory backups erased. (See page 177 of *d20 Future* for Robot Resurrection.)

ROBOT FEATS

Although robots can use the same set of feats that organic characters can, certain feats are available only to mechanical beings. Robot feats are not precisely programming, nor accessories; they are more accurately described as operating system and component configuration features.

The feats below all include the prerequisite that the character must be a robot, though in a few cases they are available to cyborgs as well.

Command Codes (PL 5)

A preset command code ensures the robot follows commands issued only by the authorized operator. This code is set when the robot is first activated, and can be reset by the operator at any time. (The code can be hacked with a DC 35 Computer Use check.)

Along with any other commands the operator can issue to the robot, the operator can instruct the robot to accept commands from other users. The operator can specify either one particular person (who must be present to supply a voice sample), or "all users" (allowing anyone to issue commands).

Prerequisite: Robot, robolink.

Benefit: The robot ignores commands from any operator who does not first issue a preset command code (as a free action).

Decentralized Components (PL 7)

The robot's components and critical systems are both widely dispersed throughout its body and reinforced by redundant backup systems, making it less susceptible to critical hits.

Prerequisite: Robot, biondroid or bioreplica frame.

Benefit: The biondroid or bioreplica robot is immune to critical hits.

Normal: Biondroid and bioreplica robots are not immune to critical hits.

Finely Tuned (PL 6)

The robot's software settings are finely tuned, making it more efficient at the tasks for which it was designed.

Prerequisite: Robot.

Benefit: Designate a number of class skills equal to the robot's Intelligence modifier. The robot gains a +1 competence bonus on all skill checks with these skills.

Special: The robot cannot have any ranks in any cross-class skills. If the robot purchases ranks in a cross-class skill, it loses the benefits of this feat.

This feat can be selected multiple times. Each time you select it, designate new class skills to which the bonus applies.

Memory Implant (PL 6)

The robot has the downloaded memories and personality traits of a living person, or an amalgamation of multiple persons, giving it a kind of virtual history. The robot does not believe itself to be the person in question. (It might not even know the identity of its "donors," in fact.) It is more accurate to say that the robot sees the world through their eyes.

Prerequisite: Robot.

Benefit: When creating your robot character, it can choose a starting occupation. The robot also receives a feat at 1st level.

Normal: Robots do not gain starting occupations, nor gain feats at 1st level.

Special: This feat must be selected at character generation.

Overclocked (PL 6)

The robot's processor has been optimized for maximum performance—though it tends to overheat a bit more easily.

Prerequisite: Robot.

Benefit: The robot gains a +2 circumstance bonus on initiative checks and Reflex saves. However, if it does not shut down after 16 hours of continuous use or activity, it takes a cumulative -2 penalty on attack rolls, ability checks, skill checks, and saving throws each day until it fully recharges itself.

Normal: A robot that does not shut down for 8 hours out of every 24 takes a cumulative -1 penalty on attack rolls, ability checks, skill checks, and saving throws each day until it fully recharges itself.

Persistent Personality (PL 7)

The robot's personality is so strong that it survives even repeated destructions of whatever robot body its brain occupies.

Prerequisite: Robot, at least one level in a heroic class, Iron Will.

Benefit: Each time the robot's body is destroyed (reduced to 0 or fewer hit points), make a DC 15 Charisma check. If the check is successful, the robot does not suffer the loss of any Charisma as a result of its destruction.

Normal: When a robot's body is destroyed, it automatically loses 1 point of Charisma.

Plug-and-Play Brain (PL 6)

The robot's brain is self-configuring, allowing it to be transferred from body to body.

Prerequisite: Robot.

Benefit: The robot's brain can be transferred to a different robot body without the usual Repair check. The process still requires 10 minutes of work and a mechanical tool kit.

Normal: Removing and transplanting a robot brain into a different body requires a Repair check, with a DC ranging from 20 to 50, depending on the type of robot frame.

Plug-and-Play Components (PL 6)

The robot is constructed with components that can be replaced with off-the-shelf parts, making it easier to conduct repairs.

Prerequisite: Robot, armature or biomorph frame.

Benefit: Repair checks made to the robot gain a +5 circumstance bonus.

Rogue Robot (PL 6)

The robot is not under anyone's control. It has developed its own system of values and has its own goals, like any other autonomous being.

Prerequisite: Robot, Int 5+.

Benefit: The robot can ignore commands given to it, or follow them, according to its own whims. Even if the model of robot is ordinarily controlled with a remote or robolink, it has the option of ignoring the signals sent to it by such devices.

Voice-Activated (PL 6)

The robot can be operated by voice commands, rather than by a remote control unit (see page 188 of *d20 Future*).

Prerequisite: Robot, robolink.

Benefit: As a free action, the robot's operator can issue verbal commands to the robot. The robot must be able to hear the operator (a Listen check might be required in particularly loud circumstances) and understand the language the operator is speaking. The robot can still only process one command at a time, however—no matter how many commands the operator issues, the robot carries out only the first one it hears.

Normal: Using a remote control unit to control a robot via a remote control unit requires a move action, attack action, or even full-round action.

Wetware (PL 7)

The robot's components are made of a type of artificial flesh that is virtually indistinguishable from the real thing except at a cellular level.

Prerequisite: Robot, bioreplica frame.

Benefit: A bioreplica robot with this feat can use cybernetic components in the same manner as a human. The robot also appears completely natural; even a Spot check won't reveal that it is a robot. Furthermore, the robot can heal normally, as well as be repaired with the Repair skill.

Normal: Bioreplica robots cannot employ cybernetic components and can be distinguished from real humans with a successful DC 20 Spot check. Robots do not heal naturally.

ROBOT ACCESSORIES

The accessories described in Chapter Ten: Robotics in *d20 Future* only scratch the surface of the equipment available to robots. Being essentially animate computers, robots are inherently upgradable. They are limited only by their carrying capacity.

Energy-Resistant Coating (PL 6)

The robot is treated with a coating that reduces the impact of energy types on the robot's inner workings. It gains resistance to energy 5 against one type of energy: acid, cold, electricity, fire, or sonic/concussion. The robot can be equipped with this accessory multiple times, but only once for each energy type.

The PL 7 version of the energy resistant coating increases the resistance to 10. At PL 8 it increases to 15, and at PL 9 it increases to 20.

Purchase DC: 20 (PL 6 or PL 7); 23 (PL 8); 25 (PL 9).

Restriction: None.

Extendable Sensor (PL 6)

The robot is equipped with a sensor on an extending "arm," which the robot can insert into tight places and otherwise use to look around corners. The sensor arm is 1 foot long and 1 inch in diameter at its thickest point. The sensor is only as effective as the rest of the robot's sensor system.

Using the extendable sensor to look around obstacles provides the robot nearly total cover, granting the robot a +12 cover bonus to Defense, and a +5 bonus on Reflex saves. (If the Reflex save is successful, the robot takes no damage, and only half damage on a failed save.)

Purchase DC: 13.

Restriction: None.

Gimbaled Joints (PL 6)

The robot is constructed with gimbaled joints and is programmed to make full use of them. This allows the robot to twist and contort easily into different configurations. The robot is so flexible that it gains a +2 equipment bonus on Escape Artist and Tumble checks.

Purchase DC: 14.

Restriction: None.

Grappling Hand (PL 6)

The robot is equipped with a hand that attaches to a telescoping limb, allowing it to reach things up to 20 feet away. This piece of equipment increases the robot's reach to 20 feet.

The robot gains a +10 equipment bonus on Climb checks.

Purchase DC: 20.

Restriction: Robots with manipulators only.



Robotic wetware



Passenger Compartment (PL 6)

A robot with this accessory can carry passengers in relative comfort, including basic life support (breathable atmosphere, regulated temperature, and so on). The compartment can carry one passenger of up to two size categories smaller than the robot (including another robot). The passenger compartment functions as long as the robot functions, but if it loses power for some reason, life support shuts down. Once the passenger compartment is no longer functioning, the compartment's temperature equalizes with the exterior temperature (see Heat and Cold on page 213 of the *d20 Modern Roleplaying Game*); the air supply is only good for another 5 minutes before the atmosphere becomes unbreathable.

If the robot has the survivor array (see page 189 in *d20 Future*), the passenger is also protected from vacuum, high pressure, and low-gravity, high-gravity, and zero-gravity conditions. The passenger does not take damage unless the robot is first destroyed.

The passenger compartment includes no control systems for operating the robot, other than opening and closing the entrance to the compartment. However, if the robot is equipped with a robolink or similar remote control system, the passenger can control the robot from inside the compartment.

See Table 5-1: Passenger Compartments for the purchase DCs.

Purchase DC: See below.

Restriction: None.

TABLE 5-1: PASSENGER COMPARTMENTS

Frame Size	Purchase DC
Diminutive or Tiny	8
Small or Medium-size	10
Large	13
Huge	17
Gargantuan	22
Colossal	25

Tentacles (Multiple) (PL 6)

Tentacles function as locomotion, but can also serve as arms. They are less dexterous than even rudimentary pincers, but much better at grappling, granting a +5 equipment bonus on grapple checks and Climb checks. Tentacles grant a base land speed of 20 feet.

Tentacles can be equipped with manipulators, allowing them to wield items and deal regular damage. If a robot with tentacles has no other form of locomotion (such as legs or thrusters), the robot must use at least half of its tentacles to support itself, leaving it only half of its manipulators with which to fight.

Damage: Nonlethal bludgeoning only.

Purchase DC: 10 + one-quarter the base purchase DC of frame.

Manipulator	F	D	T	S	M	L	H	G	C
Tentacle	—	—	1	1d2	1d3	1d4	1d6	1d8	2d6

Fusion Engine (PL 7)

The robot is powered by a miniaturized fusion reactor, enabling it to operate more or less continuously, without the standard rejuvenation cycle of 16 hours on, 8 hours off.

Purchase DC: 30.

Restriction: None.

Component Assimilator (PL 8)

Component assimilators allow robots to turn external objects into internal components. If the robot successfully pins any inorganic object two size categories smaller than itself, it can use the object as though it were an integrated component. If the object is wielded by an opponent, the robot must make a successful disarm attempt instead. The robot cannot assimilate other robots in this fashion, however, unless they have first been reduced to 0 hit points.

The object does not need to be installed for the robot to use it. The robot does not need to use its manipulators to use an item that normally requires manipulators; nor is a weapon or tool mount or internal storage unit required. The item need not include a power source—the robot's internal energy source is assumed to power the item—but it must include an appropriate delivery system. (For example, assimilating a bullet does not allow the robot to shoot it unless it has also assimilated a firearm of the proper caliber.)

The table below gives the number of objects a robot can assimilate based on its size, as well as the purchase DC for the component assimilator. The robot can purge any item from its system as a full-round action.

Frame Size	Maximum Items	Purchase DC
Tiny	1	5
Small or Medium-size	2	8
Large	3	10
Huge	4	12
Gargantuan	5	15
Colossal	6	18

Purchase DC: Special.

Restriction: None.

Nanite Self-Repair Cluster (PL 8)

Nanite self-repair clusters are bundles of component materials with small packets of short-life nanites scattered throughout the robot's body. When the robot is damaged, it (or its controller) can activate a cluster as a move action. The nanites immediately begin reconfiguring the components in their cluster to repair and replace the robot's damaged components and systems. Each round after activation, the nanites repair 10 points of damage. Each cluster is capable of repairing 50 points of damage to the robot. If the nanites repair all the robot's damage before exhausting their resources, they shut down and must be reactivated when the robot wishes to repair more damage.

No Repair check is necessary. A robot cannot use this item to repair another robot.

Purchase DC: 30.

Restriction: None.

Psychocoder (PL 8)

The psychocoder is an external device similar to the neural recorder (see page 79 of *d20 Future*). It records the brainwaves of a living being onto a robot's memory banks, in effect preserving the personality of a living person in a robot body. The character gains the robot's Strength and Dexterity, and either retains his own Intelligence, Wisdom, and Charisma, or acquires the robot's—whichever is lower. All of the character's Hit Dice convert to d10s, and the

character acquires the construct creature type. The character acquires all of the robot's immunities and limitations or restrictions, but keeps his own classes, levels, skills, skill ranks, feats, and starting occupation.

The recording process takes one hour and can be performed only on a living subject. The encoding process erases any previous programming in the robot's memory (including feats and skills), but any robot accessories remain intact. Encoding the subject's personality and memories onto the robot takes 4 hours. The process is otherwise automatic; no skill check is required to perform the recording and encoding functions.

The personality and memories are only as fresh as the recording of the subject. If the recording was stored for a week before being encoded onto the robot, for example, the robotic personality has no memory of the intervening week.

Purchase DC: 36.

Restriction: None.

SAMPLE ROBOTS

The following sample nonheroic robots have been built using the rules in this chapter and the rules in Chapter Ten: Robotics in *d20 Future*.

Gun Drone (PL 6)

The gun drone is little more than a walking laser rifle with rudimentary targeting and the most basic friend-or-foe recognition system. (The gun drone fires only on targets not wearing the

proper identification badge.) It is still immensely popular for military and paramilitary applications, because of its low cost and ease of use. (The unit is operated by a simple on/off switch, which can be switched off by an opponent in combat with a successful melee touch attack.)

Purchase DC: 23.

Restriction: None.

Gun Drone: CR 1/2; Small construct; HD 1/2d10+5; hp 10; Mas —; Init +2 (+2 Dex); Spd 30 ft.; Defense 13, touch 13, flat-footed 11; BAB +0; Grp -4; Atk +1 melee (1d3 nonlethal, legs) or +3 ranged (3d8, laser rifle); FS 5 ft. by 5 ft.; Reach 5 ft.; SQ construct traits; AL owner; SV Fort +0, Ref +2, Will +0; Str 11, Dex 14, Con —, Int —, Wis 10, Cha 1.

Skills: None.

Feats: Personal Firearms Proficiency.

Equipment: Laser rifle, with weapon mount and loading mechanism plus 3 spare power packs.

The gun drone has the following systems and accessories:

Frame: Armature.

Locomotion: Legs (multiple).

Sensors: Class I sensor system.

Feat Software: Feat progit.

Ability Upgrade: +2 Dexterity upgrade.

Accessories: Laser rifle, with weapon mount and loading mechanism plus 3 spare power packs.

Microbot (PL 6)

The microbot is the cutting edge of espionage technology—a robotic surveillance device that plants itself and goes into hiding to avoid detection. The basic model is simply an ambulatory micro-transmitter programmed to travel to a designated location and transmit back everything that happens there. However, the transmitter can be replaced with a variety of other peripherals, allowing the microbot to deliver a dose of poison, a packet of nanites, or a small explosive charge, or to act as a homing beacon.

Purchase DC: 25.

Restriction: Restricted (+2).

Microbot: CR 1/8; Fine construct; HD 1/16d10; hp 1; Mas —; Init +4 (+4 Dex); Spd 30 ft.; Defense 22, touch 22, flat-footed 18; BAB +0; Grp -21; Atk +3 melee or +12 ranged; FS 6 in. by 6 in.; Reach 0 ft.; SQ construct traits; AL owner; SV Fort +0, Ref +4, Will +0; Str 1, Dex 18, Con —, Int —, Wis 10, Cha 1.

Skills: Escape Artist +8, Hide +20, Move Silently +8.

The microbot has the following systems and accessories:

Frame: Armature.

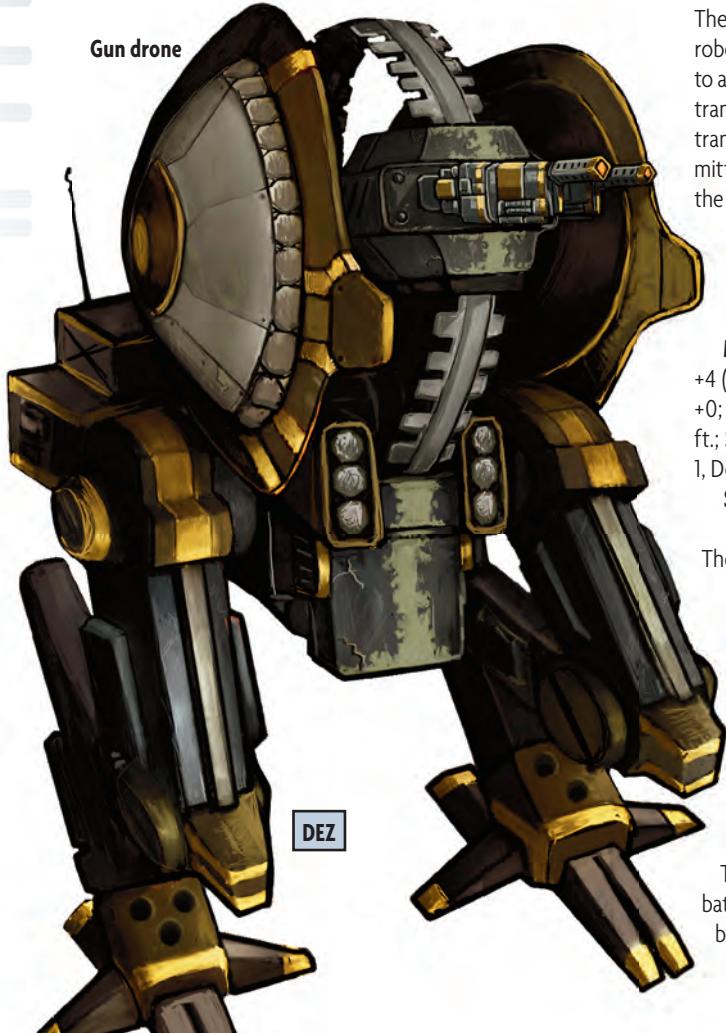
Locomotion: Multiple legs (6).

Manipulators: Pincers (2).

Sensors: Class I sensor system.

Skill Software: Escape Artist skill progit (4 ranks), Move Silently skill progit (4 ranks).

Accessories: AV transmitter, magnetic feet.



Intruder Mk. VI (PL 6)

The Intruder Mk. VI is an all-terrain assault robot built for the battlefields of the Fusion Age. Constructed with an octopuslike biomorph frame, the Intruder crawls inexorably toward enemy



Microbot

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positions and uses its claw-tipped tentacles to tear enemy soldiers to ribbons.

Purchase DC: 33.

Restriction: Military (+3).

Intruder Mk. VI: CR 6; Huge construct; HD 8d10+40; hp 84; Mas —; Init -2 (-2 Dex); Spd 20 ft.; Defense 12, touch 6, flat-footed 6; BAB +6; Grp +24; Atk +14 melee (1d8+10, 4 claws) or +2 ranged (3d8, laser rifle) or -2 ranged (3d8, laser rifle autofire); FS 15 ft. by 15 ft.; Reach 20 ft.; SQ construct traits; AL owner; SV Fort +2, Ref +0, Will +0; Str 30, Dex 6, Con —, Int —, Wis 10, Cha 1.

Skills: Climb +14.

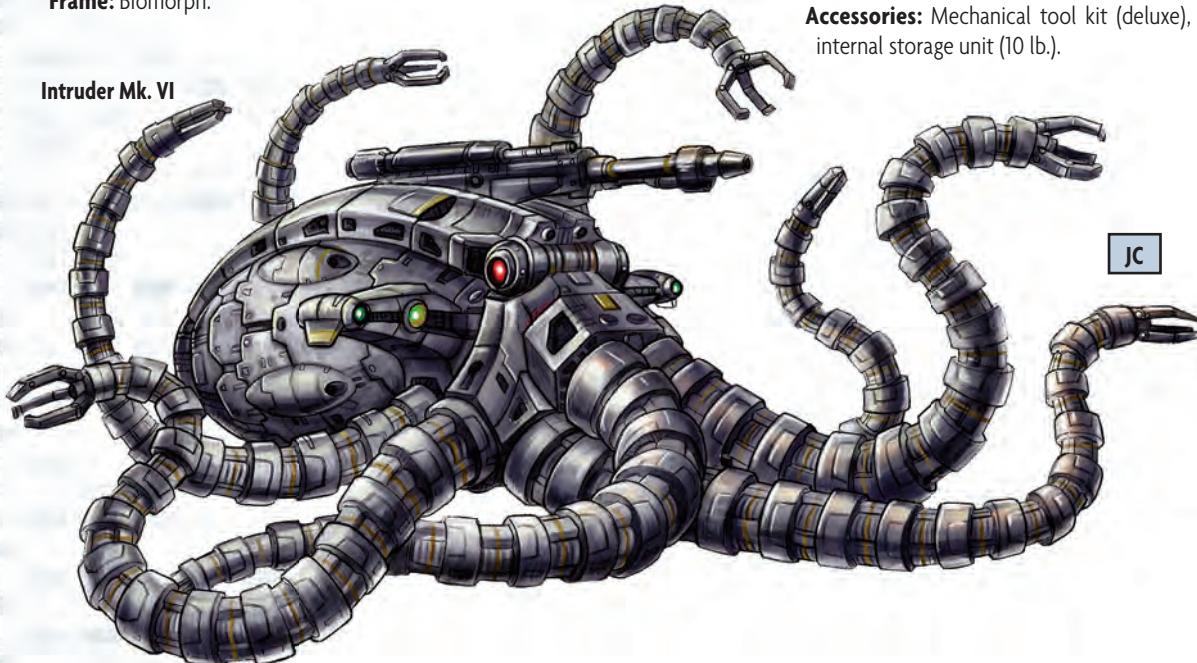
Feats: Multiattack.

Equipment: Grappling hand, weapon mount (laser rifle), loading mechanism, 3 power packs.

The Intruder Mk. VI has the following systems and accessories:

Frame: Biomorph.

Intruder Mk. VI



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Locomotion: Multiple tentacles (8).

Manipulators: Claws (8).

Armor: Duralloy armor.

Sensors: Class IV sensor system.

Skill Software: Climb skill progit (4 ranks).

Feat Software: Multiattack feat progit, Personal Firearms Proficiency feat progit.

Accessories: Grappling hand, weapon mount, laser rifle, loading mechanism, power packs (3).

OmniTool Self-Guided Repair Kit (SGRK) (PL 6)

The OmniTool Corporation popularized robotic tools during the late Information Age, but didn't develop autonomous repair robots until the Fusion Age. The SGRK fits on the owner's back like a rucksack until it is needed. It can walk on its legs or fly using its rotor. The variant SGRK-E replaces the mechanical toolkit with an electrical toolkit.

The SGRK weighs 75 pounds (accessories included).

Purchase DC: 24.

Restriction: None.

OmniTool SGRK: CR 1/4; Small construct; HD 1/2d10+5; hp 10; Mas —; Init +1 (+1 Dex, misc. mods); Spd 30 ft., 30 ft. fly (poor); Defense 12, touch 12, flat-footed 11; BAB +0; Grp -4; Atk +1 melee (1d2, 2 hands); FS 5 ft. by 5 ft.; Reach 5 ft.; SQ construct traits; AL owner; SV Fort +0, Ref +1, Will +0; Str 11, Dex 12, Con —, Int —, Wis 10, Cha 1.

Skills: Computer Use +6, Disable Device +4, Repair +10.

Feats: Gearhead.

Equipment: Mechanical toolkit (deluxe), internal storage unit (10 lb.).

The OmniTool SGRK has the following systems and accessories:

Frame: Armature.

Locomotion: Legs (multiple), rotor.

Manipulators: Hands (2).

Sensors: Class IV sensor system.

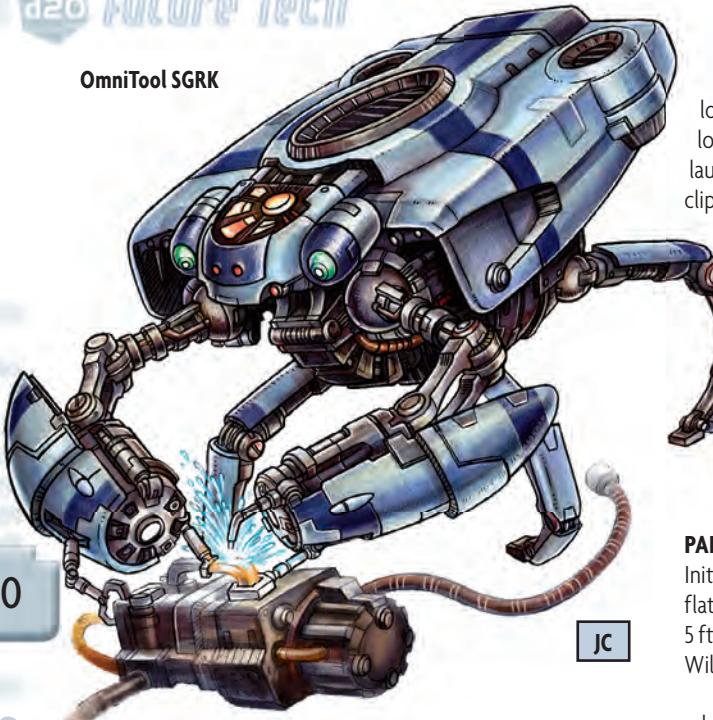
Skill Software: Computer Use skill progit (4 ranks), Disable Device skill progit (4 ranks), Repair skill progit (8 ranks).

Feat Software: Gearhead feat progit.

Accessories: Mechanical tool kit (deluxe), internal storage unit (10 lb.).

OmniTool SGRK

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Reaper (PL 7)

The Reaper is a hunter-killer robot designed by high-tech terrorists to unleash on urban targets when a dirty bomb is impractical for whatever reason. Though incredibly expensive, the plans are widely available—they can usually be found on the VRNet. Though the Reaper is incapable of melee attacks, it more than makes up for that shortcoming with three ranged weapon mounts. (The model below is the common configuration.)

Purchase DC: 44.

Restriction: Military (+3).

Reaper: CR 18; Colossal construct; HD 32d10+120; hp 296; Mas —; Init +4 (−2 Dex, +4 Improved Initiative, +2 sensor system); Spd 20 ft.; Defense 14, touch 6, flat-footed 14; BAB +22; Grp +56; Atk +12 ranged (3d10, plasma rifle) or +12 ranged (3d12, rail gun) or +12 ranged (3d6, fireflush grenade); FS 30 ft. by 30 ft.; Reach 15 ft.; SQ construct traits; AL owner; SV Fort +10, Ref +8, Will +10; Str 47, Dex 6, Con —, Int —, Wis 10, Cha 1.

Skills: Listen +8, Spot +8.

Feats: Advanced Firearms Proficiency, Alertness, Improved Initiative, Personal Firearms Proficiency.

Equipment: Fusion engine, AV transmitter, plasma rifle (with loading mechanism, weapon mount, and 3 reloads), rail gun (with loading mechanism, weapon mount, and 3 reloads) mini-grenade launcher (with loading mechanism, weapon mount, and 3 extra clips of fireflush grenades).

The Reaper has the following systems and accessories:

Frame: Armature.

Locomotion: Treads.

Armor: Neovulcanium armor.

Sensors: Class VII sensor system.

Skill Software: Listen skill progit (4 ranks), Spot skill progit (4 ranks).

Feat Software: Feat net: Advanced Firearms Proficiency, Alertness, Improved Initiative, Personal Firearms Proficiency.

Accessories: Fusion engine, AV transmitter, plasma rifle (with loading mechanism, weapon mount, and 3 reloads), rail gun (with loading mechanism, weapon mount, and 3 reloads) mini-grenade launcher (with loading mechanism, weapon mount, and 3 extra clips of fireflush grenades).

PAR-3 (PL 7)

The Personal Assistant Robot series provides citizens with tireless domestic service and endlessly helpful robotic companions. Available in “male” or “female” models, PARs cook, clean, manage appointments, and generally serve as the perfect butlers or maids.

Purchase DC: 30.

Restriction: None.

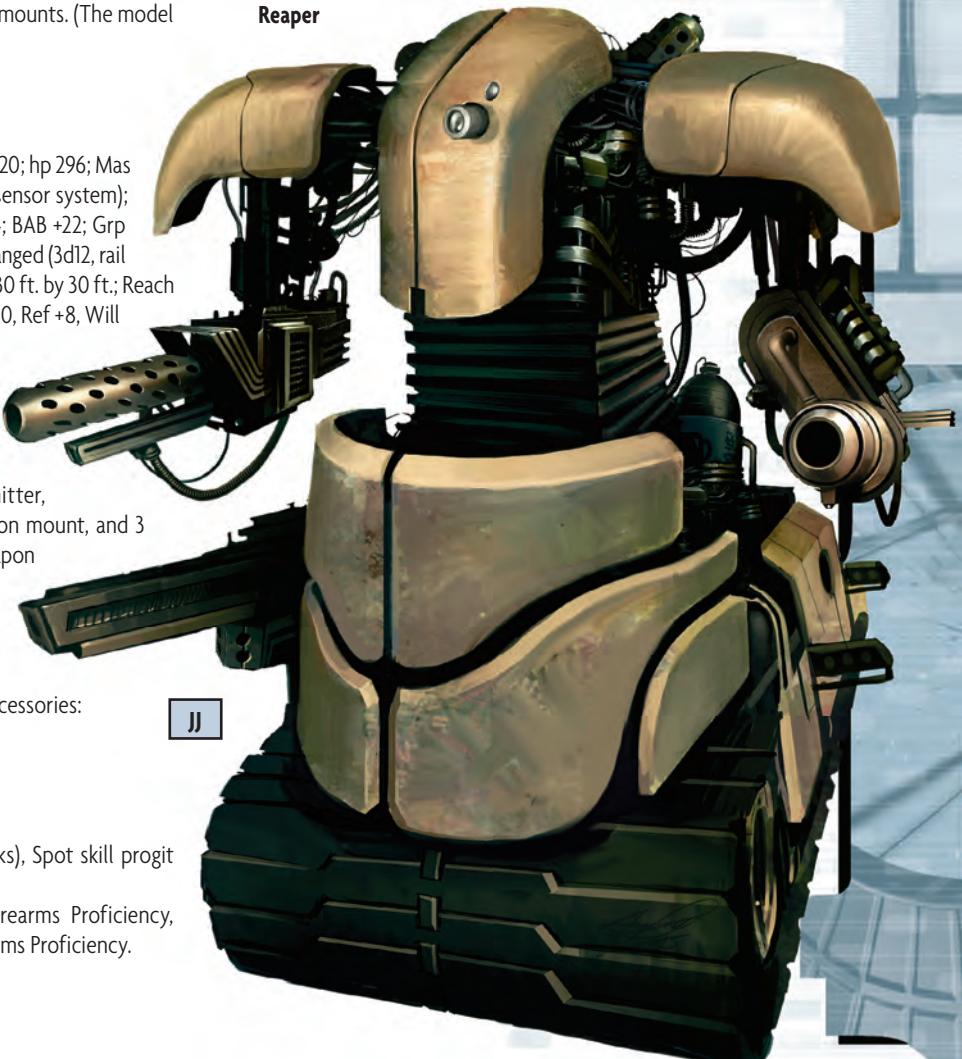
PAR-3: CR 1; Medium-size construct; HD 1d10+10; hp 20; Mas —; Init +2 (+0 Dex, +2 sensor system); Spd 20 ft.; Defense 10, touch 10, flat-footed 10; BAB +0; Grp +1; Atk +1 melee (1d3, hand); FS 5 ft. by 5 ft.; Reach 5 ft.; SQ construct traits; AL owner; SV Fort +0, Ref +0, Will +0; Str 12, Dex 11, Con —, Int 10, Wis 10, Cha 10.

Skills: Computer Use +4, Drive +4, Knowledge (civics) +4, Knowledge (current events) +4, Listen +6, Profession +4, Repair +4, Research +4, Search +6, Sense Motive +4, Spot +6, Treat Injury +4.

Feats: Command Codes, Voice Activated, Wetware.

Equipment: AV recorder, integrated video phone, vocalizer, robolink.

Reaper



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Cyberspawn

Manipulators: Hands.

Sensors: Class VII sensor system.

Skill Software: Language chip (one language), skill net (Computer Use 4 ranks, Listen 4 ranks, Search 4 ranks, Spot 4 ranks), skill net (Drive 4 ranks, Knowledge [civics] 4 ranks, Knowledge [current events] 4 ranks, Profession 4 ranks), skill net (Repair 4 ranks, Research 4 ranks, Sense Motive 4 ranks, Treat Injury 4 ranks).

Feat Software: Feat net (Command Codes, Voice Activated, Wetware).

Accessories: AV recorder, integrated video phone, vocalizer, robolink.

Cyberspawn (PL 8)

Cyberspawn are the remnants of an alien species. After exhausting the supply of natural resources on their home planet, the aliens, in an effort to simply survive, used psychocoders to download their personalities to a series of autonomous robots programmed to scour nearby worlds for useable resources. As time passed, the aliens grew weaker and sicker—and evermore dependent on the robots for survival—but they never curbed their mass consumption of resources. The robots had to venture farther and farther from the home planet to find useable resources. As the aliens became weaker and more desperate, they programmed each new generation of robots to be more and more aggressive. Now the latest generation, the cyberspawn, move from world to world in massive war freighters, taking whatever they want and killing anyone who gets in the way.

Purchase DC: 30.

Restriction: Illegal (+4).

Cyberspawn: CR 4; Medium-size construct; Tough 3/Dreadnought 1; HD 1d10+10 plus 3d10 plus 1d12; hp 43; Mas —; Init +4 (+2 Dex, +2 sensor system); Spd 20 ft.; Defense 22, touch 14, flat-footed 20; BAB +2; Grp +4; Atk +4 melee (1d3 nonlethal, task hand) or +4 ranged (3d8, disintegrator); FS 5 ft. by 5 ft.; Reach 5 ft.; SQ construct traits, robust, electricity resistance (+0), fearless, stability, unhindered; AL none; SV Fort +4, Ref +3, Will +2; Str 15, Dex 14, Con —, Int 12, Wis 10, Cha 5.

Starting Occupation: Military: Demolitions and Knowledge (tactics) are class skills.

Skills: Climb +4, Demolitions +4, Intimidate +3, Jump +3, Spot +4, Survival +3.

Feats: Decentralized Components, Improved Damage Threshold, Personal Firearms Proficiency, Toughness.

Equipment: AV transmitter, disintegrator (with weapon mount and spare power backpack), mechanical tool kit (basic), fragmentation grenade.

The cyberspawn has the following systems and accessories:

Frame: Biodroid.

Locomotion: Legs (2).

Manipulators: Task hand (1).

Armor: Crystal carbon armor.

Sensors: Class VIII sensor system.

Skill Software: Language chip (Cyberspawn).

Ability Upgrade: Strength +2.

Accessories: AV transmitter, weapon mount, disintegrator, spare power backpack, mechanical tool kit (basic), fragmentation grenade, vocalizer.



PAR-3



CHAPTER SIX

COMBAT

In the *d20 MODERN Roleplaying Game*, combat can become quite complicated. Particularly in action-intense games, combat might involve characters, vehicles, starships, robots, and any number of other factors all in a single scenario. The heroes might be engaged in a shootout with alien insurgents holed up in an office building while allied starships do battle with enemy fighters overhead, or two titanic mecha clash on a barren desert battlefield while combat vehicles pepper them both with distracting fire. Chances are that any science fiction game will eventually have significant crossover between the four main combat systems: characters, vehicles, mecha, and starships. When this happens, determining how exactly they cross over and what methods are used to integrate combat can be tricky. The following guidelines help Gamemasters adjudicate complex combat scenarios while still making use of all the rules.

The first step in staging a complex combat sequence is to determine which rules set will serve as the primary means of directing combat. The best way to determine this is to look at which aspects of the fight will involve the heroes. If the majority of the heroes will be on the ground, use character combat as the basis. If most heroes are in a vehicle, mecha, or starship, use the relevant rules set for the appropriate combat mode.

Alternately, you can select a method of combat based on which best serves the storytelling needs of the game; if the point of the sequence is to rescue a hostage held on the street, but all the heroes are in starships, it might be a good idea to begin the combat sequence with starship combat and then switch over to character combat. Similarly, if the scene requires a lengthy and intense chase sequence, the vehicle combat rules are much more conducive to such a scenario.

The four main methods of adjudicating combat each have one section below, with information on how to integrate the other three combat modes into the primary scene. Additionally, some sections feature special rules that can be added to the scene to enhance the tension or provide new game play options for both players and Gamemasters.

CHARACTER COMBAT

Character combat works best as the primary combat mode for scenes involving individual characters or other ground-based combatants. If the combat arena is small enough to accommodate individual characters without having to use a shifting scale, character combat usually works as the best means of running the scene.

Integrating Vehicle Combat

Vehicle combat integrates quite easily with character combat under the standard *d20 MODERN* rules. When character combat is the primary combat mode, simply treat the vehicles as you would any big creature. They take up more squares (depending on their size), have relatively fast movement rates, have Defense scores and hit points, and can be treated like regular combatants. Their hardness usually subtracts from any damage taken, so they are of course more difficult to damage. Additionally, each vehicle has a speed category that can be used in character combat. Since vehicles move very quickly, only alley or street speeds are suitable for integration into character combat. At faster speeds, the vehicle can move directly across the combat field in 1 round. This is fine, and actually makes a good obstacle (see Playing in Traffic, below).

Characters in vehicles must obey all vehicle combat rules. Characters not in vehicles must obey all character combat rules. Attacking the vehicle itself is just like attacking a fast-moving and bigger creature. Attacking characters inside a vehicle is a different story: Target the character as normal but figure in the speed modifier to Defense (depending on the character-scale speed of the vehicle) and any cover bonus provided by the vehicle.

Bombing Run

Fast-moving flying vehicles, such as airplanes, jets, and hover vehicles, can target a particular area of character-scale combat with vehicle weapons. Known as a bombing run, this allows a vehicle moving at highway speed or all-out speed to swoop in, make an attack, and continue on its path without stopping. Since this is more of a hazard than an actual combat action, determine which character or square is being targeted by the attack, make an attack roll based on the vehicle pilot's attack bonus, and deal damage as normal. A vehicle making a bombing run moves too quickly to take up any squares in combat, but requires time to loop around to get off an effective shot. Additionally, the vehicle's speed imposes a roll modifier to attack rolls, meaning the faster-moving vehicles take penalties on attack rolls. Vehicles making bombing runs can make only one attack per round, since their movement prevents the full attack action. Copilots or gunners can still make full attacks against any characters on the ground, provided they take no other actions.

Characters on the ground can target vehicles engaged in a bombing run with a single attack as they pass overhead, but only if they have readied an action to do so. The vehicle's speed provides the normal bonus to its Defense.

Playing in Traffic

One other vehicular hazard in character combat is having a vehicle barrel through the battlefield at high speed. The Gamemaster selects a straight line through the combat field equal in width to

the width of the vehicle. That round, the vehicle moves through all squares along that line, dealing collision damage as though moving at highway or all-out speed (Gamemaster's choice). Any characters in the path of the vehicle can make DC 15 Reflex saves to dive out of the way; characters who fail this save take normal collision damage as stationary objects. Additionally, if the vehicle takes damage from any character or item in its path, the damage is calculated in sequence with each object or character it hits; a vehicle charging through the battlefield can be destroyed before completing its run.

Integrating Mecha Combat

Mecha combat is very easy to integrate into character combat because the two systems are almost identical. In essence, the mecha becomes a creature of the appropriate size on the character-scale battlefield. Though mecha might be able to move farther and occupy more squares than individual characters, they are essentially very large creatures that are subject to all the character-scale combat rules. Simply treat any mecha as an oversized character or creature for the purpose of combat.

Stomping

One difference between mecha and characters is the mecha's ability to deal serious damage to a character by stepping on him. A character in a mecha can attempt to smash a character or an object beneath the mecha's foot, dealing significant crushing damage to the character. The mecha must be at least two size categories larger than its target to successfully stomp it. This maneuver is an attack action.

The mecha makes an attack roll against the character or object that is to be crushed, as normal. The target can make a Reflex save (DC 10 + the mecha's size modifier on grapple checks) to avoid this attack. Unconscious or otherwise incapacitated characters receive no saving throw to avoid this damage. Unlike normal crushing damage from falling objects or normal slam attacks, this attack puts the full weight and force of a mecha's body into smashing the target into the ground, dealing significantly more damage. The damage for differently sized mecha is listed in Table 6-1: Mecha Stomping Damage; apply 1-1/2 times the mecha's Strength bonus to this damage, as with a normal melee attack. Unlike the Mecha Crush feat, only one character or object can be targeted by stomping at a time, though a stomped character is considered pinned until the mecha moves again.

TABLE 6-1: MECHA STOMPING DAMAGE

Mecha Size	Stomping Damage
Large	2d6
Huge	2d8
Gargantuan	4d6
Colossal	4d8

Integrating Starship Combat

Putting starships into character combat is much like integrating vehicles. However, starships move much faster than vehicles at their normal tactical speeds and typically cannot be integrated into character combat except during a bombing run or orbital bombardment (see below). A stationary starship, or one that is hovering over the battlefield and moving very slowly, can fire its

weapons as normal against ground combatants and vice versa, though the size difference between the two makes it difficult for larger ships to target individual characters. In these cases, simply treat the starship as a massive flying creature for the purposes of character combat, using the same conversion methods as integrating a vehicle into character combat.

Orbital Bombardment

The orbital bombardment maneuver (or aerial bombardment for starships inside the atmosphere of a planet) is a method of attacking ground targets with the starship's massive weapons while remaining high above the planet's surface. A starship can engage in orbital bombardment by targeting an area of the battlefield as normal; since all squares have a natural Defense of 10, only range and size penalties make this difficult. If the attack roll is successful, the weapon deals its normal damage to the targeted squares and any creatures or objects therein. Characters within the targeted squares can make a DC 15 Reflex save for half damage. Additionally, missile weapons and explosives have a greater blast radius and can damage larger areas. Missiles and explosives deal normal damage to their primary targeted squares as normal, and then half damage to their secondary squares (characters in the secondary squares can also make the Reflex save described above). A starship's size determines the number of squares targeted by its weapons. Consult the table below to determine how many squares a single starship weapon targets.

TABLE 6-2:
ORBITAL BOMBARDMENT SQUARES TARGETED

Starship Size	Secondary Squares	
	Targeted Squares	(missiles or explosives)
Huge	10×10	20×20
Gargantuan	15×15	25×25
Colossal	20×20	30×30

VEHICLE COMBAT

Vehicle combat is much like character combat for slow-moving vehicles. However, when the primary mode of combat is between vehicles, the chase scale rules allow for combat that covers large areas of ground each round. Using the chase scale rules as the primary means of combat requires that other characters, mecha, and starships be converted to the vehicle rules for the duration of the chase.

Integrating Character and Mecha Combat

To integrate a characters on foot into chase-scale vehicle combat, simply determine the vehicle statistics for each individual character. All characters have a chase-scale movement based on their normal movement or their running speed (depending on whether or not the character attempts to attack while moving). Consult Table 5-13 in the *d20 MODERN Roleplaying Game* to determine the chase speed of a character based on normal character-scale movement. Characters use their own initiative modifiers, have no Maneuver modifiers, use their Dexterity scores to modify any stunt checks, and have a top speed of 4 times their base land speed.

Characters use their own Defense scores, have no hardness, and use their own hit points and size modifiers. They use the Balance or Tumble skill in the place of Drive or Pilot when performing maneuvers (whichever is more appropriate to the particular maneuver). When integrating characters into a chase in this manner, simply treat each character as its own vehicle (providing no cover) for the purpose of running the chase.

Integrating a mecha works exactly the same way as integrating a character, since mecha are simply characters in powered armor. During a chase, they use their own initiative modifiers, have Maneuver ratings equal to the mecha's Dexterity modifier, and have a top speed of 4 times their base land speed rate (or 4 times any other modes of movement, such as flight). Mecha use their own Defense scores and hardness (based on their superstructure) and use their own hit points (which are added to the pilot's). All other modifiers, such as size modifiers, function as normal, while the mecha uses its operator's Drive or Pilot check to perform maneuvers as normal.

Forced Boarding

Characters can force their way into vehicles by grabbing onto them and climbing in. Doing this requires a grapple check against the vehicle; if moving, the vehicle gains its speed modifier to Defense. The character makes a melee touch attack against the vehicle as normal, and then makes a grapple check opposed by the driver's Drive or Pilot check (whichever skill is relevant to the vehicle). If successful, the character grabs onto the vehicle and successfully grapples it. In subsequent rounds, the character can attempt to board the vehicle through a window or opening. The driver or pilot of the vehicle can attempt to break the grapple by opposing the character's grapple check with a Drive or Pilot check. Attempting to throw a character from the vehicle is an attack action, like attempting to break a normal grapple. Characters who have boarded the vehicle are no longer grappling, though characters within the vehicle can attempt to expel boarders through further grapples and bull rush attempts.

Integrating Starship Combat

Starships move much more quickly than vehicles and so have a significant edge over vehicles during chase sequences. To integrate a starship into chase-scale vehicle combat (or to use chase scale for a pursuit between two starships), simply convert the starship's stats to vehicle stats as follows. The starship uses the pilot's initiative score (modified by the ship itself) but uses its own size modifier as the Maneuver modifier. Starships have a top speed equal to 4 times their tactical speed and a chase-scale speed equal to 1/10th their top speed (for example, an assault fighter has a tactical speed of 4,000 feet, which gives it a top speed of 16,000 feet and a chase speed of 1,600 feet). All other values, including Defense, hardness, hit points, and any weapon attack or damage values, remain unchanged.

MECHA COMBAT

Since mecha are essentially very large characters (treated as suits of armor around individual characters), integrating other forms of combat into the scene requires many of the same methods used for character combat. Most mecha act as big creatures, so

they don't need many new rules to bring other elements into mecha combat.

Integrating Character and Vehicle Combat

Characters integrate into mecha combat the same way that mecha integrate into character combat. Characters and creatures are simply smaller than mecha and take up fewer squares, though all their statistical values remain unchanged.

Integrating vehicles into mecha combat is exactly the same as integrating them into character combat. Simply treat vehicles as smaller mecha, calculating all their statistics in the same way you would when integrating them into character-scale combat. Since mecha combat usually takes place over a much larger battlefield, vehicles can move at their highway and all-out speeds, though standard rules for movement and maneuvering still apply.

Integrating Starship Combat

Integrating starships into mecha combat is like integrating them into character combat. However, given the larger size of a mecha, the starship can move over the combat map with greater ease. In these cases, treat a starship as a vehicle and follow the appropriate guidelines. Most starships are much faster and larger than both vehicles and mecha. Starships have a base speed equal to their tactical speed (a standard fighter with a tactical speed of 3,500 feet can move 700 squares per round in character scale), use their own Defense and attack modifiers as normal, and generally function just like other vehicles, characters, or mecha.

STARSHIP COMBAT

Starship combat is the trickiest combat mode when it comes to integrating characters, vehicles, or mecha. Starship combat takes place primarily in space, and it's very difficult for an individual character to stand against a Colossal battleship. However, by zooming out to starship scale (where, unlike the character, vehicle, and mecha scales, each square represents 500 feet) integration becomes easier.

Integrating Character Combat

Individual characters should not be facing off against starships in the middle of a dogfight. On some occasions a character might eject from a vehicle (see EV Characters, below) or be abandoned in a space suit, but these situations are exceedingly rare. A character in space has two options: drift and hope not to get shot, or engage in combat at her own peril. The latter case really demands some form of powered armor, but even then a starship can wreak havoc on a soft human body.

EV Characters

Characters engaged in extravehicular (EV) combat act as very small starships. Since a square in starship combat represents 500 feet, more than one EV character can fit into a single square at this scale.

Likewise, starships can pass through an EV character's square as though that square were empty. Characters retain their normal



Starship sabotage

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statistics, including Defense and attack bonuses, and their movement is based on their flight capabilities. An EV character with rocket boosters or some other method of flight can move in space, though it might take several rounds to cross the 500-foot expanse of a single square. For example, a character with a flight speed of 100 feet could take a full-round action to travel 400 feet; the following round, that same character could use a move action to cross into the adjacent square (for a total movement of 500 feet) and then make an attack or perform some other action. EV characters can attack nearby starships as normal, though most character-scale weapons do not have the capability to accurately strike any target more than a single square away.

Forced Boarding

Characters who attach themselves to starships in combat can attempt to force their way aboard similar to the method for boarding a vehicle. If the starship is moving and the character is EV, the character can attempt to grapple a starship moving through his square. The character makes a touch attack against the starship, though a pilot who is aware of the EV character can oppose this touch attack with a Pilot check. If the character succeeds in the touch attack, the opposed grapple check occurs as normal (using the starship's grapple modifier to oppose that of the character). Once the character has successfully grappled the ship, he can attempt to cut his way in or perform other actions on the surface of the ship. Particularly large ships might send out drones or crewmembers to dislodge a grappling character, in which case combat occurs on the surface of the ship at character scale.

One alternative to randomly trying to grab onto a passing starship is attempting a forced entry against a starship grappled by another ship. Pirates often use this technique. The attacking ship must successfully grapple the target ship. If the grapple is successful, each round a single crewmember can move across the grappling mechanism to the surface of the targeted ship, grappling it unopposed. Each round the targeted ship can attempt to break free of the grappling ship, though until it does so invaders can cross over the grappling mechanism to board the ship. Characters who attach themselves to the hull of a captured ship in this manner then behave exactly as EV characters would. Mecha with space skin (page 166 of *d20 Future*) can also grapple a starship in this manner, though once the pilot leaves the mecha and boards the target ship, the mecha ceases to function.

Integrating Vehicle and Mecha Combat

Vehicles and mecha integrate more smoothly into starship combat due to their increased durability and more powerful weapons. In essence, vehicles and mecha take on starship statistics for the purpose of combat against starships, and move and behave exactly as

starships would. Since most vehicles and many mecha are smaller than most starships, multiple vehicles or mecha can occupy the same square; only mecha that are larger than 500 feet in length or height occupy the entire square. The following rules indicate how to convert a vehicle or mecha into starship statistics:

Type: Typically ultralight for vehicles; varies for mecha.

Size: The vehicle or mecha's size.

Subtype: Vehicle or mecha.

Length: The vehicle or mecha's length.

Weight: The vehicle or mecha's weight.

Tactical Speed: The vehicle or mecha's normal character-scale speed (divide by 500, rounded down, for squares of space movement).

Defense: The vehicle or mecha's Defense score, including the driver or pilot's class Defense bonus and Dexterity bonus.

Flat-Footed: Same as Defense, excluding driver or pilot's Dexterity bonus.

Autopilot Defense: Defense bonus on autopilot, if any (most mecha and vehicles do not have such a system).

Crew: 1 (driver or operator), plus any copilots.

Passenger Capacity: As the vehicle or mecha.

Cargo Capacity: As the vehicle or mecha.

Hardness: As the vehicle or mecha (based on the mecha's superstructure).

Hit Dice: Vehicle or mecha hp, divided by 20, rounded up.

Initiative Modifier: Same as vehicle or mecha's Initiative, including driver or operator's initiative bonus.

Pilot's Class Bonus: Driver or operator's class bonus to Defense.

Pilot's Dex Modifier: Driver or operator's Dexterity modifier.

Grapple Modifier: +0 (Medium) or +4 (Large) or +8 (Huge) or +12 (Gargantuan) or +16 (Colossal).

Gunner's Attack Bonus: Copilot or gunner's attack bonus.

Targeting System Bonus: None, unless the vehicle or mecha has a targeting system.

Attacks: The vehicle or mecha's normal attacks.

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