d20 MODERN™

d20 FUTURE™



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d20 FUTURE™



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d20 MODERN™

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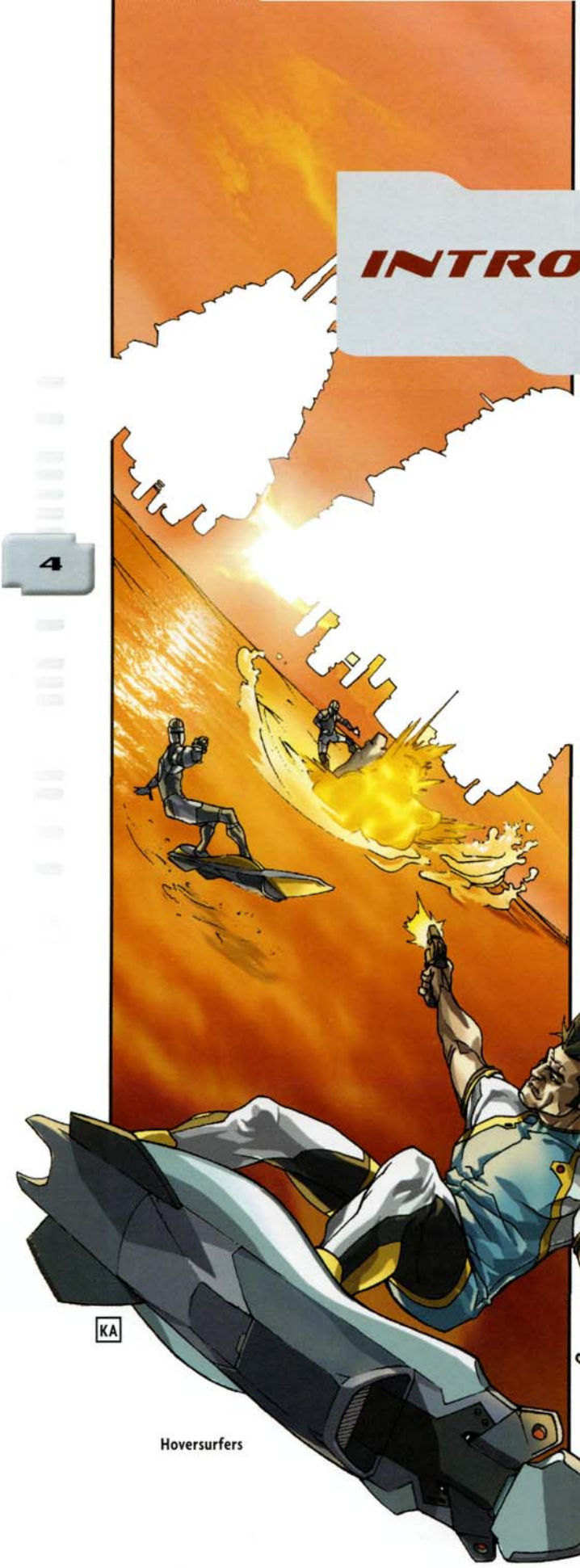
INTRODUCTION



Hoversurfers

Invaders from another dimension seek to enslave or eradicate humanity. A distant star holds the promise of Earth's first contact with an extraterrestrial civilization. Survivors of an apocalypse use mutations or psionic powers to survive in New York City. These are but a few of futuristic campaigns waiting to unfold! With this book, you have the means to create futuristic characters, adventures, and campaigns based on your favorite science fiction genres. Just as the *d20 Modern Roleplaying Game* provides rules for running characters and campaigns set in the modern day, *d20 Future* provides the rules to make any futuristic character or campaign a reality.

WHAT YOU NEED TO PLAY

This product requires the *d20 Modern Roleplaying Game* and uses the *d20 Modern* rules for character creation and advancement, combat, and monster design. You must have the *d20 Modern Roleplaying Game* to use *d20 Future* properly. *d20 Future* offers additional rules needed to create futuristic characters and futuristic campaigns.

WHAT IS D20 FUTURE?

This book takes the basic rules of the *d20 Modern Roleplaying Game* and expands on them. In addition to providing new options for futuristic characters, it includes a series of attachable and detachable "rules modules" covering such topics as space travel, mutations, dimensional travel, and xenobiology (the study of alien life forms). Not every futuristic campaign will incorporate every rules module presented in this book; for example, a campaign set on post-apocalyptic Earth may not require the space travel rules, but may include the mecha or mutations rules. This book is designed so that Gamemasters (GMs) can choose which rules modules are needed for his or her campaign and which options (feats, starting occupations, advanced classes, weapons, and equipment) players can choose from as they create their characters.

Chapter One: Characters provides new starting occupations, feats, and advanced classes for characters of the *future—any future.*

Chapter Two: Campaigns presents several quick, ready-to-play campaign settings set in the near or distant future. Each campaign setting provides the GM with guidance on which *d20 Future* rules modules to use, what level of technology is present and available, and what types of adventures are appropriate for the setting. Furthermore, the campaign settings describe unique options for characters, including advanced classes specific to those campaigns.

Chapter Three: Gear describes futuristic technology available to characters, organized by Progress Level so that GMs

and players know what gear is available based on the technology level of the campaign.

Chapter Four: Environments offers rules for exploring hostile planets and other settings, covering everything from zero-g combat to radiation sickness.

Chapter Five: Scientific Engineering covers a broad range of subjects including nanotechnology, genetic manipulation, and cloning.

Chapter Six: Traveler Science discusses the nature of space travel—both realistic and fantastic—as well as dimensional travel, teleportation, and time travel.

Chapter Seven: Starships presents starships of various sizes and includes rules for starship combat and construction.

Chapter Eight: Vehicles presents statistics for futuristic civilian and military vehicles.

Chapter Nine: Mecha provides rules for building an arming mechanical juggernauts called mecha, as well as several pre-built mecha ready for battle.

Chapter Ten: Robotics presents rules and equipment for robots and robotic heroes, including androids and bioreplicas.

Chapter Eleven: Cybernetics presents rules for building cyborgs and equipping characters with cybernetic attachments. It also discusses the benefits and ramifications of installing cybernetic hardware on biological organisms.

Chapter Twelve: Mutations provides rules for handling genetic, radioactive, and natural mutations, including powers for mutant characters.

Chapter Thirteen: Xenobiology contains rules for creating extraterrestrial and space-dwelling monsters and introduces eight nonhuman species that can be played as heroic characters.

PROGRESS LEVELS

Simply put, a Progress Level (PL) is an indication of the state of technology that exists in a particular society or civilization (which, in a science fiction setting, may be located on a planet other than Earth). This state of technological development generally pervades all aspects of a culture, particularly at higher levels (PL 5 and beyond) when long-range communication is virtually instantaneous. Even at lower levels, it's unlikely—but not impossible—for a group of humans (or other sentient beings) to be at one Progress Level in some respects and at another one in other respects.

Progress Level may vary wildly from place to place on the same world or even the same continent. Consider the early 20th-century explorers who finally penetrated the deepest reaches of the Congo or the Amazon jungle, encountering native tribes who still used Stone Age technology. In any science fiction or futuristic setting involving exploration, heroes may discover entire planets locked in their own Stone Age, Bronze Age, or Middle Ages periods, despite the high level of technology that characterizes the civilization from which the heroes originated.

PL 0: STONE AGE

The major achievements of a Stone Age society are the use of fire, the domestication of animals, and the invention of agriculture. An individual living in a Stone Age society is primitive, but he isn't necessarily gullible, stupid, or easily frightened by advanced technology.

Common weapons in a PL 0 civilization include the club, the dagger, the spear, and the bow. Armor made from hide or leather is possible, as are wicker shields. Communication beyond the local tribe or settlement doesn't exist. Travel is accomplished by foot or by simple rafts or canoes. Simple pottery, stoneworking, and woodworking are possible..

PL 1: BRONZE/IRON AGE

Early human civilizations began to work metal toward the end of the Stone Age. The malleability of copper led to its becoming the first metal to be "tamed." Adding tin to copper created a much stronger alloy: bronze. This advance allowed for the crafting of tools and weapons of great durability. In turn, those improved tools made possible the working of iron, which soon replaced bronze as the metal of choice for tools and weapons.

In a Bronze/Iron Age society, advances in pottery, construction, and agriculture allow for the concentration of populations into larger and larger groups, with a corresponding upswing in the accumulation and sharing of knowledge. The rise of nations, city-states, and empires begins in the Bronze Age. Organized efforts to improve communications allow regional societies to exist. Galleys and small sailing vessels are capable of relatively long voyages, and some cultures may build extensive road or canal networks to link distant places. Improvements in agricultural efficiency permit the rise of artisans, craftsmen, professional soldiers, and other occupations that are not directly concerned with gathering food.

The sword replaces the club and the dagger as the preferred weapon of infantry. Chariots briefly dominate warfare before cavalry (aided by the introduction of the stirrup) renders chariots obsolete. The first true military forces or tactical systems appear. Armor can now be made from sewn plates or scales, metal links, or even forged breastplates, and a variety of metal melee weapons dominate the battlefield.

PL 2: MIDDLE AGES

Maturing civilizations experience a period of turmoil and adjustment at this Progress Level. Developments continue in architecture, commerce, metallurgy, and mathematics. Wider dissemination of information becomes possible thanks to more advanced printing techniques. Sea communications dominate in the later part of this stage of development, and sturdy seafaring carracks and galleons open the door to the next Progress Level.

PURCHASING ITEMS OF LOWER OR HIGHER PROGRESS LEVEL

Progress Levels are relative, and depending on the economics of a campaign, a GM may choose to make certain items of a higher or lower Progress Level unavailable, cheaper, or more expensive to purchase. For example, a PL 5 weapon purchased in the PL 5 society would have its normal purchase DC; however, that same item sold in a PL 6 society could be cheaper (it's an older, inferior design), more expensive (it's a rare item), or unavailable (it hasn't been invented yet).

For the sake of game balance, GMs who want to make lower-PL and higher-PL items available to characters should adjust the purchase DCs of items as follows.

- –2 to Purchase DC for each Progress Level lower than the current Progress Level, except in the case of valuable antiques.
- +5 to Purchase DC for equipment from the next highest Progress Level (the limit for purchasing cutting-edge technology).

Examples: In a PL 7 setting, PL 5 equipment would carry a –4 modifier to the Purchase DC. In the same PL 7 setting, PL 8 equipment would carry a +5 modifier. Progress Level 9 equipment would be out of reach, however (except with the express permission of the GM); it simply hasn't been invented yet.

As populations increase and knowledge of agriculture evolves, an increasing percentage of the population relocates into growing cities and towns. Toward the end of this Progress Level, the feudal system, in which a small class of nobles ruled a large population of agricultural workers, begins to collapse. Specialized crafts develop, universities appear, and the middle class is born. The first corporations emerge in the form of trade guilds. The evolution of strong systems of trade and finance tends to distribute a society's wealth more evenly among its members, diluting the power of the nobility.

Tools of warfare undergo a significant revolution. Sophisticated chain and plate armors protect warriors from harm, and elaborate fortifications become something of an art form. Toward the end of the Middle Ages, the introduction of simple gunpowder weapons signals the imminent end of knights, heavy armor, and organized armies of swordsmen.

PL 3: AGE OF REASON

The Age of Reason is an era in human history when the development of ideas and systems of thought takes precedence over technological invention. The scientific method improves humankind's understanding of the world. Experimentation becomes the means by which the physical properties of nature are systematically examined. The study of the various scientific disciplines—chemistry, electromagnetics, medicine, biology, and astronomy—flourishes. Instruments such as microscopes and telescopes enable scientists to greatly extend the range of their observations and discoveries.

The new reliance on science generates waves on all levels of society. Superstition falls away, and exploration of the world reaches its apex. Society begins to experiment with new forms of organization, such as democracy. Corporations and economic alliances continue to evolve. Economically, this Progress Level is a transition from the cottage industries of the Middle Ages to industrialization.

The cannon becomes the dominant factor in naval warfare, while massed musket fire and horse-pulled field pieces rule the battlefield. Even the reliable bow vanishes, replaced by the flintlock. Light melee weapons remain common.

PL 4: INDUSTRIAL AGE

In the fourth Progress Level, the theoretical knowledge of the previous era matures into widespread practical application. The harnessing of hydraulic, steam, and electric power creates an explosion of commerce and industry. Developments such as the telegraph, the telephone, and the radio make true global communication possible. Breakthroughs in manufacturing techniques allow the construction of heavy ironclad vessels, rail transportation, and architecture of previously unimaginable size. Pioneers venture high into the atmosphere and descend into the sea's depths.

Urbanization is complete as individuals gather in smaller environments where they can more easily exchange goods and information. Corporations expand in power, many establishing themselves throughout the explored world. Governments are based on political and economic factors.

The means of war change swiftly through the period. Aircraft and submersibles join the list of military assets. Reliable and accurate rifles, pistols, and machine guns become common. Mechanized war machines herald the first great change in the art of battle since the end of the knight.

LOW PROGRESS LEVELS IN THE FUTURE

Most *d20 Modern* campaigns are set at Progress Level 5. Consequently, campaigns set in Earth's future typically feature societies with access to Progress Level 6 technology or higher. However, characters in a futuristic setting may still encounter technologically backward societies, possibly through the exploration of time travel, a journey to another world, or some other plot device. For this reason, the lower Progress Levels are included here.

PL 5: INFORMATION AGE

The Industrial Age relied on chemical power, but in the Information Age, computer technology and electronics rule supreme. Satellite information systems and the Internet connect the globe digitally. This Progress Level also sees the introduction of fission power and weapons reducing the importance of fossil fuels. The automobile replaces the locomotive as the common form of travel. The first steps toward space travel involve massive chemical rockets, unmanned probes and satellites, and short-term manned missions.

The technology of the era allows greater citizen participation in government. The emergence of international alliances begins to dissolve borders between nations. Corporations gather power and begin to threaten government authority. Technology has a greater effect on individual lifestyles than on society as a whole.

Most weapons at this time are refined versions of Industrial Age equipment. Rifles, machine guns, and heavy howitzers are still used by the world's soldiers. Computerized targeting systems and guided weapons make warfare much more precise and efficient. Strategic weapons, tested but never used, exhibit the species' power to exterminate itself in minutes.

Humanity experienced its Information Age as anxious years full of minor crises. The tension gradually alleviates through the age, and as the era ends new superpowers form.

PL 6: FUSION AGE

The development of fusion power provides an efficient, nonexpendable energy source that almost obliterates the need for chemical fuel sources. Advanced space exploration and colonization become possible. Computers become even more accessible, reliable, and powerful, leading to the development of virtual systems and widespread access to the global Internet.

Slowly, society experiences another revolution as individual nations are replaced by world powers. Megacorporations number among these new superpowers as the line between the national citizen and corporate employee is rendered indistinct. Armed with the means to eradicate the entire species, the world powers keep conflicts to the level of skirmishing and posturing, and integration of the Information Age's improvements proceed peacefully.

Scientific advanced in genetic engineering lead to artificial evolution and the first government- and corporate-sanctioned attempts to genetically manipulate human beings. Early results are encouraging, with the manifestation of positive and negative mutations in the species toward the end of the age. Scientists also perfect cloning technology, and the first human clones are created.

In the later years of this age, the first crude applications of gravity induction technology appear, in the form of civilian and military vehicles that can move through the air without using physical propulsion or consumption of fuel.

Chemical-powered explosives and firearms remain the weapons of choice; fusion technology can't be effectively miniaturized for personal combat. Nevertheless, advanced chemistry and superconducting technology change the materials and capabilities of many weapons. True spaceships become possible, propelled by powerful fusion drives, but still require a reaction mass to traverse space.



The age sees the tenuous settlement of other planets and asteroids within the same star system.

PL 7: GRAVITY AGE

As this Progress Level opens, the invention of two key technologies herald humanity's climb to the stars. The gravity induction reactor systematically replaces fusion power as an even more efficient source of energy that can be miniaturized with great ease. With the use of the mass reactor, world powers explore, divide, and colonize the entirety of the local star system. For the most part, life on the home planet is unchanged.

The second advance of the era brings perhaps the greatest upheaval in the history of human civilization. The introduction and integration of gravity induction technology leads to the creation of the induction engine, which allows starships to bridge the gap between the stars. Political and economic reorganization occurs as the species spreads far from home.

Projectile firearms are in their last days, as crude energy weapons become available. Powered armor is available to warriors of this age. Personal (melee) weapons enjoy a resurgence, due in large part to a shift in military tactics—armed conflict between individuals seldom occurs on an army scale, but more frequently involves engagements of small units in conditions when ranged weapons are not necessarily effective.

Computer technology links every society, settlement, and outpost of a star system in a single information net, creating an unparalleled and expedient exchange of knowledge and data for business, entertainment, and research.

PL 8: ENERGY AGE

The continuing miniaturization of induction engine technology allows power plants the size of marbles to harness the basic forces of creation. Powerful personal force screens and energy weapons dominate the battlefield, as projectile weapons finally disappear after ruling the battlefield for a thousand years. Miniaturized sensors, shields, and engines allow mass production of small, practical starfighters. At the other end of the spectrum, advanced construction techniques allow humans to build enormous, self-sustaining cities in space.

PL 9 AND HIGHER

Generally, these Progress Levels are beyond reach or comprehension, although isolated worlds or undiscovered species may exist that have access to them. In many cases, the signature technologies of an earlier age are abandoned in favor of more elegant and more powerful technologies.

Practical control of matter at the subatomic level, the ability to travel through time, or the power to "fold space" to shorten travel distances may be possible at this stage of technological development.

GRAVITY INDUCTION

Control of gravity is one of the key features of Progress Level 7. The development of gravitonic science and gravitonic engineering leads to a host of miraculous devices: levitating cars, interplanetary drives that require no reaction mass, and a wide range of military tools. Just as the application of electricity was spurred by the discovery of the induction principle, the creation of devices that induce gravitational energy leads to an effective control over weight.

Gravity induction relies on the phenomenon first set forth in Einstein's Theory of Special Relativity: An object's mass approaches infinity as the object's velocity approaches the speed of light. By using a cyclotron to accelerate a tiny particle to near-light speed, the gravity generator creates gravitons between the particle and the surrounding mass. These gravitons can be siphoned off, redirected, or stored by use of the induction coil.

At PL 7, gravity inducers can be miniaturized to the size of hockey pucks for special applications. An inducer powerful enough to negate a human's gravitational attraction to the Earth is about the size of a discus, while the induction motor in a flying car requires a gravity generator about the size of a spare tire.

CHAPTER ONE:

CHARACTERS



The rules for creating and advancing characters in *d20 Future* appear in the *d20 Modern Roleplaying Game*. Simply put, the rules are the same. This chapter provides new starting occupations, feats, and advanced classes suitable for *d20 Future* campaign settings.

If you are a *d20 Future* player, discuss your character concept with the Gamemaster (GM) before choosing any of the options presented here. If your GM has a specific *d20 Future* campaign in mind, some of the options presented in this chapter may be inappropriate or unavailable. For example, there's no point giving your character the Cybernetic Surgery feat if the GM doesn't intend to include cybernetics in his or her campaign. Only with your GM's assistance can you build a character that fits into the campaign and is fun to play.

STARTING OCCUPATIONS

All the starting occupations described in the *d20 Modern Roleplaying Game* are available to *d20 Future* characters, with the GM's permission. Here are several new starting occupations appropriate for futuristic campaigns.

ASTRONAUT TRAINEE

As scientists and pioneers, astronaut trainees have prepared their minds and bodies for the rigors of space travel and life in space. They are elite members of a sophisticated space program, waiting for the opportunity to hurl themselves into the void to advance humanity's understanding of science and shed light on the mysteries of the universe.

Prerequisite: Age 21+.

Skills: Choose two of the following skills as permanent class skills. If a skill you select is already a class skill, you gain a +1 competence bonus on checks using that skill.

Computer Use (Int), Craft (electronic, mechanical, or pharmaceutical) (Int), Knowledge (earth and life sciences, physical sciences, or technology) (Int), Navigate (Int), Pilot (Dex), Repair (Int), Survival (Wis).

Bonus Feat: Select either Aircraft Operation (spacecraft) or Zero-G Training*.

** Indicates a feat described in this chapter.*

Wealth Bonus Increase: +1.

COLONIST

Colonists are wayfaring pioneers who set the foundations of new societies on far-flung continents, planets, or moons. To survive in their new surroundings, they learn to live off the land

and defend themselves against indigenous predatory life forms and hostile forces of nature.

Prerequisite: Age 15+.

Skills: Choose two of the following skills as permanent class skills. If a skill you select is already a class skill, you gain a +1 competence bonus on checks using that skill.

Computer Use (Int), Craft (electronic, mechanical, or structural) (Int), Knowledge (earth and life sciences or physical sciences) (Int), Navigate (Int), Repair (Int), Survival (Wis).

Bonus Feat: Select Builder, Guide, or Planetary Adaptation*.

** Indicates a feat described in this chapter.*

Wealth Bonus Increase: +1.

DRIFTER

Drifters are aimless wanderers and worldwise jacks-of-all-trades who move between cities or star systems, working odd jobs until boredom or fate leads them elsewhere. Along the way, they learn strange customs and pick up interesting and diverse skills.

Prerequisite: Age 15+.

Skills: Choose three of the following skills as permanent class skills. If a skill you select is already a class skill, you gain a +1 competence bonus on checks using that skill.

Bluff (Cha), Decipher Script (Int), Disable Device (Int), Disguise (Cha), Forgery (Int), Gamble (Wis), Gather Information (Cha), Hide (Dex), Knowledge (streetwise) (Int), Navigate (Int), Sleight of Hand (Dex).

Wealth Bonus Increase: +2.

GLADIATOR

Gladiators have been fighting all their lives, whether on the streets or in some form of arena. They include disenchanted youths and poverty-stricken hoodlums looking to trade fists for cash, clones bred in secret labs to fight from birth, and low-ranking members of a society's warrior caste.

Prerequisite: Age 18+.

Skills: Choose one of the following skills as a permanent class skill. If a skill you select is already a class skill, you gain a +1 competence bonus on checks using that skill.

Balance (Dex), Intimidate (Cha), Knowledge (streetwise) (Int), Tumble (Dex).

Bonus Feat: Select either Brawl or Combat Martial Arts.

Wealth Bonus Increase: +1.

HEIR

Heirs are the elite sons and daughters of powerful magnates, influential nobles, and imperial monarchs. Unlike dilettantes, however, they are bound by their lineage to certain responsibilities, with the assumption that they might someday rise to lead their families into the future . . . assuming the stars are properly aligned and they do nothing to jeopardize their birthright.

Prerequisite: Age 21+.

Skills: Choose two of the following skills as permanent class skills. If a skill you select is already a class skill, you gain a +1 competence bonus on checks using that skill.

Craft (visual art or writing) (Int), Knowledge (art, business, civics, current events, or history) (Int), Perform (act, dance, keyboards, percussion instruments, sing, stringed instruments, or wind instruments) (Cha), Ride (Dex), Sense Motive (Wis).

Pre-Selected Feat: An heir must choose the Educated feat as one of her starting feats at 1st level.

Reputation Bonus Increase: +1.

Wealth Bonus Increase: +6. An heir may permanently reduce her Reputation bonus by 1 to increase her starting wealth bonus by an additional +1d6; this expenditure must be made before the character begins play. As long as her Reputation bonus is +1 or higher, an heir's wealth bonus can never drop below 10.

OUTCAST

"Outcast" is not so much an occupation as a forced way of life. Persecuted and exiled for being different, outcasts are lone pariahs or shunned members of a culture whose customs or characteristics society finds deviant or abhorrent. Outcasts lurk on the fringes of civilization. Some strive for acceptance, while others are trapped by their own feelings of resentment, self-loathing, or hopelessness.

Prerequisites: Age 15+.

Skills: Choose one of the following skills as a permanent class skill. If a skill you select is already a class skill, you gain a +1 competence bonus on checks using that skill.

Disguise (Cha), Hide (Dex), Knowledge (streetwise) (Int), Search (Int), Survival (Wis), Treat Injury (Wis).

Bonus Feat: Toughness.

Wealth Bonus Increase: +1.

SCAVENGER

Scavengers turn society's wreckage and discarded trash into useful tools or items for trade, and if they're lucky, their endeavors might even yield one or two objects of special value. They effortlessly navigate and strip clean the most treacherous places, and their playgrounds are abandoned space stations, gutted buildings, and smoking battlefields.

Prerequisites: Age 15+.

Skills: Choose three of the following skills as permanent class skills. If a skill you select is already a class skill, you gain a +1 competence bonus on checks using that skill.

Decipher Script (Int), Disable Device (Int), Knowledge (technology) (Int), Move Silently (Dex), Repair (Int), Search (Int), Spot (Wis), Survival (Wis).

Wealth Bonus Increase: +2.

TRANSPORTER

Skilled drivers and pilots, transporters move people, information, and precious cargo safely from one destination to another. They treat their vehicles as extensions of their bodies and are most comfortable behind the wheels of skycabs or the thruster controls of cargo shuttles.

Prerequisite: Age 18+.

Skills: Choose two of the following skills as permanent class skills. If a skill you select is already a class skill, you gain a +1 competence bonus on checks using that skill.

Craft (mechanical) (Int), Drive (Dex), Knowledge (current events, popular culture, or streetwise) (Int), Navigate (Int), Pilot (Dex), Repair (Int).

Bonus Feat: Select either Spacer* or Vehicle Expert.

** Indicates a feat described in this chapter.*

Wealth Bonus Increase: +1.

EXPANDED SKILLS

The following skills in the *d20 Modern Roleplaying Game* are expanded to include rules specific to *d20 Future* campaigns.

BLUFF (CHA)

You can use the Bluff skill to feint in starship combat.

Check: With a successful Bluff check, you mislead another starship so that it can't dodge your attack effectively. This check is opposed by the target pilot's Sense Motive check. If you succeed, the next attack your starship makes against the target ignores its pilot's Dexterity bonus to Defense (if it has one), thus lowering the target's Defense score.

You cannot use this tactic against a starship that's flying on autopilot. Using Bluff as a feint in starship combat is an attack action.

Special: If you have the Starship Feint feat, you gain a +2 bonus on Bluff checks when using the skill to feint in starship combat.

COMPUTER USE (INT)

In addition to all the uses described in the *d20 Modern Roleplaying Game*, this skill can be used to operate shipboard sensors as well as send, jam, scramble, and unscramble transmissions sent through space or across dimensions.

Check: The following applications of the Computer Use skill can be used untrained:

Conduct Active Sensor Scan: Using a starship's sensors to analyze another ship or object in sensory range requires a Computer Use check (DC 15). An active sensor scan conducted over a vast distance (for example, across a star system) or subjected to some form of disturbance (such as interference from a solar flare) applies a –5 or higher penalty on the check, at the GM's discretion.

Send Transmission: Routine communications (hailing a nearby ship, using a subspace or dimensional transceiver, and so on) are accomplished with a Computer Use check (DC 10). Communications sent over incredibly long distances (such as between star systems) are subject to distortion; correcting that distortion to ensure a message reaches its intended destination requires a successful Computer Use check (DC 20).

The following applications of the Computer Use skill can't be used untrained:

Jam Transmission: This skill can be used to prevent a ship or facility from receiving an incoming transmission. An opposed Computer Use check between the individual receiving the message and the individual attempting to jam the message determines whether or not the message gets through. If an unmanned computer receives the transmission, jamming the transmission requires a Computer Use check (DC 15).

Scramble/Unscramble Transmission: Computer Use can be used to scramble a transmission. This is done with an opposed Computer Use check between the individual sending the message and anyone attempting to intercept or unscramble it.

Time: Scrambling or unscrambling a transmission are all full-round actions. Conducting an active sensor scan or sending/jamming a transmission is a move action.

DISABLE DEVICE (INT)

You can use this skill to disable a robot or external cybernetic attachment.

Check: Disabling a robot is a full-round action and requires a successful Disable Device check (DC 30). The robot must be pinned (see page 153 of the *d20 Modern Roleplaying Game*) before the check can be made.

Disabling an external cybernetic attachment is a full-round action and requires a successful Disable Device check (DC 30). The creature to which the cybernetic unit is attached must be pinned before the check can be made. You cannot disable internal cybernetic attachments.

Special: A disabled robot or disabled external cybernetic attachment can be re-enabled with a successful Repair check (see Repair, below).

KNOWLEDGE (TECHNOLOGY) (INT)

You can make a Knowledge (technology) check to correctly identify starships, mecha, robots, and cybernetic attachments, as well as identify unfamiliar technological devices.

Check: The DCs for identifying technological items vary depending on the type of information required:

Identifying a starship by its type and subtype, identifying a mecha by its superstructure, or identifying a robot by its frame: DC 10.

Determining the function or purpose of a particular mechanical system or cybernetic attachment: DC 15.

Recalling the standard, factory-model design specs of a particular type or class of starship, mecha, or robot: DC 20.

When confronted with an unfamiliar piece of technology or alien artifact, you can make a Knowledge (technology) check to correctly surmise the primary (if not singular) purpose of the device. A successful check result does not enable you to activate the item, nor does it make you proficient with the item. The DC of the Knowledge (technology) check depends on the item being identified and the difference in Progress Level, as shown below:

Unfamiliar Item	DC
Basic tool or instrument	10
Robotic or vehicular component	15
Cybernetic attachment	20
Alien weapon or nanotechnology	25
Alien artifact	30
Each step in Progress Level (up or down)	+5

NAVIGATE (INT)

In a *d20 Future* campaign that features space travel or dimensional travel, you can use the Navigate skill to plot a course between planets, star systems, or dimensions.

Check: The rules for plotting a course over a great distance work as described in the Navigate skill description (see page 68 of the *d20 Modern Roleplaying Game*). Aboard a starship, you need a functional Class II sensor array (or better) to plot a course through space. You don't need to make a Navigate check when traveling along a pre-established space route or passing through a dimension gate with a pre-calibrated destination.

Rules for calibrating dimension gates to a familiar or unfamiliar destination are covered in Chapter Six: Traveler Science.

Time: Plotting a course is a full-round action.

PILOT (DEX)

You can use the Pilot skill to fly any kind of spacecraft.

Check: Unless you have the Starship Operation feat (page 14), you take a –4 penalty on Pilot checks made to pilot a starship.

The pilot of a starship can make a Pilot check to escape after being held or immobilized by another starship's grapplers or tractor beam; see Grappling Systems (page 143) for more information on grapplers and tractor beams.

Special: For modern-day (PL 5) spacecraft such as the space shuttle, the Aircraft Operation (spacecraft) is sufficient to negate the –4 penalty on Pilot checks; however, this feat cannot negate the penalty as it applies to PL 6 or higher spacecraft.

REPAIR (INT)

You can use this skill to repair vehicles, starships, mecha, cybernetic attachments, and constructs (including robots). You can also use the Repair skill to safely remove the "brain" of a destroyed robot.

Check: Repairing damage to a vehicle, starship, or mecha takes 1 hour of work, a mechanical tool kit, and a proper facility such as a workshop or hangar bay. (Without a tool kit, you take a –4 penalty on your Repair check.) At the end of the hour, make a Repair check (DC 20). Success repairs 2d6 points of damage. If damage remains, you may continue to make repairs for as many hours as it takes to restore the vehicle or starship to full hit points.

The same rules apply to robots, other constructs, and cybernetic attachments, except that each successful application of the Repair skill restores 1d10 points of damage (instead of 2d6), and the Repair check is more difficult to achieve (DC 30).

This skill may also be used to transplant the "brain" of a destroyed robot into a similar but intact robot frame. See the Robot Resurrection sidebar on page 177 for more information on robotic brain transplants.

Special: A vehicle, starship, cybernetic attachment, mecha, robot, or other construct that is reduced to 0 hp cannot be repaired. It can be salvaged for parts, however (see the Salvage feat description on page 13).

TREAT INJURY (WIS)

This skill can be used to treat members of other species, provided they are neither constructs nor undead.

Check: For all uses of this skill except surgery, the skill check's DCs are as written in the *d20 Modern Roleplaying Game*.

Performing surgery on creatures of a type different from your own carries a –8 penalty. For example, the penalty would apply to a human (type: humanoid) performing surgery on a vrusk (type: aberration). The Surgery feat reduces the penalty to –4, while the Xenomedic feat (see page 15) negates the penalty entirely.

Special: The Treat Injury skill cannot be used on nonliving or inorganic creatures, such as constructs or undead.

FEATS

A *d20 Future* character has access to all the feats described in the *d20 Modern Roleplaying Game* plus the following additional feats:

ACTION BOOST

You have the ability to alter your luck drastically in dire circumstances.

Benefit: When you spend an action point, you roll d8s instead of d6s for the action result.

ALIEN WEAPONS PROFICIENCY

You are proficient with alien weapons.

Benefit: You take no penalty on attack rolls when using any kind of alien weapon.

Special: A creature without this feat takes a –4 nonproficient penalty when making attacks with an alien weapon.

ARMOR PROFICIENCY (POWERED)

You are proficient with powered armor.

Prerequisites: Armor Proficiency (light), Armor Proficiency (medium).

Benefit: When you wear powered armor, you may add the armor's entire equipment bonus to your Defense.

Normal: A character not proficient with powered armor adds only a portion of the armor's equipment bonus to her Defense.

Special: A Soldier (see Chapter Six: Advanced Classes in the *d20 Modern Roleplaying Game*) may select this feat as one of his bonus feats.

CHARISMATIC PLUS

Advancements in science coupled with your drive to excel enable you to progress faster toward becoming a truly charismatic hero.

Benefit: You gain two talents from the Charismatic hero's talent trees. The talents must be selected from the following list, you cannot select more than one talent from a single talent tree, and you must meet all the prerequisites of a talent to select it.

Favor, Captivate, Dazzle, Taunt, Inspiration, Greater Inspiration.

Special: You may select this feat multiple times. Each time you select this feat, you must choose a different pair of talents.



Repair Skill

CRAFT CYBERNETICS

You can construct cybernetic attachments.

Prerequisites: Craft (electrical) 10 ranks, Craft (mechanical) 10 ranks, Knowledge (life sciences) 5 ranks.

Benefits: You can build any of the cybernetic attachments described in Chapter Eleven: Cybernetics. You must first make a Wealth check against the purchase DC of the attachment (to acquire the necessary components), then invest 24 hours in its construction. At the end of that time, you must succeed at a Craft (mechanical) check (DC 30) and a Craft (electrical) check (DC 30).

If both Craft checks succeed, the cybernetic attachment functions properly and can be installed at any time (see the Cybernetic Surgery feat, below). If either or both checks fail, the attachment's design is flawed; another 24 hours must be spent fixing the problems, and two new checks must be made at the end of that time.

Special: This feat does not allow you to build a cybernetic attachment of a higher Progress Level.

CYBERNETIC SURGERY

You can graft cybernetic attachments onto living tissue as well as safely remove them.

Prerequisites: Treat Injury 8 ranks, Surgery.

Benefit: You can make a Treat Injury check (DC 20) to install or remove a cybernetic attachment. If you do not have a surgery kit or access to a medical facility, you take a –4 penalty on the check. Cybernetic surgery takes 1d4 hours.

The consequences of failure are severe: If your check result fails by 5 or more, the installation or removal of the cybernetic attachment causes undue physical trauma to the patient, who suffers 1d4 points of Constitution damage. If the check result fails by 10 or more, the Constitution damage is treated as Constitution drain instead.

A character who undergoes cybernetic surgery (successful or not) is fatigued for 24 hours. Reduce this time by 2 hours for every point above the DC the surgeon achieves. The period of fatigue can never be reduced below 6 hours in this fashion.

Normal: Characters without this feat take a –8 penalty on Treat Injury checks made to perform cybernetic surgery (–4 penalty if they have the Surgery feat).

CYBERTAKER

You can have more cybernetic attachments than normal without suffering ill effects.

Benefit: The maximum number of cybernetic attachments you can have without suffering negative levels increases by 1 (see Number of Attachments, page 193, for details).

Special: You can gain this feat multiple times. Its effects stack.

DEDICATED PLUS

Advancements in science coupled with your drive to excel enable you to progress faster toward becoming a truly dedicated hero.

Benefit: You gain two talents from the Dedicated hero's talent trees. The talents must be selected from the following list, you cannot select more than one talent from a single talent tree, and you must meet all the prerequisites of a talent to select it.

Improved Aid Another, Intuition, Healing Touch 1, Healing Touch 2, Aware, Faith, Cool Under Pressure.

Special: You may select this feat multiple times. Each time you select this feat, you must choose a different pair of talents.

FAST PLUS

Advancements in science coupled with your drive to excel enable you to progress faster toward becoming a truly dexterous hero.

Benefit: You gain two talents from the Fast hero's talent trees. The talents must be selected from the following list, you cannot select more than one talent from a single talent tree, and you must meet all the prerequisites of a talent to select it.

Uncanny Dodge 1, Uncanny Dodge 2, Defensive Roll, Opportunist, Improved Increased Speed, Advanced Increased Speed.

Special: You may select this feat multiple times. Each time you select this feat, you must choose a different pair of talents.

JACK OF ALL TRADES

You've picked up a smattering of even the most obscure skills.

Prerequisite: Character level 8th+.

Benefit: You can use any skill untrained, even those that normally require training and those that are exclusive to classes you don't have. You cannot, however, gain ranks in a skill unless you are allowed to select it.

MASTERCRAFTER

You are adept at creating mastercraft electronic and mechanical devices (including tools, vehicles, weapons, robot manipulators, and armor).

Prerequisites: Craft (electrical) 8 ranks, Craft (mechanical) 8 ranks.

Benefit: When successfully completed, a mastercraft electronic or mechanical object provides an equipment bonus on skill checks made to use the object (in the case of mastercraft vehicles, this includes Drive or Pilot checks). A mastercraft weapon provides a bonus on attack or damage rolls (your choice). A mastercraft suit of armor improves the armor's equipment bonus to Defense. In each case, the bonus can be +1, +2, or +3, and no single object can have more than one mastercraft feature. (For instance, you cannot build a mastercraft weapon that gains a bonus on attack rolls and damage rolls.)

On average, it takes twice as long to build a mastercraft object as it does to build an ordinary object of the same type. The cost to build a mastercraft object is equal to the purchase DC for the object (or its components) + the bonus provided by the mastercraft feature (+1, +2, or +3).

In addition to the Wealth check, you must also pay a cost in experience points equal to 250 × the bonus provided by the mastercraft feature. The experience points must be paid before making the Craft check. If the expenditure of these experience points would drop you below the minimum needed for your current level, then the experience points can't be paid and you can't make the mastercraft object until you have sufficient experience points to remain at your current level after the expenditure is made.

Apply the following modifiers to the Craft check DC for mastercraft items:

Mastercraft Feature	DC Modifier
Mastercraft (+1)	+3
Mastercraft (+2)	+5
Mastercraft (+3)	+10

You can add the mastercraft feature to an existing ordinary object or a lower-grade mastercraft object by making a Wealth check and then making the Craft check as though you were constructing the object from scratch.

NERVE PINCH

You can incapacitate foes with a vicelike pinch.

Prerequisites: Combat Martial Arts, base attack bonus +4.

Benefit: You make an unarmed attack against a living creature. If the attack succeeds, the target takes no damage but must succeed on a Fortitude save (DC 10 + one-half your character level + your Strength modifier) or be paralyzed for 1d4+1 rounds. If the target's attack of opportunity hits you and deals damage, the nerve pinch automatically fails.

Special: This ability does not work on creatures without nervous systems or discernible anatomies, such as oozes and plants.

OATHBOUND

You swear undying allegiance to a person, group, organization, nation, planet, stellar empire, ethical philosophy, moral philosophy, or belief system. By doing so, you can better influence others who share your allegiance and more effectively oppose those who don't.

Prerequisites: At least one declared allegiance.

Benefit: Choose one of your allegiances. The allegiance you select becomes your primary allegiance and cannot be broken, except by you. The strength of your allegiance enables you to better assist other beings who have the same allegiance; if your aid another attempt succeeds, your ally gains a +3 circumstance bonus (instead of +2) on his skill check result or attack roll. Your dedication also grants you a +1 bonus on attack rolls made against creatures that do not have this allegiance.

Special: You cannot apply the benefits of this feat to multiple allegiances. If you break your oathbound allegiance, you forever lose the benefits of this feat but may take the feat again and apply the benefits to a new allegiance.

PLANETARY ADAPTATION

Your physiology has been altered by life on a planet with a harsh climate or adverse environmental conditions.

Benefit: You gain one of the benefits listed below, depending on your planet of origin.

Barren World: You gain a +4 bonus on Survival checks and a +4 bonus on Constitution checks against starvation and thirst.

Cold World: You gain a +4 bonus on Fortitude saves against extreme cold, as well as cold resistance 5.

Dark World: You gain darkvision out to a range of 60 feet. Darkvision is black and white only, but otherwise works as normal sight.

High-G World: You gain a +2 bonus to your Strength. Reduce your base height by 6 inches.

Hot World: You gain a +4 bonus on Fortitude saves against extreme heat, as well as fire resistance 5.

Low-G World: You gain a +2 bonus to your Dexterity. Increase your base height by 6 inches.

Water World: You gain a +4 bonus on Swim checks and can hold your breath for a number of rounds equal to twice your Constitution score.

Special: You may only take this feat at 1st level. You may select this feat more than once, however, if you get multiple feats at 1st level; each time you choose this feat, you gain a different benefit.

SALVAGE

You can salvage electrical and mechanical parts from destroyed vehicles, mecha, starships, robots, and cybernetic attachments.

Benefit: Salvaging a destroyed vehicle, mecha, starship, robot, or cybernetic attachment takes time, as noted in Table 1–1: Salvage. At the end of this time, make a Search check. If the check succeeds, you may increase your Wealth score by the amount indicated on Table 1–1, either by selling the salvaged parts for scrap or using them to offset the cost of future building projects.

TABLE 1–1: SALVAGE

Salvaged Machine	Time Required	Search Check DC	Wealth Increase
Vehicle			
Huge or smaller	30 min.	15	+1
Gargantuan	1 hr.	20	+2
Colossal	3 hr.	25	+3
Mecha			
Huge or smaller	30 min.	25	+2
Gargantuan	1 hr.	30	+4
Colossal	3 hr.	35	+6
Starship			
Huge	1 hr.	30	+3
Gargantuan	3 hr.	35	+5
Colossal	6 hr.	40	+8
Robot			
Tiny or smaller	10 min.	20	+1
Small to Large	30 min.	25	+2
Huge or bigger	1 hr.	30	+3
Cybernetic Attachment			
Replacement	10 min.	15	+1
Enhancement	30 min.	20	+2

Special: A particular vehicle, mecha, starship, robot, or cybernetic attachment can be successfully salvaged only once. Any further attempts to salvage the wreckage fail automatically.

SMART PLUS

Advancements in science coupled with your drive to excel enable you to progress faster toward becoming a truly intelligent hero.

Benefit: You gain two talents from the Smart hero's talent trees. The talents must be selected from the following list, you cannot select more than one talent from a single talent tree, and you must meet all the prerequisites of a talent to select it.

Savant, Linguist, Exploit Weakness, Plan, Trick.

Special: You may select this feat multiple times. Each time you select this feat, you must choose a different pair of talents. The exception is the savant talent, which you can select multiple times. However, each time you select the savant talent, you must choose a different skill (see the savant talent's description on page 26 of the *d20 Modern Roleplaying Game*).

SPACER

You have a special affinity for spacecraft and space travel.

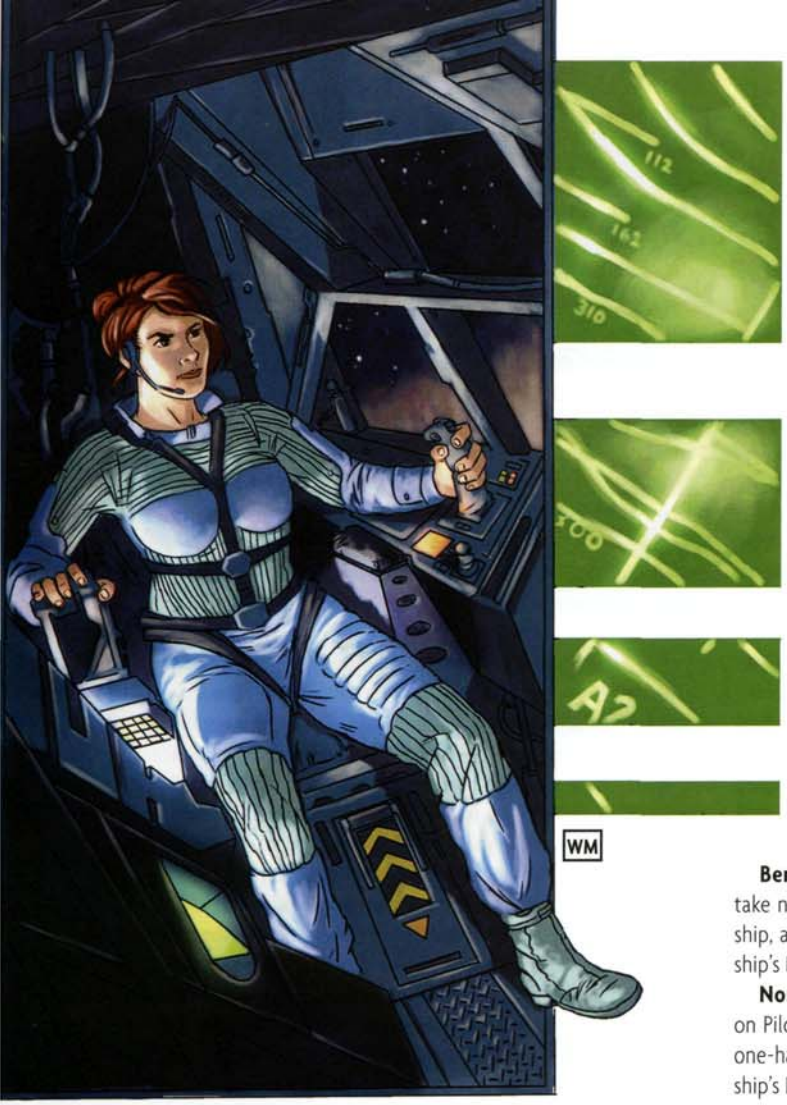
Benefits: You gain a +2 bonus on Computer Use checks made to use onboard spacecraft computer systems, a +2 bonus on Navigate checks when plotting a course through space, and a +2 bonus on all Pilot checks made to fly a spacecraft.

STARSHIP BATTLE RUN

You are skilled at starship skirmish tactics, zipping in and out of an enemy's sights.

Prerequisite: Dexterity 13, Starship Dodge, Starship Mobility.

Benefit: When using an attack action with a starship ranged weapon, you can move both before and after the attack, provided that the total distance moved does not exceed the starship's tactical speed.



Starship Operation

Moving in this way does not provoke an attack of opportunity from the defender you are attacking (though it can provoke attacks of opportunity from other nearby starships, as normal).

STARSHIP DODGE

You are adept at dodging attacks while piloting starships.

Prerequisite: Dexterity 13, Pilot 6 ranks, Starship Operation (of the appropriate type).

Benefit: When piloting a starship of a type with which you are proficient (see the Starship Operation feat), you apply a +1 dodge bonus to your ship's Defense against attacks from one enemy starship you designate during your action. You can select a new enemy ship on any action.

STARSHIP FEINT

You are skilled at misleading your enemy in starship combat.

Prerequisite: Pilot 9 ranks, Starship Operation (of the appropriate type).

Benefit: When piloting a ship with which you are proficient (see the Starship Operation feat), you can make a Bluff check in starship combat as a move action. In addition, you receive a +2 bonus on Bluff checks made to feint in starship combat. See the expanded Bluff skill description, page 10, for details.

Normal: Feinting in starship combat requires an attack action.

STARSHIP GUNNERY

You are proficient with starship weapon systems.

Benefit: You do not take a penalty on attack rolls when firing a starship weapon.

Normal: Without this feat, you take a –4 nonproficient penalty on attack rolls when firing a starship weapon.

STARSHIP MOBILITY

You are adept at dodging attacks while piloting starships.

Prerequisite: Dexterity 13, Starship Dodge.

Benefit: When piloting a starship of a type with which you are proficient (see the Starship Operation feat), you apply a +4 dodge bonus to your ship's Defense against attacks of opportunity caused when you move out of or within a starship's threatened area. Any condition that makes you lose your Dexterity bonus to Defense also makes you lose your dodge bonuses. Dodge bonuses (such as this one and the dodge bonus granted by the Starship Dodge feat) stack with each other, unlike most types of bonuses.

STARSHIP OPERATION

Select one of the following types of starships: ultralight, light, mediumweight, heavy, or superheavy. You are proficient at operating starships of that type.

Prerequisite: Pilot 2 ranks.

Benefit: When operating a starship of the selected type, you take no penalty on Pilot checks made when operating the starship, and you also apply your full class bonus to Defense to the ship's Defense.

Normal: Without this feat, you take a –4 nonproficient penalty on Pilot checks made to operate a starship, and you apply only one-half your class bonus to Defense (rounded down) to the ship's Defense.

Special: You can gain this feat multiple times. Each time you take the feat, it applies to a different type of starship (ultralight, light, mediumweight, heavy, or superheavy).

STARSHIP STRAFE

You can use a starship's ranged weapon set on automatic fire to affect a wider area than normal.

Prerequisite: Starship Gunnery.

Benefit: When using a starship's ranged weapon on autofire, you can affect an area four 500-foot squares long and one 500-foot square wide (that is, any four 500-foot squares in a straight line).

Normal: A starship weapon on autofire normally affects a 1,000-foot-by-1,000-foot area.

STRONG PLUS

Advancements in science coupled with your drive to excel enable you to progress faster toward becoming a truly strong hero.

Benefit: You gain two talents from the Strong hero's talent trees. The talents must be selected from the following list, you cannot select more than one talent from a single talent tree, and you must meet all the prerequisites of a talent to select it.

Improved Extreme Effort, Advanced Extreme Effort, Improved Ignore Hardness, Advanced Ignore Hardness, Improved Melee Smash, Advanced Melee Smash.

Special: You may select this feat multiple times. Each time you select this feat, you must choose a different pair of talents.

TOUGH PLUS

Advancements in science coupled with your drive to excel enable you to progress faster toward becoming a truly tough hero.

Benefit: You gain two talents from the Tough hero's talent trees. The talents must be selected from the following list, you cannot select more than one talent from a single talent tree, and you must meet all the prerequisites of a talent to select it.

Damage Reduction 2/—, Damage Reduction 3/—, Energy Resistance (choose one energy type), Remain Conscious, Second Wind, Stamina.

Special: You may select this feat multiple times. Each time you select this feat, you must choose a different pair of talents.

ULTRA IMMUNE SYSTEM

You are less susceptible to the ravages of poison, disease, and radiation poisoning.

Prerequisite: Constitution 13.

Benefits: You gain a +2 bonus on Fortitude saving throws to resist poisons, diseases, and radiation sickness. Furthermore, any permanent ability drain inflicted upon you is treated as temporary ability damage instead.

URBAN TRACKING

You can track down the location of missing persons or wanted individuals.

Benefit: To find the trail of an individual or to follow it for 1 hour requires a Gather Information check. You must make another Gather Information check every hour of the search, as well as each time the trail becomes difficult to follow, such as when it moves to a different area of town.

The DC of the check, and the number of checks required to track down your quarry, depends on the community population and the conditions:

Population	DC	Checks Required
Fewer than 2,000	5	1d4
2,000–9,999	10	1d4+1
10,000–49,999	15	2d4
50,000–99,999	20	2d4+1
100,000–499,999	25	3d4
500,000+	30	3d4+1

Condition	DC Modifier
Every three creatures in the group being sought	–1
Every 24 hours the quarry has been missing or sought	+1
Tracked quarry "lies low"	+5

If you fail a Gather Information check, you can retry after 1 hour of questioning. The GM rolls the number of checks required secretly, so the player doesn't know exactly how long the task requires.

Normal: A character without this feat can use Gather Information to find out information about a particular individual, but each check takes 1d4+1 hours and doesn't allow effective trailing.

Special: You can cut the time per Gather Information check in half (to 30 minutes per check rather than 1 hour per check), but you suffer a –5 penalty on the check.

EVERYBODY'S HUMAN

If you're familiar with the DUNGEONS & DRAGONS® game, you probably remember that those rules give an extra feat to all human characters at 1st level and extra skills.

The *d20 Future* rules, like the *d20 Modern Roleplaying Game* rules, assume that all characters are human. Therefore, the advanced classes in this chapter have those extra skill points and the extra feat built into them.

Chapter Thirteen: Xenobiology introduces new species that can be played as characters. These species do not gain an extra feat at 1st level and do not gain extra skill points, like human characters do. Therefore, the appropriate number of skill points for nonhuman characters is given parenthetically.

XENOMEDIC

You know how to provide safe medical treatment to alien life forms.

Prerequisites: Knowledge (earth and life sciences) 6 ranks, Treat Injury 6 ranks, Surgery.

Benefits: You can, without penalty, use the Treat Injury skill to perform surgery on a living creature regardless of its type (aberration or monstrous humanoid, for example).

Normal: Characters without this feat take a –8 penalty on Treat Injury checks (–4 if they have the Surgery feat) when performing surgery on creatures of a different type. For example, a humanoid performing surgery on an aberration takes the penalty.

Special: This feat cannot be used to heal or repair nonliving or inorganic creatures such as constructs or undead.

ZERO-G TRAINING

You can function normally in low gravity or zero gravity.

Prerequisites: Dexterity 13, Tumble 4 ranks.

Benefits: You take no penalty on attack rolls in low-gravity or zero-gravity environments. In addition, you do not suffer the debilitating effects of space sickness.

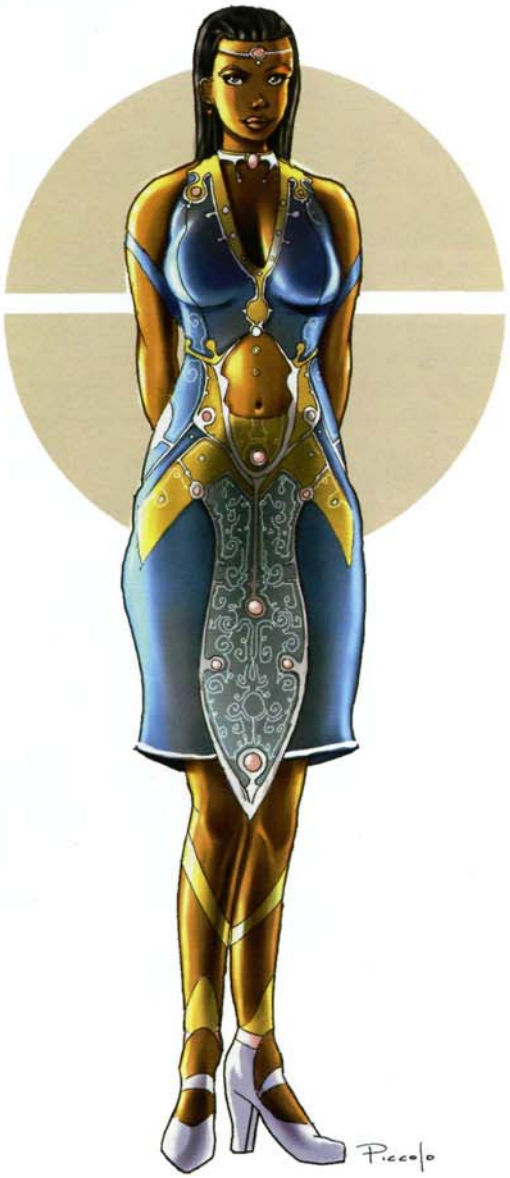
Normal: Without this feat, you take a –4 penalty on attack rolls while operating in zero-gravity environments, or a –2 penalty on attack rolls while operating in low-gravity environments. In addition, you are subject to the effects of Space Adaptation Syndrome, also known as space sickness (see Zero-Gravity Environments in Chapter 4: Environments).

ADVANCED CLASSES

New advanced classes are introduced throughout this book. Some, such as the Dimension Ranger and the Mecha Jockey, are presented in other chapters because they are specific to a particular campaign setting or require a specific set of rules to play. The advanced classes presented in this chapter fit well into many different types of science fiction campaign settings.

All the advanced classes presented in Chapter Six: Advanced Classes of the *d20 Modern Roleplaying Game* are appropriate choices for a *d20 Future* campaign, with the GM's approval.

A *d20 Future* campaign that features magic may include the Acolyte, Mage, Occultist, and Shadow Slayer advanced classes (all of which are described in Chapter Nine: Campaign Models of the *d20 Modern Roleplaying Game*), as well as all the advanced classes introduced in the *URBAN ARCANA™ Campaign Setting*.



Alexandra the Ambassador

AMBASSADOR

Skilled diplomats and dignitaries armed with a deep understanding of politics and a heightened awareness of the importance of compromise, Ambassadors can deftly mediate disputes among individuals, organizations, nations, or worlds divided by opposing ideologies, philosophies, and politics. They bring keen perception and insight to the table, striving to advance their employers' agendas without compromising their own integrity or betraying the trust placed in them as representatives of factions, nations, worlds, and stellar empires.

As the authorized representative of her faction, nation, world, or empire, the Ambassador is entitled to privileges beyond the rights of ordinary people. These privileges apply only when the Ambassador's allegiance to a faction, nation, world, or stellar empire is recognized. Select this advanced class if you want your character to excel at negotiations and have political connections and "clout."

The fastest path into this advanced class is from the Charismatic hero basic class, though other paths are conceivable.

REQUIREMENTS

To qualify to become an Ambassador, a character must fulfill the following criteria.

Skills: Diplomacy 6 ranks, Knowledge (civics) 6 ranks, Knowledge (theology and philosophy) 6 ranks.

Charismatic Hero Talents: Charm, favor.

Allegiance: An Ambassador must pledge her primary allegiance to a faction, nation, world, or empire and remain a dutiful servant of this body; if the Ambassador breaks this allegiance, she loses all the benefits of the Diplomatic Immunity and Open Arms class features (see Class Features, below).

CLASS INFORMATION

The following information pertains to the Ambassador advanced class.

HIT DIE

The Ambassador gains 1d6 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Ambassador gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

CLASS SKILLS

The Ambassador's class skills are as follows.

Bluff (Cha), Computer Use (Int), Diplomacy (Cha), Gather Information (Cha), Intimidate (Cha), Knowledge (behavioral sciences, civics, current events, history, theology and philosophy) (Int), Profession (Wis), Read/Write Language (none), Research (Int), Sense Motive (Wis), and Speak Language (none).

TABLE 1–2: THE AMBASSADOR

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+0	+0	+2	Diplomatic immunity	+1	+1
2nd	+1	+0	+0	+3	Open arms	+1	+1
3rd	+2	+1	+1	+3	Bonus feat	+2	+1
4th	+3	+1	+1	+4	Information access	+2	+2
5th	+3	+1	+1	+4	Stipend	+3	+2
6th	+4	+2	+2	+5	Bonus feat	+3	+2
7th	+5	+2	+2	+5	Restricted access	+4	+3
8th	+6	+2	+2	+6	Stipend	+4	+3
9th	+6	+3	+3	+6	Bonus feat	+5	+3
10th	+7	+3	+3	+7	Select consuls	+5	+4

TABLE 1–3: DIPLOMATIC IMMUNITY

Severity of Crime	Examples	DC	Effect of Successful Diplomacy Check
Class 5	Disturbing the peace, public intoxication, noninjurious traffic violation	15	–2 penalty on subsequent Diplomacy checks in that area
Class 4	Possession of controlled substance, injurious traffic violation, operating a business without a license, operating a vehicle or starship without a license, assault without a deadly weapon	20	–5 penalty on subsequent Diplomacy checks in that area
Class 3	Attempted bribery of a public official, robbery or grand theft, aiding and abetting a known felon, assault with a deadly weapon, possession of a concealed weapon	25	–10 penalty on subsequent Diplomacy checks in the area
Class 2	Murder or manslaughter, fraud, smuggling, assault against a public official, trafficking in controlled substances	30	Deportation within 2d6 hours
Class 1	Conspiracy against the government, murder of a public official, sabotage of public utilities	35	Detention pending the diplomatic action by character's affiliated government

Skill Points at Each Level: 5 + Int modifier (4 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Ambassador advanced class.

DIPLOMATIC IMMUNITY

Starting at 1st level, if the Ambassador is arrested for a crime, she can make a Diplomacy check to invoke her diplomatic credentials and not suffer the usual legal penalty or punishment. The severity of the crime determines the DC of the Diplomacy check, and how authorities react if the Ambassador succeeds. See Table 1–3: Diplomatic Immunity for Diplomacy check DCs based on the severity of the crime.

If one of the Ambassador's consuls (see the select consul class feature, below) is arrested for a crime and unable to secure her own release, the Ambassador may intercede on the consul's behalf. One may aid the other's Diplomacy check (see Aiding Another on page 47 of the *d20 Modern Roleplaying Game*).

An Ambassador who routinely invokes the privilege of diplomatic immunity—either on her own behalf or to protect her selected consuls—is likely to be recalled or terminated by those she has sworn to represent (at the GM's discretion).

OPEN ARMS

Beginning at 2nd level, the Ambassador is skilled at initiating peaceful negotiations. She may add a competence bonus equal to one-half her Ambassador class level on all Diplomacy checks.

BONUS FEATS

At 3rd, 6th, and 9th level, the Ambassador gets a bonus feat. The bonus feat must be selected from the following list, and the Ambassador must meet all the prerequisites of the feat to select it.

Attentive, Defensive Martial Arts, Dodge, Educated, Improved Initiative, Low Profile, Oathbound*, Renown, Trustworthy.

** Indicates a feat described in this chapter.*

INFORMATION ACCESS

Starting at 4th level, the Ambassador can make Gather Information checks without spending money or making Wealth checks, provided she is dealing with individuals or organizations that are helpful, friendly, indifferent, or unfriendly toward her or those she represents. Dealing with individuals or organizations that are hostile requires the Ambassador to make Wealth checks as usual when using the Gather Information skill.

STIPEND

Skilled diplomats are well paid for their loyalty and dedication, and they are accustomed to traveling in style. At 5th level, and again at 8th level, the Ambassador gains a one-time Wealth bonus increase of +4.

RESTRICTED ACCESS

At 7th level, the Ambassador gains clearance to access restricted files or classified information from any source that recognizes her faction, organization, nation, world, or stellar empire. She gains a +5 bonus on Computer Use checks made to defeat computer security and a +5 bonus on Research checks.

SELECT CONSULS

At 10th level, the Ambassador may appoint a number of individuals equal to her Reputation bonus as "consuls" or "attachés." These appointed individuals gain all the benefits of the diplomatic immunity, information access, and restricted access class features (described above). The Ambassador may revoke these privileges at any time and appoint replacement consuls as she sees fit. It takes 1d4 hours for an Ambassador to invoke or revoke a consul's or attaché's privileges.

DOGFIGHTER

Anyone who manages to survive that first terrifying thrill of blasting into space in the minuscule cockpit of an ultralight fighter can develop a lifelong love for it. Dogfighters are usually thrill-seekers and hotshots, but they're also extremely good at what they do. If they've survived long enough to log a dozen missions, they're probably among the best pilots in the galaxy. Dogfighters revel in the feeling of power they get from being at the controls of an armed rocket, and they know just how to make that rocket do exactly what they want it to.

Select this advanced class if you want your character to be an astrogatin', battleship-hatin' fighter jockey instead of just a glorified cropduster.



Adam the Dogfighter

The fastest path into this advanced class is from the Fast hero basic class, though other paths are certainly possible.

REQUIREMENTS

To qualify to become a Dogfighter, a character must fulfill the following criteria.

Skills: Pilot 6 ranks.

DOGFIGHTERS AND STARSHIPS

The Dogfighter advanced class is viable only in *d20 Future* campaigns that feature starships and starship battles. Make sure you consult with your GM before advancing your character toward taking levels in this class. The Dogfighter class description refers to rules presented in Chapter Seven: Starships.

Feat: Starship Operation (ultralight).

Base Reflex Save: +2.

CLASS INFORMATION

The following information pertains to the Dogfighter advanced class.

HIT DIE

The Dogfighter gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Dogfighter gains a number of action points equal to 6 + one-half his character level, rounded down, every time he attains a new level in this class.

CLASS SKILLS

The Dogfighter's class skills are as follows.

Bluff (Cha), Computer Use (Int), Craft (electronic, mechanical) (Int), Knowledge (popular culture, streetwise, technology) (Int), Navigate (Int), Pilot (Dex), Profession (Wis), Repair (Int).

Skill Points at Each Level: 5 + Int modifier (4 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Dogfighter advanced class.

BONUS FEATS

At 1st, 3rd, 6th, and 9th level, the Dogfighter gets a bonus feat. The bonus feat must be selected from the following list, and the Dogfighter must meet all the prerequisites of the feat to select it.

Blind-Fight, Brawl, Gearhead, Improved Brawl, Improved Feint, Spacer*, Starship Battle Run*, Starship Dodge*, Starship Feint*, Starship Gunnery*, Starship Mobility*, Starship Operation*, Starship Strafe*, Zero-G Training*.

** Indicates a feat described in this chapter.*

TABLE 1–4: THE DOGFIGHTER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+0	+2	+0	Bonus feat	+1	+0
2nd	+1	+0	+3	+0	Defender of the universe	+1	+1
3rd	+2	+1	+3	+1	Bonus feat	+2	+1
4th	+3	+1	+4	+1	Shake, rattle, and roll (1/day)	+2	+1
5th	+3	+1	+4	+1	To the max!	+3	+2
6th	+4	+2	+5	+2	Bonus feat	+3	+2
7th	+5	+2	+5	+2	Shake, rattle, and roll (2/day)	+4	+2
8th	+6	+2	+6	+2	Keep it together	+4	+3
9th	+6	+3	+6	+3	Bonus feat	+5	+3
10th	+7	+3	+7	+3	Shake, rattle, and roll (3/day)	+5	+3

DEFENDER OF THE UNIVERSE

Starting at 2nd level, a Dogfighter applies his Reputation bonus to the die result whenever he spends an action point to modify an attack roll, skill check, ability check, or saving throw made aboard a starship.

SHAKE, RATTLE, AND ROLL

At 4th level, a Dogfighter learns how rock an enemy starship with weapons fire. The Dogfighter must declare that he is using this ability before making the attack roll (thus, a failed attack roll ruins the attempt). A starship damaged by the Dogfighter's attack is shaken for 1 round; all passengers and crewmembers (pilots and gunners included) aboard the shaken ship take a –2 penalty on attack rolls, saving throws, and skill checks for 1 round.

A Dogfighter may use this ability once per day at 4th level, twice per day at 7th level, and three times per day at 10th level.

TO THE MAX!

At 5th level and beyond, a Dogfighter can coax more thrust out of a ship's engines, increasing its tactical speed by +500 feet. The Dogfighter must be piloting the ship to increase its tactical speed.

KEEP IT TOGETHER

At 8th level, a Dogfighter can continue to operate a starship even after it has been reduced to negative hit points and has begun breaking apart. The ship may take one move action or one attack action each round. However, the ship cannot be repaired and continues to lose 1 hit point per round, exploding once it reaches its destruction threshold (see Chapter Seven: Starships, page 113). The Dogfighter and all other personnel aboard the ship are considered shaken, taking a –2 penalty on attack rolls, saving throws, and skill checks.

DREADNOUGHT

Sometimes referred to as the "walking tank," the Dreadnought (not to be confused with the starship subtype of the same name) excels at knocking down foes while fearlessly standing her ground. Her nearly irresistible power comes from a strict exercise regimen supported by vitamin supplements, surgical operations designed to strengthen bones and enlarge muscles, and scientifically tested meditation techniques. Her power and resilience make her ideally suited for ultramodern infantry units, military insurgence teams, and secret service protection agencies.

Select this advanced class if you want your character to plow through foes and obstacles while withstanding tremendous amounts of punishment.

The fastest path into this advanced class is from the Tough hero basic class, though other paths are possible.



Stephanie the Dreadnought

REQUIREMENTS

To qualify to become a Dreadnought, a character must fulfill the following criteria.

Skill: Intimidate 6 ranks.

Feat: Improved Damage Threshold.

Tough Hero Talents: Any two Tough hero talents.

TABLE 1–5: THE DREADNOUGHT

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+2	+0	+1	Fearless, stability, unhindered	+0	+0
2nd	+1	+3	+0	+2	Ability surge (1/day), steamroller	+1	+0
3rd	+2	+3	+1	+2	Bonus feat	+1	+0
4th	+3	+4	+1	+2	Master defender (+2)	+1	+1
5th	+3	+4	+1	+3	Ability surge (2/day), knockdown	+2	+1
6th	+4	+5	+2	+3	Bonus feat	+2	+1
7th	+5	+5	+2	+4	Master defender (+4)	+2	+2
8th	+6	+6	+2	+4	Ability surge (3/day), heavy artillery	+3	+2
9th	+6	+6	+3	+4	Bonus feat	+3	+2
10th	+7	+7	+3	+5	Master defender (+6)	+3	+3

CLASS INFORMATION

The following information pertains to the Dreadnought advanced class.

HIT DIE

The Dreadnought gains 1d12 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Dreadnought gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

CLASS SKILLS

The Dreadnought's class skills are as follows.

Balance (Dex), Climb (Str), Concentration (Con), Intimidate (Cha), Jump (Str), Profession (Wis), Survival (Wis), Swim (Str), Tumble (Dex).

Skill Points at Each Level: 3 + Int modifier (2 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Dreadnought advanced class.

FEARLESS

The Dreadnought is immune to fear effects.

STABILITY

The Dreadnought is incredibly sure-footed. She gains a +4 stability bonus on all rolls made to resist being tripped, overrun, knocked prone, or pushed back by a bull rush attack.

UNHINDERED

The Dreadnought treats any suit of armor worn as though its armor penalty is 2 better.

ABILITY SURGE

At 2nd level, the Dreadnought can temporarily increase her Strength, but at a penalty to Defense. At 5th and 8th level, she can use this ability more frequently.

The Dreadnought gains a +8 morale bonus to Strength, but takes a –2 penalty to Defense. Activating ability surge is a free action, and the surge lasts for a number of rounds equal to the Dreadnought's class level. Following the ability surge, the Dreadnought is fatigued for as many rounds as she surged, but may negate this penalty as a free action by spending an action point.

The Dreadnought may use the ability surge once per day at 2nd level, twice per day at 5th level, and three times per day at 8th level.

STEAMROLLER

Starting at 2nd level, the Dreadnought does not need to move before making an overrun attempt against an opponent. She also gains a +2 bonus on any trip attack made against an opponent who blocks her overrun attempt.

BONUS FEATS

At 3rd, 6th, and 9th level, the Dreadnought gets a bonus feat. The bonus feat must be selected from the following list, and the Dreadnought must meet all the prerequisites of the feat to select it.

Action Boost*, Advanced Combat Martial Arts, Advanced Firearms Proficiency, Advanced Two-Weapon Fighting, Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (heavy), Armor Proficiency (powered), Athletic, Brawl, Burst Fire, Cleave, Combat Expertise, Combat Martial Arts, Combat Reflexes, Endurance, Frightful Presence, Great Cleave, Improved Brawl, Improved Bull Rush, Improved Combat Martial Arts, Improved Combat Throw, Improved Disarm, Improved Knockout Punch, Improved Trip, Improved Two-Weapon Fighting, Knockout Punch, Mobility, Power Attack, Run, Spring Attack, Strafe, Streetfighting, Sunder, Toughness, Two-Weapon Fighting, Ultra Immune System*.

** Indicates a feat described in this chapter.*

MASTER DEFENDER

Starting at 4th level, the Dreadnought becomes especially skilled in defensive fighting. Whenever she fights defensively or takes the total defense action, she gains a +2 bonus to Defense (in addition to the dodge bonus to Defense gained while fighting defensively or engaged in total defense).

The Dreadnought must be wearing medium, heavy, or powered armor to gain this bonus.

The bonus increases to +4 at 7th level and +6 and 10th level.

KNOCKDOWN

At 5th level and beyond, whenever the Dreadnought is allowed to apply her Strength modifier to damage, she forces the target of her successful attack to make at a Fortitude save (DC = damage dealt) or be knocked prone by the force of the blow.

HEAVY ARTILLERY

Beginning at 8th level, a Dreadnought treats all weapons as one size category smaller for purposes of determining whether or not she can wield them in one hand and if they are considered light weapons.

ENGINEER

Engineers are vital members of any industrialized society, responsible for building and maintaining weapons, vehicles, starships, and more. Although many Engineers confine themselves to workshops, garages, and shipyards, many are drawn to a life of adventure and prefer to work "in the field." Some of the best and brightest Engineers ply their trade aboard starships, on distant colonized worlds, and on the battlefield. Every organization and nation that depends on technology relies on the their knowledge. Engineers use their knowledge of how things are put together to more effectively take things apart and are often called in to bypass security measures or whip up special weapons for field troops in dangerous situations.

Select this advanced class if you want your character to excel at building, modifying, repairing, and disabling electrical and mechanical equipment, including weapons.

The fastest path into this advanced class is from the Smart hero basic class, though other paths are possible.

REQUIREMENTS

To qualify to become an Engineer, a character must fulfill the following criteria.

Skills: Computer Use 6 ranks, Craft (electrical) 6 ranks, Craft (mechanical) 6 ranks, Knowledge (technology) 6 ranks, Repair 6 ranks.

CLASS INFORMATION

The following information pertains to the Engineer advanced class.

HIT DIE

The Engineer gains 1d6 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Engineer gains a number of action points equal to 6 + one-half his character level, rounded down, every time he attains a new level in this class.

CLASS SKILLS

The Engineer's class skills are as follows.

Computer Use (Int), Craft (electronic, mechanical, structural) (Int), Disable Device (Int), Drive (Dex), Knowledge (physical sciences, technology) (Int), Navigate (Int), Pilot (Dex), Profession (Wis), Read/Write Language (none), Repair (Int), Search (Int), Speak Language (none).

Skill Points at Each Level: *7 + Int modifier (6 + Int modifier for nonhumans).*

CLASS FEATURES

The following class features pertain to the Engineer advanced class.

BUILDER

At 1st level, the Engineer gains the bonus feat Builder.

IMPROVE KIT (+1)

An engineer can use his know-how to upgrade an electrical or mechanical tool kit at no additional cost.

Electrical Tool Kit, Basic: For the cost of a basic electrical tool kit, an Engineer can assemble a mastercraft (+1) version of the kit that grants a +1 equipment bonus on all Repair checks made to fix electrical devices.

Electrical Tool Kit, Deluxe: *For the cost of a deluxe electrical* tool kit, an Engineer can assemble a mastercraft (+1) version that grants a +3 equipment bonus (instead of the usual +2 equipment bonus) on all Repair checks made to fix electrical devices and a +1 equipment bonus on all Craft (electrical) checks.

Mechanical Tool Kit, Basic: For the cost of a basic mechanical tool kit, an Engineer can assemble a mastercraft (+1) version of the kit that grants a +1 equipment bonus on all Repair checks made to fix mechanical devices.

Mechanical Tool Kit, Deluxe: For the cost of a deluxe mechanical kit, an Engineer can assemble a mastercraft (+1) version that grants a +3 equipment bonus (instead of the usual +2 equipment bonus) on all Repair checks made to fix mechanical devices and a +1 equipment bonus on all Craft (mechanical) and Craft (structural) checks.



Brandon the Engineer

TABLE 1–6: THE ENGINEER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+1	+1	+0	Builder, improve kit (+1)	+0	+0
2nd	+1	+2	+2	+0	Quick craft, superior repair	+1	+0
3rd	+2	+2	+2	+1	*Bonus feat*	+1	+1
4th	+3	+2	+2	+1	Improve kit (+2), reconfigure weapon, sabotage	+1	+1
5th	+3	+3	+3	+1	Craft XP reserve, quick craft	+2	+1
6th	+4	+3	+3	+2	Bonus feat, craft XP reserve	+2	+2
7th	+5	+4	+4	+2	Craft XP reserve, improve kit (+3), quick fix	+2	+2
8th	+6	+4	+4	+2	Craft XP reserve, weapon upgrade	+3	+2
9th	+6	+4	+4	+3	Bonus feat, craft XP reserve	+3	+3
10th	+7	+5	+5	+3	Craft XP reserve, unflustered	+3	+3

QUICK CRAFT

At 2nd level, an engineer learns how to craft ordinary scratch-built electronic, mechanical, and structural objects more quickly than normal.

When using the Craft (electronic), Craft (mechanical), or Craft (structural) skill to build an ordinary scratch-built item, the Engineer reduces the building time by one-quarter. For example, a complex electronic device that normally takes 24 hours to build takes the Engineer 18 hours to build.

At 5th level, the Engineer reduces the building time of ordinary objects and mastercraft objects by half.

SUPERIOR REPAIR

At 2nd level, an Engineer learns improved ways of repairing robots, vehicles, mecha, starships, and cybernetic attachments.

An Engineer with a mechanical tool kit and an appropriate facility (a workshop, garage, or hangar) can repair damage to a robot, vehicle, mecha, starship, or cybernetic attachment. (Without a mechanical tool kit, the Engineer takes a –4 penalty on the Repair check.) With 1 hour of work, the engineer can restore a number of hit points based on his Repair check result, as shown in Table 1–7: Superior Repair. If damage remains, the Engineer may continue to make repairs for as many hours as needed to fully repair the damaged robot, vehicle, mecha, starship, or cybernetic attachment.

TABLE 1–7: SUPERIOR REPAIR

Repair Check Result	Damage Repaired
Less than 20	None
20–29	2d6 + Engineer class level
30–39	3d6 + Engineer class level
40+	4d6 + Engineer class level

BONUS FEATS

At 3rd, 6th, and 9th level, the Engineer gets a bonus feat. The bonus feat must be selected from the following list, and the Engineer must meet all the prerequisites of the feat to select it.

Aircraft Operation (spacecraft), Builder, Cautious, Gearhead, Mastercrafter*, Salvage*, Surface Vehicle Operation, Vehicle Expert, Zero-G Training*.

** Indicates a feat described in this chapter.*

IMPROVE KIT (+2)

At 4th level, the Engineer can assemble mastercraft (+2) electrical and mechanical tool kits. This ability works as the 1st-level improve kit class feature, except the equipment bonuses improve by an additional +1.

RECONFIGURE WEAPON

At 4th level, an Engineer can reconfigure a melee or ranged weapon, improving one aspect of it. Reconfiguring a weapon requires 1 hour of work and a successful Repair check (DC 20); reconfiguring a mastercraft weapon is slightly harder (DC 20 + the weapon's mastercraft bonus feature). An Engineer may take 10 or take 20 on this check.

The reconfiguration imposes a –1 penalty on attack rolls made with the weapon but grants one of the following benefits indefinitely:

Changed Rate of Fire: The reconfiguration changes the weapon's rate of fire. A semiautomatic-only weapon switches to an automatic-only weapon, or vice versa. This benefit applies only to a ranged weapon with either a semiautomatic or automatic fire setting.

Greater Ammo Capacity: The reconfigured weapon can hold 50% more ammunition than normal. This benefit applies only to weapons that take ammunition.

Greater Concealment: The reconfiguration grants a +2 bonus on Sleight of Hand checks made to conceal the reconfigured weapon.

Greater Range Increment: The reconfigured weapon's range increment increases by 10 feet. This benefit applies only to weapons with range increments.

Signature Shooter: The weapon is reconfigured for a single individual's use only and is treated as a unique exotic weapon. Anyone else who uses the weapon takes a –4 nonproficient penalty on attack rolls.

Weapons can be reconfigured multiple times; each time a weapon is reconfigured, it imparts a new benefit. Undoing an Engineer's weapon reconfiguration requires 1 hour and a successful Disable Device check (DC 20 + the Engineer's class level).

SABOTAGE

At 4th level and beyond, the Engineer can sabotage an electrical or mechanical object so that it operates poorly. The Engineer must succeed on a Disable Device check (DC 20) to accomplish the downgrade, and sabotaging a mastercraft object is slightly harder (DC 20 + the mastercraft object's bonus feature). Noticing the Engineer's handiwork without first testing the sabotaged device requires a successful Search check (DC = the Engineer's Disable Device check result). Fixing the sabotaged item requires a successful Repair check (see the Repair skill description on page 70 of the *d20 Modern Roleplaying Game*).

Sabotage Device: As a full-round action, the Engineer can reconfigure a device with electrical or mechanical components (such as a computer, a tool kit, or a vehicle) so that anyone who uses it suffers a penalty equal to the Engineer's class level on skill checks made to use the device.

Sabotage Weapon: As a full-round action, the Engineer can sabotage a weapon so that it misfires or breaks the next time it is used. A sabotaged weapon cannot be used effectively until repaired. This use of sabotage also applies to vehicle and starship weapons.

CRAFT XP RESERVE

Starting at 5th level, an Engineer with the Mastercrafter feat can build mastercraft electronic and mechanical devices without investing as much of himself in the process.

At 5th level and every level thereafter, an Engineer gains a special reserve of experience points equal to 100 × his Engineer class level. These extra experience points are separate from experience gained through level advancement and can only be used to make mastercraft items; they do not count toward level gain.

An Engineer must spend the extra experience points he gains at each level, for when the Engineer gains a level, he loses any unspent experience points in his reserve. For example, at 6th level, the Engineer gains 600 XP to spend on making mastercraft items; any unspent experience points in his reserve from the previous level are lost.

IMPROVE KIT (+3)

At 7th level, the Engineer can assemble mastercraft (+3) electrical and mechanical tool kits. This ability works as the 4th-level improve kit class feature, except the equipment bonuses improve by an additional +1.

QUICK FIX

At 7th level, the Engineer can repair a mechanical or electrical device in half the normal time; see the Repair skill description on page 70 of the *d20 Modern Roleplaying Game* for normal repair times. However, cutting the repair time increases the Repair check DC by 5.

WEAPON UPGRADE

At 8th level, an Engineer can upgrade handheld or robot-installed weapons, as well as weapon systems aboard vehicles, mecha, or starships.

TABLE 1–8: WEAPON UPGRADE

Handheld/Robot Weapon Upgrade	DC
Weapon also dazes target for 1 round	25
Weapon also knocks target prone	30
Weapon leaves target shaken for 1d4 rounds	35
Weapon also stuns target for 1d4 rounds	40

Vehicle/Mecha/Starship Weapon Upgrade	DC
Weapon deals an extra two dice of damage	25
Weapon ignores 5 points of target's hardness/DR	30
Weapon's critical hit multiplier increases by 1	35
Weapon ignores 10 points of target's hardness/DR	40

The Engineer must spend 1 hour tinkering with the weapon, after which he must succeed at a Craft (mechanical) check. The DC varies depending on how the weapon is modified, as shown in Table 1–8: Weapon Upgrade. If the skill check fails, the attempt to modify the weapon also fails, although the Engineer may try again. (The engineer may take 20 on the skill check, but the upgrade takes 20 hours to complete.) An upgraded weapon has a 10% chance of breaking after each time it is used; it cannot be used again until repaired, and repairing it requires 1 hour and a successful Repair check (DC 40).

UNFLUSTERED

A 10th-level Engineer can perform complicated tasks without provoking attacks of opportunity from adjacent foes.

During any round in which the Engineer uses the Computer Use, Craft, Demolitions, Disable Device, or Repair skill, he can first make a Concentration check (DC 15) to use the desired skill without provoking attacks of opportunity. Making the Concentration check doesn't cost the Engineer an action. He may take 10 on the Concentration check, but he cannot take 20.

EXPLORER

Driven by a thirst for knowledge, an unyielding curiosity, or a craving for adventure, the Explorer lives to plumb the unknown. She is Columbus, Earhart, Livingston, and Armstrong all rolled into one. She might serve her own agenda or a larger organization. Regardless of her loyalties, the Explorer's investigative talents serve her well when unraveling the secrets of vanished alien cultures, mapping new star systems, surveying distant planets for eventual colonization, unearthing the treasures of ancient dynasties, or determining what lies beyond dimension gates. The Explorer's survival skills also make her an excellent scout and guide.

Select this advanced class if you want your character to excel at exploration and uncovering secrets in places where most others fear to tread.

The fastest path into this advanced class is from the Dedicated hero basic class, though other paths are possible.



Lily the Explorer

REQUIREMENTS

To qualify to become an Explorer, a character must fulfill the following criteria.

Skills: Knowledge (earth and life sciences) 6 ranks, Knowledge (history, physical sciences, or theology and philosophy) 4 ranks, Search 4 ranks, Survival 6 ranks.

Dedicated Hero Talent: Aware.

CLASS INFORMATION

The following information pertains to the Explorer advanced class.

HIT DIE

The Explorer gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Explorer gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

TABLE 1–9: THE EXPLORER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+1	+1	+1	Explorer lore, survivalist	+1	+0
2nd	+1	+2	+2	+2	Resolve, skilled searcher	+1	+0
3rd	+2	+2	+2	+2	Bonus feat	+2	+1
4th	+3	+2	+2	+2	Trap sense (+1)	+2	+1
5th	+3	+3	+3	+3	Extra step	+3	+1
6th	+4	+3	+3	+3	Bonus feat	+3	+2
7th	+5	+4	+4	+4	Trap sense (+2)	+4	+2
8th	+6	+4	+4	+4	Explorer's evasion	+4	+2
9th	+6	+4	+4	+4	Bonus feat	+5	+3
10th	+7	+5	+5	+5	Extra step, trap sense (+3)	+5	+3

CLASS SKILLS

The Explorer's class skills are as follows.

Balance (Dex), Bluff (Cha), Climb (Str), Decipher Script (Int), Disable Device (Int), Drive (Dex), Gather Information (Cha), Handle Animal (Cha), Investigate (Int), Jump (Str), Knowledge (arcane lore, art, earth and life sciences, history, physical sciences, theology and philosophy) (Int), Listen (Wis), Navigate (Int), Pilot (Dex), Read/Write Language (none), Research (Int), Ride (Dex), Search (Int), Sense Motive (Wis), Speak Language (none), Spot (Wis), Survival (Wis), Swim (Str), Treat Injury (Wis).

Skill Points at Each Level: 7 + Int modifier (6 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Explorer advanced class.

EXPLORER LORE

An Explorer picks up stray and obscure facts during her adventures. She may make a special Explorer lore check with a bonus equal to her Explorer class level + her Intelligence modifier to see whether or not she knows some relevant knowledge about notable people, legendary items, or noteworthy places. If the Explorer has 5 or more ranks in Knowledge (history), she gains a +2 bonus on this check. She may take 10 but cannot take 20 on this check.

An Explorer lore check does not reveal the powers of a magic or psionic item but may give some hint as to its general function; an Explorer may not take 10 or take 20 on this check.

A GM can determine the Difficulty Class of the check result by referring to Table 1–10: Explorer Lore.

SURVIVALIST

At 1st level, the Explorer gains the bonus feats Guide and Track.

RESOLVE

Beginning at 2nd level, an Explorer gains a morale bonus equal to one-half her Explorer class level (rounded down) on saving throws to resist fear effects and Intimidate checks.

SKILLED SEARCHER

When actively searching for secret doors or traps, an Explorer of 2nd level or higher gains a bonus on her Search checks equal to one-half her Explorer class level (rounded down).

BONUS FEATS

At 3rd, 6th, and 9th level, the Explorer gets a bonus feat. The bonus feat must be selected from the following list, and the Explorer must meet all the prerequisites of the feat to select it.

Action Boost*, Advanced Two-Weapon Fighting, Aircraft Operation (spacecraft), Archaic Weapons Proficiency, Attentive, Brawl, Dodge, Educated, Endurance, Exotic Firearms Proficiency, Exotic Melee Weapon Proficiency, Heroic Surge, Improved Feint, Improved Knockout Punch, Improved Two-Weapon Fighting, Jack of All Trades*, Knockout Punch, Mobility, Nimble, Renown, Spacer*, Streetfighting, Studious, Track, Two-Weapon Fighting, Vehicle Expert.

** Indicates a feat described in this chapter.*

TRAP SENSE

At 4th level, an Explorer gains an intuitive sense that alerts her to danger from traps, giving her a +1 bonus on Reflex saves made to avoid traps and a +1 dodge bonus to Defense against attacks made by traps.

These bonuses rise to +2 at 7th level and +3 at 10th level.

EXTRA STEP

An Explorer of 5th level or higher can spend an action point to take an extra 5-foot step during her turn, as a free action. This extra 5-foot step does not provoke attacks of opportunity.

TABLE 1–10: EXPLORER LORE

DC	Type of Knowledge	Examples
10	Common, known by at least a substantial minority of the local population.	A local official's hobbies and interests; common legends or rumors about a powerful place of mystery.
20	Uncommon but available, known by only a few people in the area.	The coordinates of an known but uncharted world; legends or rumors about a powerful psionic artifact.
25	Obscure, known by few, hard to come by.	The customs of a documented alien species; the true homeworld of an ancient royal dynasty.
30	Extremely obscure, known by very few, possibly forgotten by most who once knew it, possibly known only by those who don't understand the knowledge's significance.	The most likely location of a long-lost pharaoh's tomb; the history of a powerful artifact and its creator; the likely coordinates of a fabled but as-yet-undiscovered planet.

At 10th level, the Explorer can take the extra 5-foot step without spending an action point.

EXPLORER'S EVASION

If an Explorer of 8th level or higher is exposed to any effect that normally allows a character to attempt a Reflex saving throw for half damage (a grenade blast, for example), the Explorer suffers no damage if she makes a successful saving throw.

If the Explorer already has evasion (the Fast hero's evasion talent, for example), she gains improved evasion instead. Improved evasion works similar to evasion, except the Explorer suffers only half damage on a failed saving throw.

FIELD OFFICER

The Field Officer coordinates armed forces in the field. A natural leader with the heart of a warrior, he knows how to direct allies and lead by example. His tactical knowledge gives his team an edge in any conflict, and he's not afraid to get dirty or bloody in the process of completing a mission. A Field Officer might command a small counter-terrorist team, a group of well-trained soldiers assigned to "black ops" missions, or a team of undisciplined mercenaries who require strong leadership.

Select this advanced class if you want your character to be the one who takes charge in a crisis or leads others in the field.

The fastest path into this advanced class is from the Charismatic hero basic class, though other paths are possible.



Russell the Field Officer

REQUIREMENTS

To qualify to become a Field Officer, a character must fulfill the following criteria.

Base Attack Bonus: +2.

Skills: Diplomacy 6 ranks, Knowledge (tactics) 6 ranks.

Feat: Personal Firearms Proficiency.

CLASS INFORMATION

The following information pertains to the Field Officer advanced class.

HIT DIE

The Field Officer gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Field Officer gains a number of action points equal to 6 + one-half his character level, rounded down, every time he attains a new level in this class.

CLASS SKILLS

The Field Officer's class skills are as follows.

Bluff (Cha), Computer Use (Int), Diplomacy (Cha), Gather Information (Cha), Intimidate (Cha), Knowledge (behavioral sciences, civics, history, physical sciences, tactics, theology and philosophy), Read/Write Language (none), Sense Motive (Wis), Speak Language (none).

Skill Points at Each Level: 5 + Int modifier (4 + Int modifier for nonhumans).

TABLE 1–11: THE FIELD OFFICER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+1	+0	+0	+2	Leadership	+1	+1
2nd	+2	+0	+0	+3	Uncanny survival	+1	+1
3rd	+3	+1	+1	+3	Bonus feat	+2	+1
4th	+4	+1	+1	+4	Tactical expertise	+2	+2
5th	+5	+1	+1	+4	August leadership	+3	+2
6th	+6	+2	+2	+5	Bonus feat	+3	+2
7th	+7	+2	+2	+5	Tactical mastery	+4	+3
8th	+8	+2	+2	+6	Commanding presence	+4	+3
9th	+9	+3	+3	+6	Bonus feat	+5	+3
10th	+10	+3	+3	+7	Action trust	+5	+4

CLASS FEATURES

The following class features pertain to the Field Officer advanced class.

LEADERSHIP

By providing supervision and guidance, a Field Officer can improve an ally's chances of succeeding at a skill check. Instead of making a skill check to aid another (see Aid Another on page 47 of the *d20 Modern Roleplaying Game*), the Field Officer makes a Diplomacy check (DC 10). He cannot take 10 or take 20 on the check. Success grants a competence bonus on the ally's skill check equal to the Field Officer's Charisma bonus or Reputation bonus, whichever is greater. The ally must be within sight and hearing distance of the Field Officer and must be able to understand him.

A Field Officer cannot use this ability on himself.

UNCANNY SURVIVAL

Beginning at 2nd level, a Field Officer can add one-half his class level to his Defense for 1 round, once per day. (The bonus applies to the Field Officer's touch and flat-footed Defense, as well.) He must declare he is doing this at the beginning of his turn, and the Defense bonus lasts until his next round of actions.

BONUS FEATS

At 3rd, 6th, and 9th level, the Field Officer gets a bonus feat. The bonus feat must be selected from the following list, and the Field Officer must meet all the prerequisites of the feat to select it.

Advanced Firearms Proficiency, Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (heavy), Armor Proficiency (powered)*, Combat Expertise, Dodge, Improved Initiative, Iron Will, Mobility, Precise Shot, Quick Draw, Renown, Shot on the Run.

** Indicates a feat described in this chapter.*

TACTICAL EXPERTISE

Starting at 4th level, as a full-round action, a Field Officer can use his tactical knowledge to coordinate allies. Allies to be affected must be within sight and hearing distance of the Field Officer and must be able to understand him.

The Field Officer must make a Knowledge (tactics) check with a DC equal to 15 + the number of allies affected. He cannot take 10 or take 20 on the check. If the check succeeds, all affected allies gain a competence bonus on attack rolls or a dodge bonus to Defense equal to the Field Officer's Reputation bonus. The Field Officer chooses which of the two benefits to impart and must impart the same benefit to all affected allies. The benefits last for 1 round.

If the check fails, the Field Officer's allies gain no benefit, but the action is still spent.

A Field Officer cannot apply the benefits of this ability to himself.

AUGUST LEADERSHIP

The Field Officer gains this ability at 5th level. It works like the leadership ability (see above), except the Field Officer adds his Charisma bonus and his Reputation bonus to the ally's skill check.

TACTICAL MASTERY

At 7th level, the Field Officer requires less time to direct his allies. This ability is similar to tactical expertise (see Tactical Expertise, above) but requires an attack action instead of a full-round action.

COMMANDING PRESENCE

At 8th level and beyond, a Field Officer can use an attack action and his commanding presence to enable an ally or weaken a single foe's resolve.

Enabling an ally requires an attack action and a successful Diplomacy check (DC 20). If the check succeeds, the Field Officer can negate any one of the following harmful conditions affecting a single ally: cowering, dazed, fatigued, nauseated, panicked, shaken, or stunned. The ally to be affected must be within sight and hearing distance of the Field Officer and must be able to understand him. The Field Officer cannot use this ability on himself.

Weakening a foe's resolve requires an attack action and a successful Intimidate check (DC = target's level check). If the check succeeds, the target is shaken for a number of rounds equal to 1d6 + one-half the Field Officer's class level + the Field Officer's Charisma modifier. The target must be within sight and hearing distance of the Field Officer and must be able to understand him. A target that resists the Field Officer's attempt to weaken its resolve is immune to the Field Officer's use of this ability for 24 hours.

ACTION TRUST

At 10th level, the Field Officer's mere presence inspires, safeguards, and motivates his allies.

As a free action, a Field Officer may spend one of his action points to modify an ally's attack roll, skill check, ability check, level check, or saving throw result by +2d6 (applying a bonus of +2 to +12). The ally to be affected must be within sight and hearing distance of the Field Officer to gain the benefits of the Field Officer's spent action point. A Field Officer may use this ability once per round, and not on himself (he gains the normal benefits for spending an action point on himself).

Any character may transfer some or all of her action points to the Field Officer as a free action. The Field Officer must consent to the transfer, and these action points become the Field Officer's to spend as he sees fit.

HELIX WARRIOR

The subjects of rigorous scientific experimentation, Helix Warriors are soldiers whose DNA has undergone a process of conversion sometimes referred to as "forced evolution." Science corrects their physical flaws and enables Helix Warriors to surpass the natural limitations of the human form. The genetic mutation process is ongoing. As their DNA continues to transform, Helix Warriors manifest new abilities that make them into better, more resilient super-soldiers, security guards, and law enforcement officers.

Select this advanced class if you want your character to be a capable soldier with abilities beyond the reach of normal human beings.

The fastest path into this advanced class is from the Strong hero basic class, though other paths are possible.

REQUIREMENTS

To qualify to become a Helix Warrior, a character must fulfill the following criteria.

Base Attack Bonus: +3.
Skill: Knowledge (tactics) 3 ranks.
Feat: Endurance.

CLASS INFORMATION

The following information pertains to the Helix Warrior advanced class.

HIT DIE

The Helix Warrior gains 1d10 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Helix Warrior gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

CLASS SKILLS

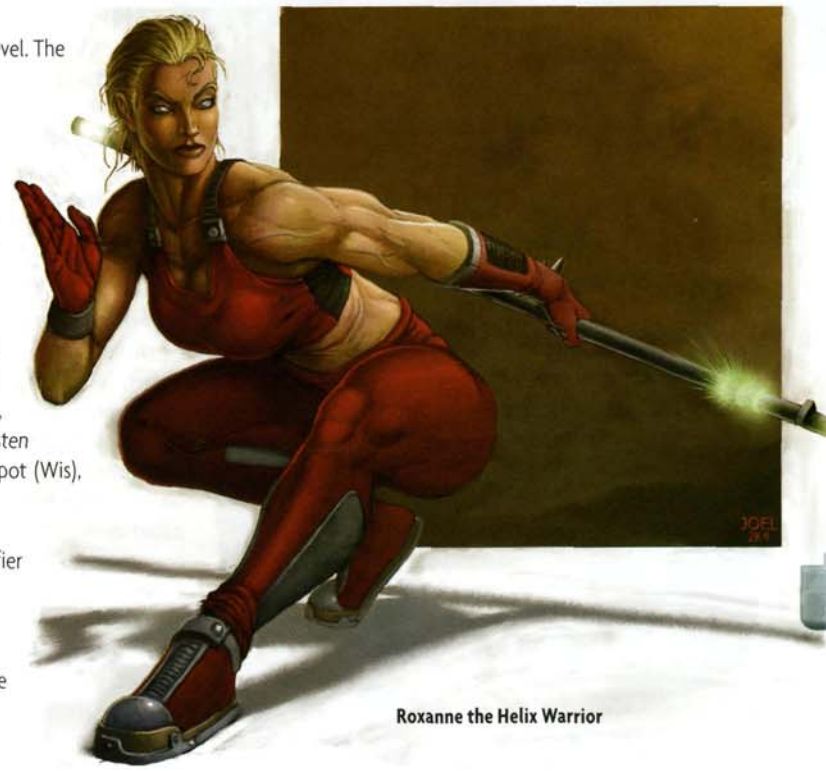
The Helix Warrior's class skills are as follows.

Balance (Dex), Climb (Str), Computer Use (Int), Demolitions (Int), Escape Artist (Dex), *Hide (Dex), Intimidate (Cha), Jump (Str), Listen* (Wis), Move Silently (Dex), Navigate (Int), Spot (Wis), Survival (Wis), Swim (Str), Tumble (Dex).

Skill Points at Each Level: 3 + Int modifier (2 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Helix Warrior advanced class.



Roxanne the Helix Warrior

HAUL

Helix Warriors can carry more heavy gear than the typical soldier. A Helix Warrior's Strength is considered 4 points higher for the purpose of determining her carrying capacity.

LIGHT SLEEPER

Helix Warriors are light sleepers and can make Listen checks even while asleep, without penalty. (A sleeping character normally takes a –10 penalty on Listen checks.)

SURVIVOR

When a Helix Warrior spends an action point to modify the result of a saving throw, she may roll an additional 1d6 and take the best result, discarding the lower roll(s).

DARKVISION

Beginning at 2nd level, a Helix Warrior gains darkvision. She can see in total darkness out to a range of 60 feet. Darkvision is black-and-white only, but is otherwise like normal sight.

The range of the Helix Warrior's darkvision improves to 90 feet at 5th level and 120 feet at 8th level.

BONUS FEATS

At 3rd, 6th, and 9th level, the Helix Warrior gets a bonus feat. The bonus feat must be selected from the following list, and the Helix Warrior must meet all the prerequisites of the feat to select it.

Advanced Combat Martial Arts, Advanced Firearms Proficiency, Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (heavy), Armor Proficiency (powered)*, Athletic, Blind-Fight, *Combat Expertise, Combat Reflexes, Combat Throw, Dead Aim,* Defensive Martial Arts, Elusive Target, Exotic Firearms Proficiency, Far Shot, Great Fortitude, Improved Combat Martial Arts, Improved Combat Throw, Improved Disarm, Improved Trip, Iron Will, Lightning Reflexes, Nerve Pinch*, Surface Vehicle Operation, Ultra Immune System*, Weapon Focus, Whirlwind Attack, Zero-G Training*.

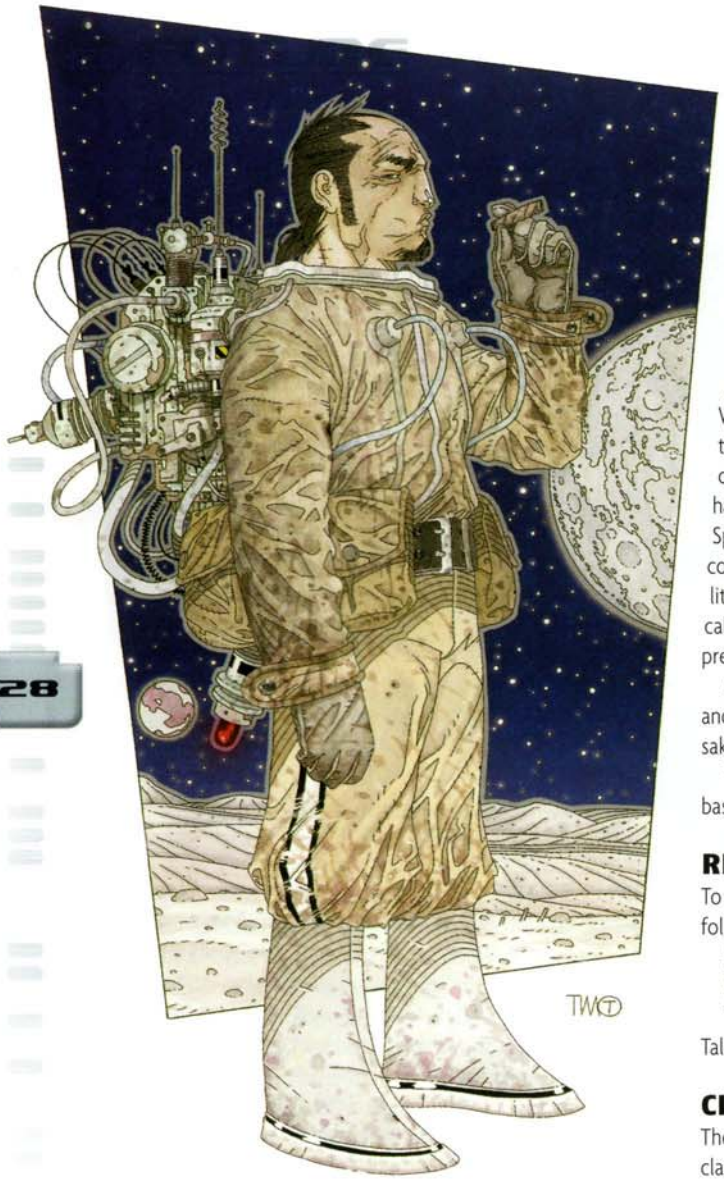
** Indicates a feat described in this chapter.*

STRONG AS AN OX

At 4th level and beyond, the Helix Warrior's carrying capacity increases as if she were one size category larger (Large instead of Medium-size, for example).

TABLE 1–12: THE HELIX WARRIOR

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+1	+1	+0	+1	Haul, light sleeper, survivor	+1	+0
2nd	+2	+2	+0	+2	Darkvision (60 ft.)	+1	+0
3rd	+3	+2	+1	+2	Bonus feat	+2	+1
4th	+4	+2	+1	+2	Strong as an ox	+2	+1
5th	+5	+3	+1	+3	Darkvision (90 ft.), superior conditioning	+3	+1
6th	+6	+3	+2	+3	Bonus feat	+3	+2
7th	+7	+4	+2	+4	Improved reaction	+4	+2
8th	+8	+4	+2	+4	Darkvision (120 ft.)	+4	+2
9th	+9	+4	+3	+4	Bonus feat	+5	+3
10th	+10	+5	+3	+5	Decisive attack	+5	+3



Moondog the Space Monkey

IMPROVED REACTION

At 7th level, a Helix Warrior gains a +2 competence bonus on initiative checks.

DECISIVE ATTACK

At 10th level, when a Helix Warrior spends an action point to modify the result of an attack roll, she may roll an additional 1d6 and take the best result, discarding the lower roll(s).

SPACE MONKEY

When a wealthy nation, stellar empire, or megacorporation needs to tame a hostile world or explore a remote corner of space, they often use rugged yet expendable astronauts skilled at adapting to harsh conditions. Willing to tackle almost any challenge for cash, Space Monkeys are ideally suited for galactic "grunt work," able to complete straightforward missions in difficult environments with little or no supervision. Small teams of Space Monkeys are often called upon to "clear" hostile worlds, build habitats on them, and prepare these worlds for colonization.

Select this advanced class if you want your character to survive and thrive in the far-flung reaches of space, risking all for adventure's sake . . . or a fat paycheck.

The fastest path into this advanced class is from the Tough hero basic class, though other paths are possible.

REQUIREMENTS

To qualify to become a Space Monkey, a character must fulfill the following criteria.

Starting Occupation: Astronaut Trainee.

Skills: Craft (mechanical or structural) 6 ranks, Survival 6 ranks.

Tough Hero Talent: Any one talent from the Unbreakable Talent Tree.

CLASS INFORMATION

The following information pertains to the Space Monkey advanced class.

HIT DIE

The Space Monkey gains 1d10 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Space Monkey gains a number of action points equal to 6 + one-half his character level, rounded down, every time he attains a new level in this class.

CLASS SKILLS

The Space Monkey's class skills are as follows.

SUPERIOR CONDITIONING

Beginning at 5th level, a Helix Warrior learns how to shake off adverse conditions. When a Helix Warrior is subjected to one of the following conditions, the duration of the condition's effect is halved: cowering, dazed, exhausted, fatigued, nauseated, panicked, paralyzed, shaken, and stunned. If the condition's duration is only 1 round, the Helix Warrior is not affected at all.

TABLE 1–13: THE SPACE MONKEY

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+2	+1	+0	Hibernation trance	+1	+0
2nd	+1	+3	+2	+0	Monkey's wrench	+1	+0
3rd	+2	+3	+2	+1	Bonus feat	+2	+0
4th	+3	+4	+2	+1	Monkeys unite	+2	+0
5th	+3	+4	+3	+1	Know location (+2)	+3	+1
6th	+4	+5	+3	+2	Bonus feat	+3	+1
7th	+5	+5	+4	+2	Monkey shines	+4	+1
8th	+6	+6	+4	+2	Know location (+4), space suitable	+4	+1
9th	+6	+6	+4	+3	Bonus feat	+5	+2
10th	+7	+7	+5	+3	Monkey shot	+5	+2

Balance (Dex), Bluff (Cha), Climb (Str), Computer Use (Int), Craft (mechanical, structural) (Int), Demolitions (Int), Disable Device (Int), Drive (Dex), Escape Artist (Dex), Jump (Str), Knowledge (earth and life sciences, technology) (Int), Navigate (Int), Pilot (Dex), Repair (Int), Search (Int), Survival (Wis), Treat Injury (Wis), Tumble (Dex).

Skill Points at Each Level: 5 + Int modifier (4 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Space Monkey advanced class.

HIBERNATION TRANCE

A Space Monkey can enter a deep trance that allows him to gain the full benefits of sleep or bed rest in half the usual time. For example, a Space Monkey requires only 4 hours to gain the benefits of 8 hours of sleep, or 12 hours of complete bed rest to reap the benefits of a full day of complete bed rest.

MONKEY'S WRENCH

Space Monkeys use tools expertly and creatively. Starting at 2nd level, a Space Monkey gains a competence bonus equal to one-half his Space Monkey class level on skill checks made when using a tool kit. This bonus stacks with the tool kit's normal equipment bonus.

BONUS FEATS

At 3rd, 6th, and 9th level, the Space Monkey gets a bonus feat. The bonus feat must be selected from the following list, and the Space Monkey must meet all the prerequisites of the feat to select it.

Acrobatic, Advanced Firearms Proficiency, Aircraft Operation (spacecraft), Archaic Weapon Proficiency, Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (heavy), Armor Proficiency (powered)*, Athletic, Blind-Fight, Brawl, Builder, Combat Reflexes, Force Stop, Gearhead, Improved Brawl, Improved Bull Rush, Improved Feint, Improved Knockout Punch, Jack of All Trades*, Knockout Punch, Power Attack, Run, Spacer*, Streetfighting, Toughness, Vehicle Dodge, Vehicle Expert, Weapon Focus, Zero-G Training*.

** Indicates a feat described in this chapter.*

MONKEYS UNITE

Space Monkeys fight better together. Starting at 4th level, a Space Monkey gains a +1 morale bonus on attack rolls when fighting adjacent to another Space Monkey.

Furthermore, a Space Monkey gains a +1 morale bonus on attack rolls against an opponent flanked by another Space Monkey; this bonus is in addition to the usual +2 bonus for flanking.

KNOW LOCATION

At 5th level, a Space Monkey gains a +2 competence bonus on Navigate and Survival checks to avoid becoming lost. This bonus increases to +4 at 8th level.

MONKEY SHINES

Upon reaching 7th level, a Space Monkey has learned sneaky tactics such as kicking dirt in a foe's face, pretending to be badly wounded, or forcing an opponent to stare into the sun. He can use the Bluff technique of feinting in combat as a move action, allowing him to feint and attack in the same round. (For more information on feinting in combat, see pages 49–50 of the *d20 Modern Roleplaying Game*.)

If the Space Monkey also has the Improved Feint feat, he gains a +4 bonus (instead of the feat's usual +2 bonus) on Bluff checks made to feint in combat.

SPACE SUITABLE

At 8th level, a Space Monkey becomes more comfortable in armor. He treats any suit of armor as though its armor penalty and maximum Dexterity bonus were 1 better.

MONKEY SHOT

By spending an action point at the end of his turn, a 10th-level Space Monkey gains an extra attack at his full attack bonus. (Remember that a character can spend only one action point per round.)

SWINDLER

Swindlers use their keen understanding of chance and probability to manipulate others—often for profit, but sometimes for nobler ends. They are masters of their own fate, architects of their own destiny. To them, luck is the supreme force that created the universe, and it governs how everything in the universe interacts. Swindlers gamble on their ability to be in the right place at the right time, and through their actions, they can alter the fortunes of others for good or ill. The craftiest Swindlers learn new ways to manipulate their own luck as well, allowing them to beat the odds more often than the laws of probability would allow.

Select this advanced class if you want your character to use luck and guile as weapons for personal gain or as instruments to benefit the less fortunate.

The fastest path into this advanced class is from the Charismatic hero basic class, though other paths are possible.

REQUIREMENTS

To qualify to become a Swindler, a character must fulfill the following criteria.

Skills: Bluff 6 ranks, Disguise 4 ranks, Gamble 6 ranks.

TABLE 1–14: THE SWINDLER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+0	+1	+2	Cheat fate	+0	+0
2nd	+1	+0	+2	+3	Thousand faces	+1	+0
3rd	+2	+1	+2	+3	Bonus feat	+1	+1
4th	+3	+1	+2	+4	Fortune's favor (+2)	+1	+1
5th	+3	+1	+3	+4	Warp probability (30 ft.)	+2	+1
6th	+4	+2	+3	+5	Bonus feat	+2	+2
7th	+5	+2	+4	+5	Fortune's favor (+4)	+2	+2
8th	+6	+2	+4	+6	Warp probability (60 ft.)	+3	+2
9th	+6	+3	+4	+6	Bonus feat	+3	+3
10th	+7	+3	+5	+7	Fortune's favor (+6)	+3	+3



Troy the Swindler

Charismatic Hero Talents: Any two of the following talents: Charm, Coordinate, Fast-Talk.

CLASS INFORMATION

The following information pertains to the Swindler advanced class.

HIT DIE

The Swindler gains 1d6 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Swindler gains a number of action points equal to 7 + one-half his character level, rounded down, every time he attains a new level in this class. (The Swindler's ability to manipulate probability entitles him to a higher number of action points per class level than other advanced classes.)

CLASS SKILLS

The Swindler's class skills are as follows.

Bluff (Cha), Diplomacy (Cha), Disguise (Cha), Escape Artist (Dex), Forgery (Int), Gamble (Wis), Gather Information (Cha), Knowledge (behavioral sciences, business, civics, current events, history, popular culture, streetwise, theology and philosophy) (Int), Perform (act) (Cha), Read/Write Language (none), Research (Int), Sense Motive (Wis), Sleight of Hand (Dex), Speak Language (none), Tumble (Dex).

Skill Points at Each Level: 7 + Int modifier (6 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Swindler advanced class.

CHEAT FATE

Fortune favors the Swindler. Once per day, he may reroll one roll that he has just made before the GM declares whether the roll results in success or failure. The Swindler must take the result of the reroll, even if it's worse than the original roll.

THOUSAND FACES

A Swindler's ability to manipulate probability makes him unpopular in certain circles, increasing the need for a ready number of disguises.

At 2nd level, the Swindler becomes a master of the quick disguise. He can don a convincing disguise in one-tenth the normal time (1d4 minutes).

BONUS FEATS

At 3rd, 6th, and 9th level, the Swindler gets a bonus feat. The bonus feat must be selected from the following list, and the Swindler must meet all the prerequisites of the feat to select it.

Action Boost*, Blind-Fight, Confident, Deceptive, Educated, Elusive Target, Low Profile, Nimble, Renown, Trustworthy.

** Indicates a feat described in this chapter.*

FORTUNE'S FAVOR

Starting at 4th level, the Swindler learns to subtly manipulate the fortunes of his adversaries, making him harder to strike in combat. He can spend an action point to gain a +2 luck bonus to Defense against all attacks for 1 round. The Swindler must use this ability on his turn, and the bonus lasts until just before the Swindler's next turn. A Swindler uses this ability instead of Dodge on his turn.

The luck bonus to Defense increases to +4 at 7th level and +6 at 10th level.

WARP PROBABILITY

At 5th level, the Swindler can affect another creature's attack roll, skill check, ability check, level check, or saving throw.

As a free action during another creature's turn, the Swindler can spend an action point to alter the target's d20 roll result. The Swindler must be within 30 feet of the target, must be able to see the target, and must declare that he's spending the action point before the GM reveals the result of the target's roll. The Swindler's action-point die result counts either as a bonus or penalty to the target's roll, at the Swindler's discretion.

At 8th level, the range of this ability increases to 60 feet.

TECHNOSAVANT

A skilled if somewhat quirky technician, the Technosavant combines natural genius with expert training to become a master of technology and technological devices. As an avid collector of robotic, cybernetic, and computer hardware, she often seems more comfortable around machines than living, breathing beings. She uses her mechanical aptitude to solve everyday problems, and she communicates with other Technosavants in a language consisting of common words interlaced with trendy yet impenetrable technical jargon—much of it invented from scratch.

Select this advanced class if you want your character to master robotics, cybernetics, and alien technology, as well as to put this technology to good use in the field.

The fastest path into this advanced class is from the Smart hero basic class, *though other paths are possible.*

REQUIREMENTS

To qualify to become a Technosavant, a character must fulfill the following criteria.

Skills: Computer Use 6 ranks, Craft (electrical or mechanical) 6 ranks, Disable Device 6 ranks, Knowledge (technology) 6 ranks.

CLASS INFORMATION

The following information pertains to the Technosavant advanced class.

HIT DIE

The Technosavant gains 1d6 hit points per level. The character's *Constitution modifier applies.*

ACTION POINTS

The Technosavant gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

CLASS SKILLS

The Technosavant's class skills are as follows.

Computer Use (Int), Craft (electrical, mechanical) (Int), Demolitions (Int), Disable Device (Int), Drive (Dex), Knowledge (behavioral sciences, earth and life sciences, physical sciences, popular culture, technology) (Int), Navigate (Int), Pilot (Dex), Profession (Wis), Read/Write Language (none), Repair (Int), Research (Int), Speak Language (none), Spot (Wis).



Roberta the Technosavant

Skill Points at Each Level: 7 + Int modifier (6 + Int modifier for nonhumans).

TABLE 1–15: THE TECHNOSAVANT

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+0	+1	+1	Salvage, Technocant	+1	+0
2nd	+1	+0	+2	+2	Robomancer, technophile	+1	+0
3rd	+2	+1	+2	+2	Bonus feat	+2	+0
4th	+3	+1	+2	+2	Cybermancer, skilled salvager	+2	+1
5th	+3	+1	+3	+3	Down with robots (+1d6/+4), exotic weapon adept	+3	+1
6th	+4	+2	+3	+3	Bonus feat	+3	+1
7th	+5	+2	+4	+4	Super cybersurgeon, virtual Houdini	+4	+2
8th	+6	+2	+4	+4	Down with robots (+2d6/+8), expeditious salvager	+4	+2
9th	+6	+3	+4	+4	Bonus feat	+5	+2
10th	+7	+3	+5	+5	Build prototype	+5	+3

CLASS FEATURES

The following class features pertain to the Technosavant advanced class.

SALVAGE

A Technosavant gains the Salvage feat (see page 13) for free.

TECHNOCANT

A Technosavant learns to read, write, and speak a trendy jargon-riddled dialect called Technocant. In other words, the Technosavant gains Read/Write Technocant and Speak Technocant as free skills.

Characters without the Read/Write Technocant skill can translate written Technocant with a successful Decipher Script check (DC 20). Characters without the Speak Technocant skill can translate spoken Technocant with a successful Intelligence check (DC 20), although any character with the linguist talent can add her Smart hero levels to the check.

The Read/Write Technocant and Speak Technocant skills each cost 1 skill rank.

ROBOMANCER

At 2nd level, the Technosavant becomes a master of robotics. With the help of some mechanical "magic," she takes half the normal time to build or repair a robot's frame or a robotic component.

TECHNOPHILE

At 2nd level, the Technosavant adds one-half her Technosavant class level to any Knowledge (technology) check made to identify an unfamiliar piece of technology or alien artifact (see Expanded Skills, page 10).

BONUS FEATS

At 3rd, 6th, and 9th level, the Technosavant gets a bonus feat. The bonus feat must be selected from the following list, and the Technosavant must meet all the prerequisites of the feat to select it.

Alien Weapon Proficiency*, Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (powered)*, Builder, Craft Cybernetics*, Cybernetic Surgery*, Cybertaker*, Exotic Firearms Proficiency, Exotic Melee Weapon Proficiency, Gearhead, Mastercrafter*, Vehicle Expert.

** Indicates a feat described in this chapter.*

CYBERMANCER

Starting at 4th level, the Technosavant becomes a master of cybernetics. With the help of some mechanical "magic," she takes half the normal time to build or repair a cybernetic attachment.

SKILLED SALVAGER

A Technosavant of 4th level or higher has a special knack for scavenging useful components from destroyed vehicles, mecha, starships, robots, and cybernetic attachments.

When using the Salvage feat, the Technosavant gains a competence bonus on her Search checks equal to one-half her Technosavant class level.

DOWN WITH ROBOTS

A Technosavant of 5th level or higher can use her knowledge of robotics to more easily defeat and disable robots.

The Technosavant deals +1d6 points of damage against robots by targeting slight weaknesses in their design or armor. In addition, the Technosavant gains a +4 bonus on grapple checks against robots, enabling her to deactivate them more easily using the Disable Device skill (see Expanded Skills, page 10).

At 8th level, the bonus to damage against robots increases to +2d6, and the bonus on grapple checks against robots improves to +8.

EXOTIC WEAPON ADEPT

Starting at 5th level, the Technosavant becomes more adept at handling exotic weapons without any formal training. She suffers only a –2 penalty (instead of the usual –4 penalty) when wielding an exotic melee weapon or exotic ranged weapon with which she is not proficient.

SUPER CYBERSURGEON

At 7th level, the Technosavant gains a +4 competence bonus on Treat Injury checks made to perform cybernetic surgery; see the Cybernetic Surgery feat description on page 12 for more information.

VIRTUAL HOUDINI

A Technosavant of 7th level or higher can perform small wonders with a computer. She gains the following benefits when using the Computer Use skill:

Find File, Degrade Programming, or Write Program: When attempting to find a file, degrade a computer program, or write a program, a Technosavant who exceeds the Computer Use check DC by 5 or more accomplishes her intended task in half the normal time (minimum 1 round).

Cover Tracks: A Technosavant who successfully covers her tracks while hacking into a computer system imposes a –10 penalty (instead of the normal –5 penalty) on any attempt made to identify her.

EXPEDITIOUS SALVAGER

A Technosavant of 8th level or higher can use the Salvage feat to salvage a wrecked vehicle, mecha, starship, robot, or cybernetic attachment in half the usual time (see the Salvage feat description, page 13, for details).

BUILD PROTOTYPE

At 10th level, a Technosavant can build robots, robotic components, and cybernetic attachments of a Progress Level one step higher. However, the Craft check DCs for such items are increased by +10.

TRACER

The Tracer is always looking for someone or something, stalking his elusive quarry with unyielding resolve. His expertise in pursuing fugitives makes him the ideal bounty hunter or truant officer. Sometimes his skills are put to the test tracking down missing persons or packages. His talents also make him a skilled assassin, although only the most emotionally detached Tracers are comfortable with that role. Regardless of how the Tracer earns his keep, he invariably finds *what he's looking for . . . or dies trying.*

Select this advanced class if you want your character to excel at hunting fugitives or locating missing persons or consignments.

The fastest path into this advanced class is from the Dedicated hero basic class, though other paths are possible.

REQUIREMENTS

To qualify to become a Tracer, a character must fulfill the following criteria.

Base Attack Bonus: +2.

Skills: Investigate 6 ranks, Knowledge (behavioral sciences or streetwise) 6 ranks, Survival 6 ranks.

Feat: Track.

CLASS INFORMATION

The following information pertains to the Tracer advanced class.

HIT DIE

The Tracer gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Tracer gains a number of action points equal to 6 + one-half his character level, rounded down, every time he attains a new level in this class.

CLASS SKILLS

The Tracer's class skills are as follows.

Climb (Str), Computer Use (Int), Disable Device (Int), Disguise (Cha), Drive (Dex), Gather Information (Cha), Hide (Dex), Investigate (Int), Jump (Str), Knowledge (behavioral sciences, civics, streetwise, tactics) (Int), Listen (Wis), Move Silently (Dex), Navigate (Int), Pilot (Dex), Research (Int), Search (Int), Sense Motive (Wis), Spot (Wis), Survival (Wis), Swim (Str).

Skill Points at Each Level: 5 + Int modifier (4 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Tracer advanced class.

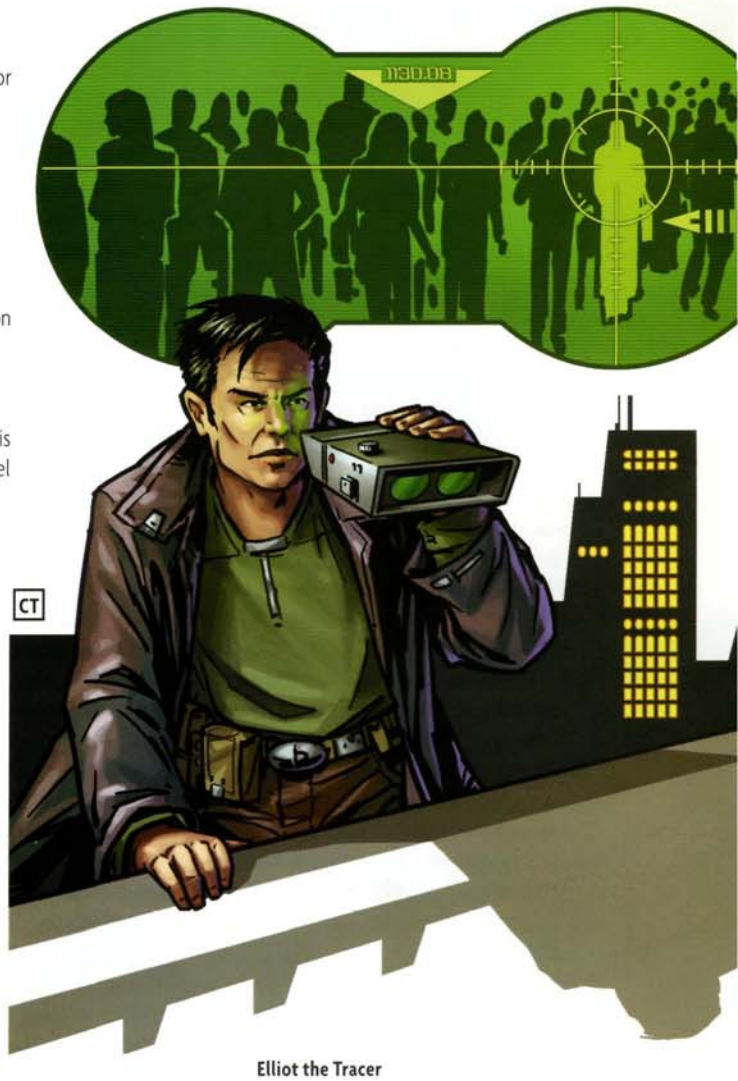
TARGET SPECIES

At 1st level, a Tracer selects a species or specific kind of creature his "target species"—human, fraal, moreau, illithid, orc, n'sss, puppeteer, vrusk, or some other choice (subject to the GM's approval). The Tracer must have previously encountered at least one member of the target species to select it. An expert tracker, the Tracer gains a +2 bonus on Bluff, Intimidate, Listen, Sense Motive, Spot, and Survival checks when using these skills against members of the target species. Likewise, he gets a +2 bonus on weapon damage rolls against such creatures.

As a free action, a Tracer may spend an action point to change his target species.

URBAN TRACKING

At 1st level, a Tracer gains the bonus feat Urban Tracking (see page 15).



Elliot the Tracer

SWIFT STRIKE

At 2nd level, the Tracer becomes skilled at taking down unwary targets quickly. He deals +1d6 points of damage on successful melee and ranged weapon attacks made against a flat-footed opponent. This extra damage can be lethal or nonlethal, as determined by the choice of weapon and the manner in which it's used.

The extra damage increases to +2d6 at 5th level and +3d6 at 8th level.

BONUS FEATS

At 3rd, 6th, and 9th level, the Tracer gets a bonus feat. The bonus feat must be selected from the following list, and the Tracer must meet all the prerequisites of the feat to select it.

TABLE 1–16: THE TRACER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+1	+0	+2	+0	Target species, Urban Tracking	+1	+0
2nd	+2	+0	+3	+0	Swift strike +1d6	+2	+1
3rd	+3	+1	+3	+1	Bonus feat	+2	+1
4th	+4	+1	+4	+1	Uncanny stealth (full speed)	+2	+1
5th	+5	+1	+4	+1	Swift strike +2d6	+3	+2
6th	+6	+2	+5	+2	Bonus feat	+3	+2
7th	+7	+2	+5	+2	Uncanny stealth (charge/run)	+4	+2
8th	+8	+2	+6	+2	Swift strike +3d6	+4	+3
9th	+9	+3	+6	+3	Bonus feat	+4	+3
10th	+10	+3	+7	+3	Swift tracking	+5	+3

Advanced Combat Martial Arts, Advanced Firearms Proficiency, Aircraft Operation (spacecraft), Alertness, Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (powered)*, Athletic, Combat Throw, Dead Aim, Double Tap, Elusive Target, Far Shot, Improved Combat Martial Arts, Improved Combat Throw, Improved Initiative, Low Profile, Nerve Pinch*, Precise Shot, Shot on the Run, Skip Shot, Spacer*, Stealthy, Trustworthy, Unbalance Opponent.

** Indicates a feat described in this chapter.*

UNCANNY STEALTH

Tracers learn to move quickly yet quietly.

At 4th level, a Tracer no longer suffers the –5 penalty on Hide and Move Silently checks while moving at full speed.

At 7th level, a Tracer suffers only a –10 penalty on Hide and Move Silently checks while running or charging (instead of the normal –20 penalty).

SWIFT TRACKING

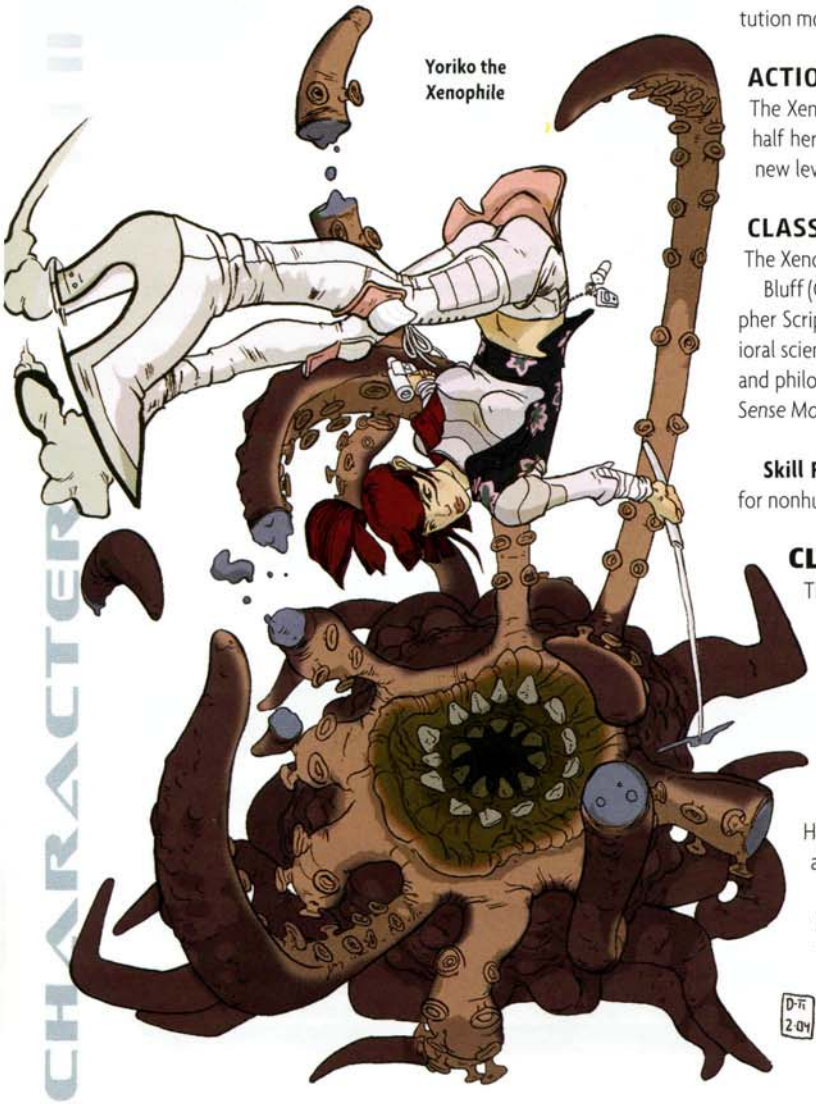
At 10th level, the Tracer can move a full speed without penalty when using the Survival skill to track. He can move at twice normal speed while tracking, but takes a –10 penalty on the check when doing so.

XENOPHILE

The Xenophile studies and analyzes the physiology, psychology, culture, and technology of other species. A Xenophile's fascination with "xenomorphs" (alien life forms) can manifest in myriad ways, but her interest in other species doesn't bestow any special kinship with them. While some Xenophiles express genuine fondness or compassion for new xenomorphs they encounter, a roughly equal number are dispassionate researchers interested only in advancing the science of xenobiology. A few Xenophiles actively use such knowledge to combat and exterminate perceived or real xenomorphic threats to their own species.

Select this advanced class if you want your character to know the abilities, strengths, and weaknesses of various xenomorphs—knowledge that might be used to help or harm them.

The fastest path into this advanced class is from the Smart hero basic class, though other paths are possible.



REQUIREMENTS

To qualify to become a Xenophile, a character must fulfill the following criteria.

Skills: Knowledge (earth and life sciences) 6 ranks, Knowledge (technology) 6 ranks.

Smart Hero Talent: Either linguist or exploit weakness.

CLASS INFORMATION

The following information pertains to the Xenophile advanced class.

HIT DIE

The Xenophile gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Xenophile gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

CLASS SKILLS

The Xenophile's class skills are as follows.

Bluff (Cha), Computer Use (Int), Craft (pharmaceutical) (Int), Decipher Script (Int), Diplomacy (Cha), Knowledge (arcane lore, behavioral sciences, earth and life sciences, history, technology, theology and philosophy) (Int), Read/Write Language (none), Research (Int), Sense Motive (Wis), Speak Language (none), Treat Injury (Wis).

Skill Points at Each Level: 7 + Int modifier (6 + Int modifier for nonhumans).

CLASS FEATURES

The following class features pertain to the Xenophile advanced class.

XENOLORE

A Xenophile can make a Knowledge check to identify certain characteristics of a xenomorph, including any special attacks, special qualities, or vulnerabilities. In general, the DC of the Knowledge check equals 10 + the xenomorph's Hit Dice. A successful check allows the Xenophile to unlock a single fact about the xenomorph. For every 5 points by which her check result exceeds the DC, the Xenophile learns another piece of useful information.

The type of Knowledge check depends on the xenomorph's creature type, as shown below:

Knowledge (arcane lore): Fey, magical beasts.

TABLE 1–17: THE XENOPHILE

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+1	+0	+2	Xenolore, xenotype (1st)	+0	+0
2nd	+1	+2	+0	+3	Xenoresistance (+1)	+1	+1
3rd	+2	+2	+1	+3	Bonus feat	+1	+1
4th	+3	+2	+1	+4	Xenotype (2nd)	+1	+1
5th	+3	+3	+1	+4	Xenodefense (+1), xenoresistance (+2)	+2	+2
6th	+4	+3	+2	+5	Bonus feat	+2	+2
7th	+5	+4	+2	+5	Xenotype (3rd)	+2	+2
8th	+6	+4	+2	+6	Xenoresistance (+3)	+3	+3
9th	+6	+4	+3	+6	Bonus feat	+3	+3
10th	+7	+5	+3	+7	Xenodefense (+2), xenotype (4th)	+3	+3

Knowledge (earth and life sciences): Aberrations, animals, dragons, elementals, giants, humanoids, monstrous humanoids, oozes, plants, vermin.

Knowledge (technology): Constructs.

Knowledge (theology and philosophy): Outsiders, undead.

XENOTYPE

A Xenophile studies the behaviors and weaknesses of particular xenomorphs and knows how to exploit them.

At 1st level, a Xenophile may select a type of creature (also called a "xenotype") from among those given on Table 1–18: Xenotypes. She must meet the special prerequisite to choose a xenotype, as specified in the table. Due to her extensive study of the chosen type of foe and training in the proper techniques for combating or negotiating with such creatures, the Xenophile gains a +2 bonus on Bluff, Intimidate, Listen, Sense Motive, Spot, and Survival checks when using these skills against members of the chosen xenotype. Likewise, she gets a +2 bonus on weapon damage rolls against such creatures.

At 4th, 7th, and 10th level, the Xenophile may select an additional xenotype from those given on Table 1–18. In addition, at each such interval, the bonus against any one xenotype (including the one just selected, if desired) increases by 2. For example, a 4th-level Xenophile has two chosen xenotypes; against one, she gains a +4 bonus on Bluff, Intimidate, Listen, Sense Motive, Spot, and Survival checks and weapon damage rolls, and against the other she has a +2 bonus. At 7th level, she has three xenotypes, and she gains an additional +2 bonus that she can assign to any one of the three. Thus, her bonuses could be +4, +4, +2 or +6, +2, +2.

A Xenophile who chooses humanoids as a xenotype must also specify a particular species (such as elf, fraal, kroath, moreau, or orc).

XENORESISTANCE

At 2nd level, a Xenophile gains a +1 bonus on saving throws to resist the extraordinary, spell-like, or supernatural attacks of species other than her own. This bonus increases to +2 at 5th level and +3 at 8th level.

BONUS FEATS

At 3rd, 6th, and 9th level, the Xenophile gets a bonus feat. The bonus feat must be selected from the following list, and the Xenophile must meet all the prerequisites of the feat to select it.

Alien Weapons Proficiency*, Combat Reflexes, Dodge, Educated, Medical Expert, Mobility, Studious, Surgery, Weapon Focus, Xenomedic*.

** Indicates a feat described in this chapter.*

XENODEFENSE

At 5th level, during her action, the Xenophile can designate an opponent and receive a +1 insight bonus to Defense against any subsequent attacks from that opponent. The opponent must belong to one of the Xenophile's chosen xenotypes (see Xenotype, above). The Xenophile can select a new opponent on any action.

At 10th level, the insight bonus to Defense increases to +2.

TABLE 1–18: XENOTYPES

Selected Xenotype	Example [1]	Special Prerequisite
Aberration	Star doppelganger	Knowledge (earth and life sciences) 12 ranks
Animal	Shark	None
Construct	Robot	Knowledge (technology) 9 ranks
Dragon	Wyrm	Knowledge (earth and life sciences) 9 ranks
Elemental	Etoile	Knowledge (earth and life sciences) 9 ranks
Fey	Jynx	Knowledge (arcane lore) 6 ranks
Giant	Urban wendigo	None
Humanoid [2]	Human	None
Magical beast	Grendelspawn	Knowledge (arcane lore) 9 ranks
Monstrous humanoid	Sesheyan	Knowledge (earth and life sciences) 9 ranks
Ooze	Terrestrial effluvium	Knowledge (earth and life sciences) 9 ranks
Outsider	Dimensional horror	Knowledge (theology and philosophy) 9 ranks
Plant	Monstrous flytrap	None
Undead	Bodak	Knowledge (theology and philosophy) 6 ranks
Vermin	Puppeteer	None

1 Example creatures are taken from this book, the *d20 Modern Roleplaying Game*, the *Urban Arcana™ Campaign Setting*, or the *d20 Menace Manual™*.

2 Choose a specific humanoid species.

CHAPTER TWO:

CAMPAIGNS



The nine campaign models in this chapter illustrate the breadth of the science fiction genre, presenting the Gamemaster with multiple settings upon which to hang adventures. Each campaign model builds around a particular theme. The heroes might be fighting horrors from deep space, leaping between dimensions to prevent the destruction of the universe, or surviving on post-apocalyptic Earth. You've probably seen most or all of these themes covered before in books, television shows, and movies. Each theme carries a unique tone and inspires particular types of adventures. In the *Genetech* campaign, mutant heroes wage war against prejudice and intolerance, while the *Bughunters* campaign is all about killing aliens.

Each campaign model opens with a brief summary, then describes how the heroes fit in to the setting. The information that follows provides the Gamemaster with enough information to answer some fundamental questions about the setting, such as the ideal Progress Level of the campaign, the *d20 Future* rules modules needed to run the campaign, descriptions of some key players in the unfolding storyline, and adventure hooks. Several of the campaign models conclude with a campaign-specific advanced class available to heroes (at the GM's discretion, of course).

BUGHUNTERS

"Interesting. Look how small this thing's brain is. Whatever it was, it wasn't smart enough—or big enough—to do the kind of damage we've seen here. That means there's more of them around here. And they're bigger."

SUMMARY

Humanity reaches out to colonize the stars and finds that the flora and fauna sometimes object. Enter professional soldiers who locate, attack, and destroy hostile aliens.

CAMPAIGN IN BRIEF

Bughunters presents a campaign setting in which humanity has entered an era of galactic expansion, leading to encounters with hostile alien life forms. It's the job of the lucky heroes to respond

KA

Bughunters

to alien "infestations" by traveling to distant worlds and wiping out anything that's inimical to human life. The heroes are paid reasonably well as soldiers—but no ordinary soldier would take the kind of jobs that the Bughunters pursue.

A Bughunter's life can be disturbingly short. Hostile alien life forms don't have a special ability to kill Bughunters, but they usually outnumber the soldiers. Some might argue that the aliens have rights, too. Bughunters don't share this view. To them, the aliens are akin to rats in a cellar or roaches in a kitchen.

ROLE OF THE HEROES

The heroes in this setting are all clones, trained as soldiers by the Colonial Authority and sent out in starships to trouble spots on distant planets. Their mission is to locate and destroy every hostile alien organism they encounter. Most of the time, however, their mission degenerates into "stay alive until the evac ship arrives."

Bughunters are understandably fatalistic. They don't have much to look forward to in life except another dangerous mission to another dangerous rock to tangle with another dangerous alien life form. Their real reward isn't their paycheck but the gratitude of the colonists whose lives they save.

CAMPAIGN TRAITS

Bughunters puts the heroes on the front line of science fiction action movies like *Aliens* and *Starship Troopers*. The creatures that the heroes face may or may not be intelligent, but it doesn't really matter: Peaceful coexistence is for diplomats. The Bughunters' job is to wipe out the alien life forms.

PROGRESS LEVEL

A *Bughunters* campaign can be set at Progress Level 6 or higher.

RULES SET

The *Bughunters* campaign setting uses the rules on clones (see Chapter 5: Scientific Engineering), except that the heroes themselves are the clones. Most are genetically modified to favor physical strength and speed, making the majority of Bughunters good candidates for the Strong and Fast basic classes. Shortly after the cloning process concludes, the new clones are trained in hand-to-hand and ranged combat—getting them ready for their first mission. A few have actually acquired the Soldier advanced class by the time they go on their first mission; most are still just Strong/Fast heroes. Should they survive, their first mission might be the catalyst that lets them move into the Bughunter advanced class.

As for the foes the Bughunters face, check out Chapter 13: Xenobiology of this book or Chapter Eight: Friends and Foes in the *d20 Modern Roleplaying Game*. You can also use the klick from the *Star*Drive* campaign model (see page 49) as a generic "bug" for heroes to exterminate.

ADVENTURE SETUPS

In *Bughunters*, the centerpiece of every adventure is most likely some slavering alien monster. Certainly there can be intrigue and diplomatic entanglements with colonists, law enforcement, and other military units, but what the players will be looking for is a horde of alien killing machines bursting out of the shadows in a blur of fangs and talons. Your job as the Gamemaster is to determine why this particular type of monster is so hell-bent on tearing innocent colonists to shreds, when most self-respecting creatures of animal intelligence would do their best to keep as much distance between themselves and the new arrivals as possible.

THE HUNTING GROUND (LOW-LEVEL ADVENTURE)

Sometimes, a soft, juicy target is just too hard for an alien predator to pass up. The new settlement on a heavily forested alien world has drawn hungry beasts from miles around, and they're doing everything they can to get in and feast on all that unprotected flesh. They haven't yet connected that popping noise and the stinging sensation they sometimes feel when they're close to the walls of the settlement, so firearms just aren't deterring them. What's needed is more firepower. Enter the Bughunters.

The heroes, upon arrival, are in deep. The landing pad is in an area of the settlement that isn't secure, and their arrival is greeted by hungry predators. Then some of the colony's leaders attempt to convince the Bughunters that their orders are to evacuate "essential personnel" (meaning themselves). If the heroes refuse, several colonists attempt to steal their dropship. Now the heroes must not only finish their assigned mission, but they have to contend with hysterical colonists who attempt to cajole, threaten, bribe, and seduce the heroes at every opportunity. Monsters may surround the settlement, but there are just as many threats inside the walls.

THE SPAWNING GROUND (MID-LEVEL ADVENTURE)

Colonists can't be expected to know everything about the mating habits of alien life forms. When a mining colony abruptly stops all radio communication with the Colonial Authority, the Bughunters are sent in to check things out. The colony is empty, though it looks like the colonists did an admirable job of defending themselves before they died. Some fuzzy video footage shows that an oversized flying insect attacked the colonists, but there's no sign of any such bug.

Unfortunately, the heroes can't just leave; a second colony ship is on its way to the planet, and just because there are no threats at the moment doesn't mean there won't be after the Bughunters leave. So the heroes have to go hunting, and, not surprisingly, the trail leads into the mines. Sure enough, the heroes find a hive of alien insects—and the missing colonists, all of whom have been implanted with eggs. Many are still alive, but it won't be much longer before the eggs hatch and the larval bugs make the dead colonists their first meal. If they can be treated before the eggs hatch, the remaining colonists have a good chance of surviving.

Getting the colonists out of the mine is rough; the insects object, and more than one colonist's eggs hatch during the journey. Making matters worse, the second colony ship has arrived early, and the noise of its arrival has attracted most of the insects from the mines. The Bughunters have a nuclear device that can destroy all the insects in the mines—but it will also render the mines radioactive, ruining the hopes of all the newly arrived miners. It's a tough call for the heroes, but they're the only ones who can decide.

THE EXPERIMENT (HIGH-LEVEL ADVENTURE)

The Colonial Authority isn't only callous about the lives of Bughunters. They're also willing to sacrifice an entire agricultural colony to retrieve a specimen of the most dangerous alien life form yet—a monster so dangerous that it would be worth billions to the first corporation to learn how to clone it. But something upsets the plan: The alien monster isn't the only alien on the planet. Another alien entity is on planet, and it is systematically destroying every sample of the monster.

The Bughunters are sent to the planet to wipe out the invading alien monster, but things go wrong almost immediately. An accident

in the munitions bay of the heroes' transport sets off a chain reaction explosion, and the heroes must jettison all of their nuclear weapons. A hydraulic seal bursts while landing, grounding the heroes' dropship until repairs can be finished. The colonists distrust the Bughunters from the very beginning, aware that their colony has been designated as a test site, and that the heroes are there to ensure the completion of the experiment. Adding fuel to the fire is an intercepted message for the heroes, instructing them to round up any colonists who show signs of "infection" and return them to the Colonial Authority for "examination."

When colonists in outlying farms start disappearing, a firefight breaks out in the main settlement. The heroes see some sort of technologically advanced alien—and it fires on them. In the ensuing chase, the heroes discover that there's not one, but *four* of these aliens, and they're abducting colonists. After the smoke clears, a quick investigation reveals that the colonists the aliens were after are the same ones on the Colonial Authority's "infected" list.

The heroes have run into their counterparts from an alien civilization: Bughunters from another world. These aliens have been conducting training exercises on this planet for centuries and were startled to discover that a starfaring species had set up camp in the middle of their monster-breeding area. Now they are desperate to prevent any of their creations from getting off the planet.

BUGHUNTER

The galaxy can be such an unfriendly place, and Bughunters are what some diplomats call a "necessary evil." Most Bughunters are cloned; their work is so dangerous that the hazard pay on a single mission alone would make an ordinary person a millionaire. Clones have no legal rights; they don't even have to be paid. Their job is to do or die out on the fringes of civilized space.

Select this advanced class if you want your character to live the "on-the-edge" lifestyle of a professional alien exterminator.

The fastest path into the Bughunter advanced class is from the Strong hero basic class, though other paths are certainly possible.

REQUIREMENTS

To qualify to become a Bughunter, a character must fulfill all the following criteria.

Base Attack Bonus: +4.

Skills: Knowledge (tactics) 3 ranks.

Feats: Personal Firearms Proficiency, Advanced Firearms Proficiency.

CLASS INFORMATION

The following information pertains to the Bughunter advanced class.

HIT DIE

The Bughunter gains 1d10 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Bughunter gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

CLASS SKILLS

The Bughunter's class skills are as follows.

Climb (Str), Demolitions (Int), Drive (Dex), Handle Animal (Cha), Intimidate (Cha), Jump (Str), Knowledge (current events, earth and life sciences, popular culture, tactics) (Int), Listen (Wis), Pilot (Dex), Profession (Wis), Read/Write Language (none), Speak Language (none), Spot (Wis), Survival (Wis), Swim (Str), Treat Injury (Wis).

Skill Points at Each Level: 5 + *Int modifier* (4 + *Int modifier* for nonhumans).

CLASS FEATURES

The following features pertain to the Bughunter advanced class.

WEAPON FOCUS

At 1st level, a Bughunter gains the Weapon Focus class feature, providing the benefit of the feat with the same name. The Bughunter chooses a specific weapon. She can also choose unarmed strike or grapple. The Bughunter must be proficient with the weapon.

The Bughunter gains a +1 bonus on all attack rolls made using the selected weapon.

IMPROVED REACTION

At 2nd level, a Bughunter gains a +2 competence bonus on initiative checks.

BONUS FEATS

At 3rd, 6th, and 9th level, the Bughunter gets a bonus feat. The bonus feat must be selected from the following list, and the Bughunter must meet all the prerequisites of the feat to select it.

Advanced Combat Martial Arts, Archaic Weapons Proficiency, Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (heavy), Brawl, Burst Fire, Cleave, Combat Martial Arts, Combat Reflexes, Double Tap, Endurance, Exotic Firearms Proficiency, Exotic Melee Weapon Proficiency, Far Shot, Great Cleave, Improved Brawl, Improved Combat Martial Arts, Point Blank Shot, Power Attack, Precise Shot, Shot on the Run, Strafe, Zero-G Training*.

**New feat described in Chapter One: Characters.*

TABLE 2–1: THE BUGHUNTER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+1	+1	+0	Weapon focus	+1	+0
2nd	+1	+2	+2	+0	Improved reaction	+1	+0
3rd	+2	+2	+2	+1	Bonus feat	+2	+0
4th	+3	+2	+2	+1	Weapon specialization	+2	+0
5th	+3	+3	+3	+1	Hunter's grudge +2	+3	+1
6th	+4	+3	+3	+2	Bonus feat	+3	+1
7th	+5	+4	+4	+2	Greater weapon specialization	+4	+1
8th	+6	+4	+4	+2	Hunter's grudge +4	+4	+1
9th	+6	+4	+4	+3	Bonus feat	+5	+2
10th	+7	+5	+5	+3	Controlled autofire	+5	+2

WEAPON SPECIALIZATION

At 4th level, the Bughunter gains weapon specialization with a specific melee or ranged weapon that she also has applied the Weapon Focus feat or class feature to. She gains a +2 bonus on damage rolls with the weapon.

GREATER WEAPON SPECIALIZATION

At 7th level, a Bughunter gains greater weapon specialization with the weapon she selected at 4th level. This ability increases the bonus on damage rolls to +4 when using the selected weapon.

HUNTER'S GRUDGE

At 5th level, the Bughunter draws on her past experiences with alien creatures to fuel her fire against those she faces now. The Bughunter gains a +2 competence bonus on Listen, Spot, and Survival checks when using these skills against alien creatures of a specific type (see below). She also gains a +2 bonus on weapon damage rolls against such creatures. At 8th level, this bonus increases to +4.

The Bughunter may choose any alien race or alien creature she has encountered so far, designating that as the alien being she both knows the most about and most hates. (To get anything out of this ability, a player should try to select something that his character is reasonably certain will show up again in the campaign.)

CONTROLLED AUTOFIRE

At 10th level, a Bughunter using a weapon on autofire imposes a –5 penalty on creatures' Reflex saves to avoid taking damage (effectively increasing the DC from 15 to 20). See Autofire on page 148 of the *d20 Modern Roleplaying Game* for details.

DIMENSION X

"We are now in a state of alert. After receiving a distress message from the United American Emirate, and a garbled plea for assistance from the Napoleonic Union, we have concluded that something catastrophic has happened to dimensions JN-38-A and at least half of RU-997-V-M-R. We just don't know what."

SUMMARY

Dimensional explorers face Armageddon as a rogue dimension remakes other dimensions in its own image.

CAMPAIGN IN BRIEF

In the *Dimension X* campaign, all the various dimensions created since the dawn of time are being systematically erased from existence. Since the heroes are from one such dimension, it is only a matter of time before they are also erased—unless they can determine why this "Dimensional Armageddon" is happening and stop it.

Unfortunately, since no sensing or recording equipment can survive the unmaking of existence, the only way to gather data is to journey to a dimension that is being erased and observe the phenomena firsthand—clearly a dangerous proposition. In addition to the chance of being trapped in the dimension and unable to escape before it is destroyed, the heroes must contend with a panic-stricken populace for whom the end of the world is hours away.

ROLE OF THE HEROES

The heroes serve a group called the Nexus. It is the function of the Nexus to monitor the various dimensions for raider activity, nascent dimension-traveling activities, and areas of heavy dimensional static. It is the heroes' job to investigate such occurrences and deal with them accordingly: Raiders must be stopped, new dimension travelers must be evaluated, and areas of dimensional static must be mapped and sorted out.

How the heroes accomplish all of this is up to them; they are autonomous dimensional troubleshooters, and if violence is their forte, then the Nexus assigns them to situations requiring violence to solve. If they're good at talking, the Nexus sends them to where negotiating does the trick. However, with the impending Dimensional Armageddon, the heroes are assigned to investigative missions—no matter what their skill set.

CAMPAIGN TRAITS

Dimension X mixes dimensional travel with high adventure in an "end-of-the-world" scenario. Though the heroes can help stem the tide of panic, and perhaps even ferry refugees across dimensions, they are powerless before the unmaking of reality after reality, and to watch it relentlessly creep toward them should fill them with a kind of existential dread.

The setting for *Dimension X* changes from mission to mission, and even scene to scene. The heroes may hold emergency strategy meetings with a 115-year-old Adolf Hitler as they try to plan how to evacuate Nazi Europe, or they may float serenely in space aboard a refugee ship, watching Midgard dissolve behind them like a time-lapse photo of a rotting apple. The campaign is not about any *one* place, but *all* places.

RULES SET

Dimension X campaigns use the rules for dimensional travel (see Chapter 6: Traveler Science). Everything else, including what sort of doomed alternate realities to present to the players, is up to the GM.

CRISIS POINTS

Dimensional crisis points occur when an important event arises—one that can go many ways. For example, the assassination of a world leader can suddenly create thousands of new alternate realities: one in which the leader is killed, one in which he is wounded, one in which his assassin is killed, one in which a second assassin steps in, and so on.

These crisis points eventually resolve themselves, but until they do, they create tremendous distortion in the fabric of reality. The effect on dimension travelers is rather like driving down a multilane highway and having it suddenly diverge into hundreds of seemingly identical lanes, all traveling in different directions.

The Nexus monitors these crisis points because the distortion of reality creates so much dimensional static that they cannot properly monitor the involved dimensions—making them easy prey for dimensional raiders. The presence of the raiders creates even more distorted realities—where the world leader's death signals an alien invasion, or where his successor signs over control of his nation to the raiders, and similar outlandish scenarios—and forces the Nexus to intervene before things get out of hand.

ADVENTURE SETUPS

In a *Dimension X* campaign, the heroes must accept early on that they are fighting what appears to be a losing battle. They can only hope to delay Armageddon long enough for someone to find a way to stop it. However, the players are only going to want to deal with disaster scenarios so many times before they yearn for something else to do. Fortunately, amid all the chaos, opportunities to explore the nature of panic are common. The populations of doomed dimensions beg the heroes to save them and try to bargain for a trip to a "safe" dimension. The heroes may relocate refugees to such a haven—only to

find that it's next on the chopping block. They may have to stave off raiders who prey upon desperate people seeking a way out. They might even have to negotiate with bitter enemies to set up refugee camps.

THE FIRST CASUALTIES (LOW-LEVEL ADVENTURE)

Shortly after the heroes begin working for the Nexus, word begins to spread that contact has been lost with Dimension Rangers who had been investigating newly discovered crisis points. The heroes are assigned to investigate such a crisis point themselves. When they arrive, they discover that the crisis points have arisen because of mass panic in dimensions where a green electricity is dissolving everything into a blank whiteness.

The heroes soon find one of the missing Dimension Rangers, and he is desperately trying to evacuate as many people as possible before the world is destroyed. He begs the heroes to help him—surely, with two dimension wands, they can save twice as many people. However, the task is monumental; the wands only allow one person at a time to pass through, and the wave of annihilation is approaching too fast. There are riots as far as the eye can see, and people are begging the heroes to take their children or their spouses or their elderly parents next. In the confusion, someone tries to grab the heroes' dimension wand and "make it go faster."

Finally, time runs out. The Dimension Ranger tells the heroes to shut off their gate and open a new one back to the Nexus; the Nexus has to be warned. He will keep his gate open until the end, and the last the heroes see of him is the wave of nothingness approaching as he helps people through his dimension gate.

THE REFUGEES (MID-LEVEL ADVENTURE)

After the heroes return with news of the Dimensional Armageddon, things at the Nexus go into overdrive. Dimension Rangers are sent on missions to see if anything remains of the destroyed dimensions. Others are sent to new crisis point dimensions to gather data. The heroes are sent to the dimension into which they had sent refugees and arrange for their safety.

Unfortunately, the refugees are under attack by dimensional raiders who are looking to take advantage of the easy pickings afforded them by so many displaced people in a state of massive confusion. Although the heroes drive the raiders away, it is clear that the refugees are not safe here; the heroes must find someplace else for them to go.

The heroes find a suitable dimension, but it has one drawback; it is under the control of a totalitarian state. The refugees will be well protected but subject to draconian laws. The leader of the dimension is willing to discuss setting up refugee camps, but he wants to negotiate a price for his aid: access to the Nexus's dimension gates. The leader obviously wants to use them to expand his rule, so it becomes a question of just how badly the heroes want to help the refugees. To make things worse, if the heroes make a counter-offer, the leader declares that he needs time to think about it—knowing full well that the longer he stalls, the more desperate the heroes will be to accede to his demands.

Do the heroes bargain, or do they waste time trying to find another dimension that can support such a large influx of refugees? Even if they do, is there any guarantee that the dimension raiders won't simply strike there next or that the Dimensional Armageddon isn't on its way there?

DISSOLUTION (HIGH-LEVEL ADVENTURE)

The heroes receive a bit of good news. Reports from Dimension Rangers indicate that the Dimensional Armageddon appears to follow a pattern, and the next dimension slated for annihilation can be predicted. Evacuation procedures commence immediately. The heroes are assigned to assist in the procedure, and things are going well for once—when news comes that the Armageddon has changed course, and is now plowing through the dimensions on a direct route



to the Nexus. Everyone is recalled to help evacuate the Nexus before the wave of destruction arrives.

The heroes are pulled off-course into a dimension that had apparently been destroyed earlier. Here, they find evidence that the destroyed dimensions are actually being *recombined*—crisis points have been altered so that only one version of events occurred. In effect, the Dimension Armageddon is creating one single dimension, and somehow the existence of the Nexus is a threat to that goal.

Before the heroes can do anything with this information, they are confronted by alternate versions of themselves from the new single dimension. Their alternate selves explain that the Nexus is the cause of the Dimension Armageddon; because it only monitors crisis points and does nothing to control them, the dimensions have experienced a kind of "big bang." Now that so many have occurred, reality is automatically trying to sort itself out. Everything will be all right if the heroes do nothing. However, if they prevent the Nexus from being destroyed, the cycle of annihilation will go on and on, with the Dimension Armageddon chasing new dimensions around for all time.

Now the heroes have to decide what to do—and what to believe. Are their alternate selves telling the truth, or are they somehow responsible? Is the goal of creating a single dimension worth all of the unique lives and cultures and histories that will be erased from existence? Finally, if the Nexus is destroyed, will the heroes themselves be around afterward to enjoy life in the final dimension?

DIMENSION RANGER

A Dimension Ranger patrols alternate dimensions, always alert for signs of trouble. If he is lucky, his job is no more difficult than guiding lost dimensional travelers back to their proper dimensions. However, he must also contend with dimensional raiders, dimensional static, and the occasional end of the world. Finally, there persists the danger of stumbling into the wrong world and being burnt at the stake or tortured for information.

Select this advanced class if you want your character to be that mysterious figure who walks between worlds.

The fastest path into this advanced class is from the Dedicated hero basic class, though other paths are certainly possible.

REQUIREMENTS

To qualify to become a Dimension Ranger, a character must fulfill all the following criteria.

Skills: Knowledge (current events) 8 ranks, Knowledge (history) 8 ranks, Survival 6 ranks.

Feats: Guide.

CLASS INFORMATION

The following information pertains to the Dimension Ranger advanced class.

HIT DIE

The Dimension Ranger gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Dimension Ranger gains a number of action points equal to 6 + one-half his character level, rounded down, every time he attains a new level in this class.

CLASS SKILLS

The Dimension Ranger's class skills are as follows.

Balance (Dex), Bluff (Cha), Craft (electronic) (Int), Investigate (Int), Knowledge (behavioral sciences, current events, history, physical sciences, popular culture, philosophy and theology) (Int), Listen (Wis), Navigate (Int), Profession (Wis), Read/Write Language (none), Repair (Int), Research (Int), Sense Motive (Wis), Speak Language (none), Spot (Wis), Survival (Wis), Treat Injury (Wis).

Skill Points at Each Level: 5 + Int modifier (4 + Int modifier for nonhumans).

CLASS FEATURES

The following features pertain to the Dimension Ranger advanced class.

DIMENSION WAND

The Dimension Ranger receives a dimension wand (see page 105) with which to do his work. This wand is only on loan to the Dimension Ranger; he must relinquish it upon demand. He is responsible for its upkeep, and if it becomes lost or destroyed, he is responsible for finding it or replacing it.

DIMENSIONAL FORTITUDE

At 2nd level, the Dimension Ranger is so used to traveling between dimensions in even the roughest conditions that he is less affected by dimensional static. He gains a competence bonus on his Fortitude saves when traveling through unstable gates; this bonus is equal to half his Dimension Ranger level, rounded down.

BONUS FEATS

At 3rd, 6th, and 9th level, the Dimension Ranger gains a bonus feat. The bonus feat must be selected from the following list, and the Dimension Ranger must meet all the prerequisites of the feat to select it.

TABLE 2–2: THE DIMENSION RANGER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+1	+1	+2	Dimension wand	+1	+0
2nd	+1	+2	+2	+3	Dimensional fortitude	+1	+0
3rd	+2	+2	+2	+3	Bonus feat	+2	+0
4th	+3	+2	+2	+4	Dimensional familiarity	+2	+1
5th	+3	+3	+3	+4	Dimensional haven	+3	+1
6th	+4	+3	+3	+5	Bonus feat	+3	+1
7th	+5	+4	+4	+5	Dimensional ally	+4	+2
8th	+6	+4	+4	+6	Advanced dimension wand	+4	+2
9th	+6	+4	+4	+6	Bonus feat	+5	+2
10th	+7	+5	+5	+7	Dimensional allies	+5	+3

Advanced Firearms Proficiency, Alertness, Archaic Weapons Proficiency, Attentive, Blind-Fight, Deceptive, Educated, Far Shot, Medical Expert, Meticulous, Personal Firearms Proficiency, Surgery, Track, Weapon Focus.

DIMENSIONAL FAMILIARITY

At 4th level, the Dimension Ranger has grown accustomed to several different dimensions. He can reset his dimension wand to open a gate to one such dimension as a full-round action, rather than taking the usual 30 minutes. The Dimension Ranger can designate a number of "familiar" dimensions equal to his Dimension Ranger level.

DIMENSIONAL HAVEN

At 5th level, the Dimension Ranger has found a handy dimension that is perfectly suited to his needs and desires. Through a combination of atmosphere, dimensional resonance, and time dilation, the dimensional haven provides the optimal environment for rest and recuperation. While in the dimensional haven, the Dimension Ranger recovers 1 hit point per character level per hour of rest, and any ability damage he has taken returns at the rate of 1 point per hour of rest. Complete bed rest—doing absolutely nothing other than recovering—doubles the recovery rate of hit points and ability points.

DIMENSIONAL ALLY

During the course of his dimensional travels, the Dimension Ranger has encountered an alternate version of himself who is enough like him that they share the same values and priorities. At 7th level, the Dimension Ranger knows how to contact this "twin" for aid. Locating the alternate Dimension Ranger requires one hour of dimensional travel devoted specifically to the task, at the end of which time both Dimension Rangers are in the same location together.

The alternate version of the Dimension Ranger is an exact duplicate of the Dimension Ranger. The Dimension Ranger can have only one alternate version of himself at a time. The alternate hero may be played by the Dimension Ranger's player or the GM, at the GM's discretion. This character attempts to aid the Dimension Ranger, with the restriction that he cannot use his own dimensional ally ability to locate a third Dimension Ranger. Should either Dimension Ranger be killed, it has no effect on the other. If the "original" is killed, the player may continue playing the alternate version at the GM's discretion.

ADVANCED DIMENSION WAND

As the 1st-level dimension wand ability, except that this dimension wand can store up to five preset dimension coordinates. Selecting one of the preset coordinates requires a move action.

DIMENSIONAL ALLIES

As the 7th-level dimensional ally ability, except that the Dimension Ranger can locate, after 1 hour's searching, a number of alternate versions of himself equal to his Wisdom bonus.

FROM THE DARK HEART OF SPACE

"Can you feel that? It's them, the dark ones. The Henderson expedition awakened something terrible out there—something that was supposed to sleep for a long time. Now it's here ... and hungry."

SUMMARY

Supernatural horrors pursue humanity across the breadth of space for their own dark designs.

CAMPAIGN IN BRIEF

In *From the Dark Heart of Space*, a terrible evil lurks in the background of the universe, manipulating galaxy-spanning events for its own evil designs. Behind every tragedy, every unspeakable act of violence, and every wicked deed lurk agents of a shadowy evil. The heroes combat this faceless evil, even if the battle proves ultimately hopeless. The galaxy is not what it appears to be, and those that can see beyond the surface know of a growing darkness called the Void, so named because it devours even the brightest light over time.

From the Dark Heart of Space is a setting where the agents of evil lurk not only in the shadows but behind the eyes of living creatures. Anyone can be an agent of the darkness: friends, neighbors, co-workers, and even pets can march to the beat of evil's drum. The campaign is all about the danger that lurks in the unknown, paranoia, and the dark spaces between the stars.

ROLE OF THE HEROES

The heroes in *From the Dark Heart of Space* struggle, sometimes vainly, to hold back the darkness as best they can. While the rest of the population lives in ignorant bliss, duped by the Void's illusions, the heroes struggle to prevent themselves and the people they care about from being devoured by evil.

The villains of the campaign take on many forms: dark gods, specters, hideous aliens, and ordinary people consumed by evil. The heroes come from all walks of life. The grizzled soldier, the bookish historian, and the absent-minded engineer stand on equal footing when it comes to fighting against



The dark heart of space

the Void. The heroes of the setting are regular people who have somehow been awakened to the evil undercurrents flowing through the universe.

CAMPAIGN TRAITS

From the Dark Heart of Space is a combination of science fiction and modern horror, pitting heroes of the future against powerful and malevolent forces throughout the galaxy. Hopelessness, despair, terror, and insanity are the order of the day in this campaign, with the agents of the Void working to eliminate all those that can see them for what they truly are.

The Void thrives on the suffering and pain of others, and misery spreads like wildfire wherever it holds sway. Its dark agents seek only to eliminate the heroes and spread their evil influence throughout the galaxy. Can a small handful of heroes stop the ever-encroaching agents of the Void, or will their hearts give in to the darkness?

POWER GROUPS

There are many power groups at work in *From the Dark Heart of Space*, some of which are tied to the Void and some of which are not. Agents of the void own and operate many of these power groups; for instance, the heads of major corporations like Galac-Tech (manufacturers of long-range space transports) and Singularity Cybersystems (a major computer company) are devoted agents of the Void. They can use their wealth and vast resources to eliminate any heroes. On the other hand, the galaxy turns and operates on its own sometimes without the hand of the shadow at work, meaning that there are literally thousands of groups and companies not directly tied to the Void for the heroes to interact with.

No one truly knows what the Void is. The exploration of space has brought humans closer to the Void than ever before. What is known is that the Void feasts on human vice and weakness, and humans consumed by the darkness become the Void's agents. Agents of the Void strive to corrupt all of humanity. The Void itself seeks only to feed off the fear, anger, and strife that its agents provoke.

The heroes can be associated with a major organization, or they may not be. Some heroes might seek sponsorship in their crusade against the faceless evil. The Church of the Stars, a religious sect dedicated to ridding the galaxy of the Void entirely, has survived through sheer willpower and has been wiped out almost to the last man several times over. Each time, the Church starts again with its crusade, drawing followers from those who can perceive the agents of the Void.

ALLIES AND OPPONENTS

Enemies constantly surround the heroes in *From the Dark Heart of Space*, as any living thing can be corrupted by the Void and transformed into one of its agents. Most governments are at least influenced if not downright manipulated by the agents of the Void, and frequently the heroes can be branded as criminals and outlaws by the establishment.

AGENTS OF THE VOID

The ultimate instrument of darkness, an agent of the Void is a dark spirit that possesses the body of a creature whose spirit or life force has been consumed by the Void. The Void needs agents to serve as its hands and eyes, as it cannot manifest physically on its own.

Agent of the Void is an acquired template that can be applied to any living creature (referred to as the base creature). An agent of the Void uses all the base creature's statistics except as noted here.

Challenge Rating: Same as the base creature +3.

Special Qualities: An agent of the Void retains all of the base creature's extraordinary, spell-like, and supernatural abilities. It also gains the following special qualities:

Unnerving Attack (Su): Any creature wounded by an agent of the Void must succeed on a Will save (DC 10 + 1/2 the agent's Hit Dice + the agent's Charisma modifier) or be shaken for 1 round. The effects of multiple unnerving attacks are not cumulative.

Voice of the Void (Ex): An agent of the Void gains a +10 bonus on Intimidate checks.

Allegiances: The base creature's allegiances are replaced by a singular allegiance to the Void. An agent of the Void can have no other allegiances.

Saves: As the base creature, but modified by the altered ability scores (see below).

Abilities: The base creature's ability scores improve as follows when it becomes an agent of the Void: Con +4, Int +2, Wis +4, Cha +4.

RULES SET

From the Dark Heart of Space can be set at Progress Level 6 or higher and may feature any of the rules modules presented in this book. One campaign-specific rule is the ability to detect agents of the Void, which all heroic characters can do.

DETECTING AGENTS OF THE VOID

Whenever a hero encounters a creature that she suspects is an agent of the Void, she may make a Wisdom check (DC 10 + 1/2 the creature's Hit Dice or level) to sense the presence of the Void within the creature. A hero may attempt to detect an agent of the Void once per round as a free action.

PURIFIER

As specially trained members of the Church of the Stars, Purifiers are tasked with driving agents of the Void out of their host bodies. A Purifier not only recognizes the agents of the Void but also slays them for a living. She and others like her are part of the Church's crusade against the encroaching darkness. A Purifier knows that creatures consumed by the Void cannot be saved; therefore, they must be destroyed.

Purifiers come from all walks of life. Steadfast and true of heart, they devote themselves wholly to the extermination of the Void and embrace the notion of a galaxy at peace. Each Purifier carries a special sword, known as a *tohar shelahl*, crafted from the finest of materials. The sword, which serves as a symbol of the Church's tireless struggle against evil, is the Purifier's weapon of choice in melee combat.

Choose this advanced class if you want to be part of an organization dedicated to wiping out the Void and purging an all-consuming darkness from the galaxy.

The fastest path into this advanced class is from the Dedicated hero basic class, although other paths are possible.

REQUIREMENTS

To qualify to become a Purifier, a character must fulfill all the following criteria.

Base Attack Bonus: +2.

Skills: Knowledge (theology and philosophy) 6 ranks.

Feats: Iron Will.

Allegiance: The hero must have the Church of the Stars as her primary allegiance.

CLASS INFORMATION

The following information pertains to the Purifier advanced class.

HIT DIE

The Purifier gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Purifier gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

CLASS SKILLS

The Purifier's class skills are as follows.

Bluff (Cha), Concentration (Con), Decipher Script (Int), Diplomacy (Cha), Gather Information (Cha), Investigate (Int), Knowledge (history, theology and philosophy) (Int), Listen (Wis), Profession (Wis), Read/Write Language (none), Research (Int), Sense Motive (Wis), Speak Language (none), Spot (Wis), Survival (Wis), Treat Injury (Wis).

Skill Points at Each Level: 7 + Int modifier (6 + Int modifier for nonhumans).

CLASS FEATURES

The following features pertain to the Purifier advanced class.

STEADFAST HEART

The Purifier faces the Void and its agents without fear or trepidation. Starting at 1st level, the Purifier gains a morale bonus on Will saves against effects generated by the Void or its agents (including saves against the agents' unnerving attack ability). This morale bonus is equal to the Purifier's Reputation bonus.

KNOW EVIL

Starting at 2nd level, the Purifier can detect the presence of the Void within other creatures with greater ease. She adds a competence bonus equal to one-half her Purifier class level (rounded down) to Wisdom checks made to detect the presence of the Void in a creature.

BONUS FEATS

At 3rd, 6th, and 9th level, the Purifier gets a bonus feat. The bonus feat must be selected from the following list, and the Purifier must meet all the prerequisites of the feat to select it.

Agile Riposte, Alertness, Archaic Weapons Proficiency, Attentive, Cleave, Combat Expertise, Dodge, Great Cleave, Improved Bull Rush, Improved Critical, Improved Disarm, Improved Initiative, Improved Trip, Mobility, Oathbound*, Power Attack, Quick Draw, Renown, Spring Attack, Sunder, Track, Trustworthy, Weapon Focus, Whirlwind Attack.

**New feat described in Chapter 2: Characters.*

THE TOHAR SHELAHL

The *tohar shelahl*, known more commonly as the tohar, is the favored weapon of the Purifiers. The tohar is a high frequency sword (see Fusion Age Weapons in Chapter 3: Gear for more information) covered in the sacred runes of the Church of the Stars. Each tohar is uniquely crafted to suit the Purifier's personality and is not only a deadly weapon in the fight against the Void but also a symbol of power and strength within the Church.

TOHAR MASTERY

Starting at 4th level, a Purifier wielding a tohar shelahl (see sidebar) deals +1d6 points of damage against agents of the Void. At 8th level, this bonus damage increases to +2d6. Do not multiply this damage when a critical hit is scored.

PURGE THE DARKNESS

Beginning at 5th level, a Purifier can burn the dark spirit out of an agent of the Void. The Purifier must spend an action point and succeed at a ranged touch attack to do so. (The action point expenditure does not apply to the attack roll result.) If the attack succeeds, the agent of the Void must succeed on a Fortitude save (DC 10 + 1/2 the Purifier's character level + the Purifier's Charisma modifier) or be banished back into the Void, leaving the host body lifeless. Even if the Fortitude save succeeds, the agent of the Void still takes 1d6 points of damage per Purifier level (maximum 10d6). Attempting this purge provokes an attack of opportunity from threatening foes. A successful attack of opportunity made against the Purifier does not ruin the purge attempt.

BEACON

Starting at 7th level, the Purifier becomes a bastion of goodness, purity, and hope. All allies within 30 feet of the Purifier gain a morale bonus on Will saves against effects generated by the Void or its agents (including saves against the agents' unnerving attack ability). This morale bonus is equal to the Purifier's Reputation bonus.

SACRED DEFENDER

At 7th level, a Purifier can spend an action point to gain a +1d6 sacred bonus to her Defense for 1 round. A Purifier with 8–14 character levels rolls 2d6 and takes the highest die result; a Purifier with 15 or more character levels rolls 3d6 and takes the highest result.

TABLE 2–3: THE PURIFIER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+0	+2	+2	Steadfast heart	+1	+0
2nd	+1	+0	+3	+3	Know evil	+1	+0
3rd	+1	+1	+3	+3	Bonus feat	+2	+1
4th	+2	+1	+4	+4	Tohar mastery +1d6	+2	+1
5th	+2	+1	+4	+4	Purge the darkness	+3	+1
6th	+3	+2	+5	+5	Bonus feat	+3	+2
7th	+3	+2	+5	+5	Beacon, sacred defender	+4	+2
8th	+4	+2	+6	+6	Tohar mastery +2d6	+4	+2
9th	+4	+3	+6	+6	Bonus feat	+5	+3
10th	+5	+3	+7	+7	Void smite	+5	+3

VOID SMITE

At 10th level, a Purifier can spend an action point to imbue her tohar shelahl with the power of good for 1 round. Any agent of the Void wounded by the tohar during that round must succeed on a Fortitude save (DC 10 + 1/2 the Purifier's character level + the Purifier's Charisma modifier) or be banished back to the Void, leaving behind a lifeless host body. Even if the Fortitude save succeeds, the agent of the Void still takes 10d6 points of damage (in addition to the sword's normal damage).

GENETECH

"Hey, Dolphinhead! Get your flippers back to Seaworld!"

SUMMARY

Armies of genetically enhanced soldiers wage war against prejudice, intolerance, and other forces arrayed against them while trying to gain acceptance and find their place in the world.

CAMPAIGN IN BRIEF

Genetech is a setting where the freedom fighters of tomorrow are not just revolutionaries and charismatic leaders but are fighting for their very survival. In most cases, the heroes of *Genetech* are not even human; they are franks (genetically altered humans) and moreaus (human/animal gene-spliced crossbreeds) that have escaped captivity. Characters in this campaign setting see themselves as the last heroes willing to fight for what they believe in, and most see their enemies as the greedy and powerful corporations, politicians, and scientists that abuse genetics for their own benefit.

Conflicts in *Genetech* are not so far separated from the conflicts in the real world; they include wars, famines, government cover-ups, corporate scandals, and much more. The only difference between the prominent conflicts of the modern world and those in *Genetech* is that the chief participants are genetically altered soldiers who are frequently considered the property of their creators and not autonomous beings. The setting revolves around outcast warriors fighting morally bankrupt scientists, businesses, and governments while struggling to survive in an apathetic world.

ROLE OF THE HEROES

The heroes of the *Genetech* campaign are genetically inhuman, yet they possess humanlike behavior. They express their emotions as humans do, they are fallible, and they do not always make the right decisions. By the same token, these heroes also possess certain qualities that separate them from the apathetic masses trying to maintain the status quo. They are resourceful, intelligent, creative, and most of all, they believe in their cause. In a world where it is much easier to ignore the larger problems than face them, the heroes of the campaign are the types of characters who confront challenges rather than flee from them.

The heroes in *Genetech* are franks and moreaus that have escaped their creators' clutches (or been set free by a benevolent party) and have chosen to take up arms against the governments and corporations that would try to control them. Their goals vary from individual to individual; some are primarily concerned with ecological crimes and hunt down corporations that destroy the environment, while others see themselves as the liberators of their kind. Some heroes join up with organizations that are receptive to genetically altered beings, while others find themselves driven into hiding by the world that hates and fears them. Regardless of their specific role, the heroes of *Genetech* are capable of great things because they believe they can make a difference.

CAMPAIGN TRAITS

The *Genetech* setting is a technothriller world where fast-paced action and intense espionage dominate world events. The key



element of the *Genetech* campaign is genetic engineering. After forty years of intense research, genetic engineering finally reached the point where the creation of whole new species became a reality. Genetic engineering is not limited to the creation of franks and moreaus, but extends into the world of normal everyday citizens. Thanks to the science of genetics, parents can determine cosmetic details of their children before they are even born and check for genetic defects and correct them in advance.

In addition to the added technological element of genetic enhancement, the *Genetech* campaign deals with violent conflict. Freedom fighters struggle against oppressive governments, covert agents battle against overbearing corporations, and revolutionaries fight off those that would harm the planet with their greed. The *Genetech* campaign is part espionage, part armed rebellion, and part ecological defense.

POWER GROUPS

In *Genetech*, most of Earth's existing organizations make up the majority of the power groups. World governments spend billions of dollars over 40 years to perfect genetic research, and like any investor, they want to see a return on their payments. Similarly, the governments that don't have access to genetics technology struggle to acquire it, or hire bands of independent franks and moreaus to do the dirty work for them. Many corporations have grown into megacorporations, spanning international borders with offices on various continents. These corporations have the power to challenge even large governments, and some are more than willing to take advantage of dislocated populaces and genetic outcasts for cheap labor.

Genetically altered species constitute a new "power group" in society. Franks and moreaus that cannot prosper in the legitimate world are forced to seek new means of feeding and clothing themselves, while some groups of genetically enhanced warriors form mercenary, paramilitary, or terrorist groups to protect their own interests.

Finally, the Uncorrupted is a human supremacy group comprised of unaltered humans who fear and loathe all mutants. Members of the Uncorrupted treat all mutants the same, failing to abide even the slightest genetic enhancement or alteration. The agenda of the Uncorrupted includes the extermination of all franks and moreaus as well as the cessation of all genetic experimentation.

ALLIES AND OPPONENTS

Since *Genetech* is a near-future campaign setting, many modern government agencies and organizations will play a major role in the campaign. In America, the Central Intelligence Agency (CIA) and the Federal Bureau of Investigation (FBI) both recognize the need for franks and moreaus in many operations but are not as deeply immersed in their use as other groups. The Department of Energy (DOE) and the National Institute of Health are primarily responsible for the creation of franks and moreaus, and they are interested in funding further genetic research and experimentation. The National Security Agency (NSA), one of the most secretive and dangerous organizations in the world, often uses franks and moreaus as weapons and covert agents, manipulating world events from behind the scenes.

One of the more prominent opponents that genetically altered heroes will face comes not from some powerful government agency or multi-billion dollar company but from the general populace itself. The Uncorrupted, a general term used to describe the various human superiority groups, are collections of unaltered humans opposed to the very existence of franks and moreaus. They are violent bigots and terrorists who seek to exterminate all genetically altered beings. Most Uncorrupted groups are localized within one region or country, but some groups span the entire globe. Most members of the Uncorrupted are drawn from the public at large, united by their fear and hatred of all "freaks."

RULES SET

Various types of moreaus are presented in the *d20 Modern Roleplaying Game*. The other major group of genetically altered beings—called franks (short for Frankensteins)—are presented here. Franks have subtle genetic mutations that grant them abilities beyond most humans. Franks come in many shapes and sizes. Some franks blend in perfectly with other humans, while others are overtly altered in some way. A particularly smart frank might have a large head, while a frank with low-light vision might have reflective eyes like a cat's.

In general, the rules for mutations presented in Chapter 12: Mutations can be used to create franks. However, players wishing to play a frank may instead choose one of several frank options presented below. The choice to play a frank is made at character creation, and all adjustments to the character should be made at that time.

FRANKS

Various types of franks are presented below, along with a starting racial package for players not wishing to use the mutation system presented in Chapter 12. All of the franks described below gain skills and feats as humans do and have a level adjustment of +0.

Brute: Brutes make good soldiers and grunts. They gain a +2 bonus to Strength, take a –2 penalty to Intelligence and Charisma, and possess low-light vision.

Deadeye: Deadeyes have enhanced hand-eye coordination and make excellent drivers, pilots, and sharpshooters. They gain a +2 bonus to Dexterity, take a –2 penalty to Intelligence and Charisma, and possess low-light vision.

Egg: Eggs have heightened mental capabilities and take their name from the slang term "egghead." They make excellent scientists and engineers. Eggs gain a +2 bonus to Intelligence and take a –2 penalty to Constitution.

Honeytrap: Taking their name from a Cold War term for prostitutes used in blackmail schemes, honeytraps are engineered to function undercover and in espionage situations. They gain a +2 bonus to Charisma and take a –2 penalty to Wisdom.

Praetorian: Taking their name from an ancient order of Roman bodyguards, praetorians often serve as the protectors of powerful business tycoons and government officials. They gain a +4 bonus to Constitution and take a –2 penalty to Intelligence and Charisma.

Stalker: Stalkers have heightened senses that enable them to better track down targets. Hunters gain a +2 bonus to Wisdom, take a –2 penalty to Charisma, and possess low-light vision.

ADVANCED CLASSES

The Dreadnought and Helix Warrior advanced classes, as presented in Chapter One: Characters, are available to frank and moreau heroes in the *Genetech* campaign setting.

MECHA CRUSADE

"All units, power up. Prime weapons and calibrate sensors. Lay in a course, four-four-one mark two-five. Anyone who wants to be a hero, take the lead."

SUMMARY

Heroic soldiers pilot giant robots as the new machines of battle in a war-torn future.

CAMPAIGN IN BRIEF

The *Mecha Crusade* campaign places heroes in vehicles of tremendous power and drops them into an interplanetary war zone. The campaign deals with intergalactic conflicts on a massive scale. Tensions are high as the war between Earth and outlying colonists comes to a head.

The Solar System War of 2053 provides the backdrop for the *Mecha Crusade* campaign. After establishing thriving colonies on the Moon, in the asteroid belt, and across the moons of Jupiter, Earth's authoritarian government continues to demand vast amounts of resources from its colonies to further expand the polluted megacities covering the planet. The colonies have declared their independence, and fearing that the unrest would spread back home, the government on Earth has openly vowed to bring the colonies back in line. The colonists feel they are fighting a war for independence from an oppressive government that seeks to exploit their workforce and resources. To the people of Earth, the upstart colonists are greedy rebels who hoard their resources and ignore their heritage in favor of wealth and power.

ROLE OF THE HEROES

The heroes fight for Earth or one of the many independent colonies across the solar system. The Earth loyalists defend their admittedly polluted world simply because it is where humanity took its first steps toward greatness. The Colonists have abandoned Earth's corrupted ecosystem to forge new lives among the stars. Yet other heroes might be members of the first generation of humans to be born away from Earth, feeling no allegiances to the original home world and instead fighting to defend the only home they know.

Although all heroes may be called to pilot mecha into battle, they also enjoy many different roles. Some heroes are skilled diplomats, using their mecha as symbols to unite the colonists or the bickering power groups on Earth into a solid front against the enemy. Spies and secret agents might use their mecha as tools of their trade, sneaking into hidden facilities and stealing the blueprints for the next big weapon. Some heroes will be front line soldiers, while others serve as couriers or explorers.

CAMPAIGN TRAITS

The *Mecha Crusade* campaign is heavily influenced by the mecha genre, popular in science fiction as well as Japanese comics and animation. *Mecha Crusade* is all about big robots, exotic locales, and the drama that unfolds around a solar system at war. It is a harsh setting, much like gritty war movies, and often provides a sense of desperation as titanic mecha clash over ruined landscapes. High technology is the order of the day, as well, since the mecha themselves as well as their weapons and armor require immense amounts of technological maintenance to stay in working order. The mecha must function in many environments, including the empty void of space.

In addition to high technology, *Mecha Crusade* features many exotic locales. Primarily functioning as battlefields, these environments are unique and stand out as interesting places for huge robots to clash. The frozen sands of Mars. The scorching swamps of Venus. The dust-filled craters of the Moon. The murky oceans and rubble-strewn megacities of Earth. Battles are waged against a backdrop that emphasizes not only the situation at hand but also the incredible power of the mecha. No living soldier could survive such harsh environments, and the clashes in those locations are only made possible by the existence of mecha. Whether the heroes travel to the Jovian moon of Europa or to the rocky asteroid belt, they will engage in battles that determine the fate of millions.

POWER GROUPS

Two main power groups support the *Mecha Crusade* campaign: the Earth Loyalists and the Colonists. The Loyalists wish to quash the Colonists' rebellion and subject them to Earth's law, while the Colonists spend their time trying to sever ties with their oppressive home world. Though each power group is large and encompasses billions of people, they also incorporate smaller factions that are easier for heroes to identify with.

The government of Earth inaugurated the war; of that, there is little question. As political unrest began to bubble throughout the colonies, the paranoid politicians on Earth sent secret police to capture, retrieve,



Mecha crusade

and murder any dissenters before their sentiments could be spread. Later, when the situation began to spiral out of control, the Earth sent entire armies into the streets of the colonies to keep the peace, which instead provoked many neutral colonists who reacted negatively to such an overt use of force.

Within the colonies arose a rebellious underground, which many people believe existed long before any overt conflicts were fought. This underground began more as a collection of political philosophers and thinking minds, but eventually transformed into a true rebellion attempting to incite the populations of the various colonies into rebelling. These secret groups went from debating the fairness of the economy to putting guns in the hands of its members in order to further their cause of independence. As full-scale war breaks out, these underground organizations exist not only in the colonies but also on Earth, hoping to provoke Earth's tattered populace into overthrowing their own government and seizing their destinies like the colonists have.

ALLIES AND OPPONENTS

Most of the heroes' likely allies will simply be other members of the faction to which the heroes owe their allegiance. If the heroes are colonial sympathizers, they will likely find help in the form of the rebellious underground or the colonial space fleets. Conversely, if the heroes are Earth Loyalists, they might serve Earth-based megacorporations and government agencies determined to break the Colonists' backs.

The heroes' enemies will likely be the military and police arms of the faction against which they are opposed. Overt conflicts with the opposing military will make up many of the major battles fought in the war, while more subtle clashes with individual agents of the opposition will be less noteworthy but equally significant. Caught behind enemy lines, a hero will have to not only avoid the police and military but also average citizens or other nonmilitary personnel that could either turn them in or actively fight against them. In a war where two sides fight one another for freedom and control, the choosing of a side will determine what groups will be friends and foes.

RULES SET

The *Mecha Crusade* campaign can be set at Progress Level 7 or higher. It uses the rules for building, equipping, and operating mecha, as presented in Chapter 9: Mecha. It also incorporates starships, robotics, and cybernetics, as presented in other chapters.

ADVANCED CLASSES

The Mecha Jockey advanced class, presented in Chapter 9: Mecha, is available to heroes in the *Mecha Crusade* campaign setting.

STAR*DRIVE

"Humanity is only as strong as its commitment to fellowship, advancement, and peace. Once civilization has lost faith in its future, it is truly lost to the present."



Star*Drive

SUMMARY

Adventurers in the 25th century journey among the stars in the Galactic Concord as war threatens from the edge of civilized space.

CAMPAIGN IN BRIEF

In a *Star*Drive* campaign, the Second Galactic War has ended and the Galactic Concord has risen from the ashes of interstellar conflict. Bit by bit, the stellar nations are rebuilding after the destruction—only to learn that while their attention has been diverted elsewhere, horrible new enemies have appeared on the far side of the Verge, the tiny sliver of civilization at the edge of civilized space.

Here, perhaps more than in any other campaign setting, the heroes are free to explore where they will and do what they want. The galaxy is full of wonders, but it runs on the same old industries it always did: agriculture, shipping, mining, research, and so on. The heroes can be merchants or mercenaries, soldiers or citizens, villains or vigilantes. If they're truly brave, they can set course for the Verge and see what life is like for the part of space that civilization forgot for one hundred years.

CAMPAIGN TRAITS

The *Star*Drive* setting is wide open, letting the heroes go wherever they wish. However, they're more likely to discover new intrigues and new political machinations than new life and new civilizations. In a galaxy so large, with so many former enemies working together, there should never be a lack of adversaries.

POWER GROUPS

The power groups in the *Star*Drive* setting are almost too numerous to mention; this listing touches on the major players.

THE GALACTIC CONCORD

The strongly pro-human Galactic Concord represents humanity's hopes for the future. Consisting of the losers and leftovers from the Second Galactic War, the Concord has become the arbiter of affairs for the stellar nations—scattered across the face of the galaxy, but united by a strong military.

THE RIGUNMOR STAR CONSORTIUM

Ostensibly an enlightened society, the Rigunmor Star Consortium understands that the pursuit of life and liberty come after the pursuit of profit. The financial zeal exhibited by the Rigunmor Star Consortium carries a certain sinister flavor, generating charges of thievery, smuggling, and breach of contract. However, so long as the Concord dollars keep flowing, the Rigunmors are willing to overlook such ill will.

THE THULDAN EMPIRE

The Thuldan Empire is self-described as "first among the stellar nations" and is the largest, oldest, and best militarily equipped government around. Fiercely patriotic, the Empire prides itself on the fact that it has never lost a military engagement—though it speaks of the Second Galactic War as "lacking in victories."

VOIDCORP

Descended from a centuries-old computer software, hardware, and Internet corporation, VoidCorp thrives by imposing strict order on its citizens, who are referred to as "Employees." Others consider its practices downright draconian, but VoidCorp sees itself as promoting survival of the fittest.



Klick

SM

THE KLICKS

At the far end of the Verge, alien species unheard of before the Second Galactic War have begun to stir. Slowly but inexorably expanding into civilized space, the alien klicks and their allies began by devastating the entire Silver Bell colony on Spes, followed by fierce ground fighting on Rakke. The Galactic Concord has responded as quickly as possible, but faster-than-light technology being what it is, even distress messages take many days to get through.

RULES SET

*Star*Drive* is a Progress Level 7 or higher campaign that uses the starship rules from Chapter 7, combined with the interstellar travel rules from Chapter 6: Traveler Science. To people the galaxy with interesting alien species, consult Chapter 13: Xenobiology in this book. You can also find suitable alien species and intergalactic adversaries in the *d20 Menace Manual* and the *d20 Modern Roleplaying Game*. One of the setting's most persistent alien threats—the klick—is described below.

KLICK

Klicks are arachnid-like aliens from a distant part of the Milky Way galaxy. Ferocious, aggressive, and merciless, they have invaded human-controlled space in a slow and steady wave of invasion. Though the Galactic Concord has slowed their progress, the klicks are determined and resourceful.

Klicks have strange, wedge-shaped bodies covered with smooth, chitinous plates. They possess six multi-jointed legs ending in thick claws, and an additional pair of forelimbs ending in sharp, manipulating claws. A klick's sensory organs hang in a pendulous glob below the main part of its body, between the forelimbs.

The klicks employ brutal but effective "hit-and-run" combat tactics. They favor ambushes and overwhelming numbers. Military analysts have suggested that klicks have a hive-mind social structure, like terrestrial insects, but scientists discard the notion as unlikely "Earth-centered" thinking.

The name "klick" was coined by Galactic Concord soldiers and based on the odd clicking sounds that the aliens make when they communicate. To further stymie efforts to understand this enigmatic species, klicks captured in combat never survive longer than a few hours—generally because of terrible wounds sustained during their apprehension.

SPECIES TRAITS

Bioweakness Field (Ex): A klick naturally produces a field of energy that causes non-klicks to feel weak and tired. Any non-klick within 30 feet of a klick must succeed on a Fortitude save (DC 10) every round before taking his or her actions; failure means that the creature takes 1d3 points of temporary Strength damage. A creature affected by overlapping klick bioweakness fields does not make multiple saves; instead, each additional field after the first increases the saving throw DC by +2. Galactic Concord soldiers, accordingly, prefer to battle klicks from a safe distance.

Klick: CR 1/2; *Medium-size aberration;* HD 1d8; hp 5; Mas 10; Init +1; Spd 30 ft.; Defense 13, touch 11, flat-footed 12 (+1 Dex, +2 natural armor); BAB +0; Grap +1; Atk +1 melee (1d4+1, claw) or +1 ranged; Full Atk +1 melee (1d4+1, 2 claws) or +1 ranged; FS 5 ft. by 5 ft.; Reach 5 ft.; SQ Bioweakness field, darkvision 60 ft.; AL evil; SV Fort +0, Ref +1, Will +1; AP 0, Rep +0; Str 12, Dex 12, Con 10, Int 8, Wis 8, Cha 6.

Skills: Climb +5, Hide +3, Jump +3, Listen +2, Move Silently +3, Read/Write Klick, Speak Klick, Spot +2, Survival +4.

Feats: Simple Weapon Proficiency.

Possessions: Various personal belongings.

Advancement: By character class.

Klick, Strong Ordinary 2/Tough Ordinary 1: CR 2; Medium-size aberration; HD 2d8+4 plus 1d10+2; hp 20; Mas 15; Init +1; Spd 30 ft.; Defense 16, touch 14, flat-footed 15 (+3 class, +1 Dex, +2 natural armor); BAB +2; Grap +4; Atk +4 melee (1d4+2, claw) or +3 ranged (3d10, plasma rifle); Full Atk +4 melee (1d4+2, 2 claws) or +3 ranged (3d10, plasma rifle); FS 5 ft. by 5 ft.; Reach 5 ft.; SQ Bioweakness field, darkvision 60 ft.; AL evil; SV Fort +5, Ref +1, Will +1; AP 0, Rep +0; Str 14, Dex 13, Con 15, Int 10, Wis 12, Cha 8.

Skills: Climb +6, Jump +6, Knowledge (tactics) +2, Read/Write Klick, Speak Klick, Survival +3.

Feats: Advanced Firearms Proficiency, Personal Firearms Proficiency, Simple Weapon Proficiency.

Possessions: Plasma rifle.

CONCORD ADMINISTRATOR

The Concord Administrator is a kind of spacefaring marshal; she is the law out on the lawless edge of space. The Galactic Concord has invested considerable time and training to make its Administrators both capable and incorruptible. They represent Concord authority, and any sign of abuse weakens confidence in the Concord. Although the Concord Administrator is authorized to dispense summary justice, she usually sticks to the motto of "bring them back alive"—because public trials remind everyone of the price for breaking Concord law.

Select this advanced class if you want your character to be the ultimate authority in the fringes of space.

The fastest path into this advanced class is from the Dedicated hero basic class, though other paths are certainly possible.

REQUIREMENTS

To qualify to become a Concord Administrator, a character must fulfill all the following criteria.

Skills: Investigate 6 ranks, Knowledge (civics) 6 ranks, Sense Motive 6 ranks.

Feats: Iron Will.

Allegiance: The character must have an allegiance to the Galactic Concord to become a Concord Administrator (see Allegiances on page 37 of the *d20 Modern Roleplaying Game*).

CLASS INFORMATION

The following information pertains to the Concord Administrator advanced class.

HIT DIE

The Concord Administrator gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Concord Administrator gains a number of action points equal to 6 + one-half her character level, rounded down, every time she attains a new level in this class.

CLASS SKILLS

The Concord Administrator's class skills are as follows.

Bluff (Cha), Computer Use (Int), Concentration (Con), Diplomacy (Cha), Gather Information (Cha), Intimidate (Cha), Investigate (Int), Knowledge (behavioral sciences, civics, current events, streetwise) (Int), Profession (Wis), Read/Write Language (none), Research (Int), Search (Int), Sense Motive (Wis), Speak Language (none), Spot (Wis), Survival (Wis).

Skill Points at Each Level: 5 + Int modifier (4 + Int modifier for nonhumans).

CLASS FEATURES

The following features pertain to the Concord Administrator advanced class.

CONCORD ALLEGIANCE

If a Concord Administrator loses or gives up her allegiance to the Galactic Concord, she can no longer advance in this class. She is also required by law to surrender her tri-staff (see below) to Concord authorities.

TRI-STAFF

At 1st level, the Concord Administrator is given her badge of office: the tri-staff. She also receives the bonus feat Exotic Melee Weapon Proficiency (tri-staff), which allows her to wield the tri-staff in combat without penalties.

A tri-staff has the following game statistics:

Damage: 2d6	**Size:** Large
Critical: 19–20	**Weight:** 12 lb.
Damage Type: Slashing	**Purchase DC:** 23
Range Increment: —	**Restriction:** Mil (+3)

In addition, a tri-staff can be powered up as a free action, dealing +1d6 points of electricity damage in addition to its normal damage. At the same time, it exudes a force field that grants its wielder DR 10/–. The tri-staff can be powered up in this fashion for a maximum of 10 rounds per day. Recharging a tri-staff requires a power source and 1 hour.

A tri-staff cannot be purchased on the black market.

TABLE 2–4: THE CONCORD ADMINISTRATOR

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+1	+0	+1	Concord allegiance, tri-staff	+1	+1
2nd	+1	+2	+0	+2	Bonus class skill	+1	+1
3rd	+2	+2	+1	+2	Bonus feat	+2	+2
4th	+3	+2	+1	+2	Profile, stunning strike 1/day	+2	+2
5th	+3	+3	+1	+3	Bonus class skill	+3	+2
6th	+4	+3	+2	+3	Bonus feat	+3	+3
7th	+5	+4	+2	+4	Stunning strike 2/day	+4	+3
8th	+6	+4	+2	+4	Bonus class skill	+4	+3
9th	+6	+4	+3	+4	Bonus feat	+5	+4
10th	+7	+5	+3	+5	Hunch, stunning strike 3/day	+5	+4

BONUS CLASS SKILL

At 2nd level, and again at 5th and 8th level, the Concord Administrator may designate any one cross-class skill as a class skill. This represents an area of training and expertise that the Concord Administrator picks up outside her normal training.

BONUS FEATS

At 3rd, 6th, and 9th level, the Concord Administrator gains a bonus feat. The bonus feat must be selected from the following list, and the Concord Administrator must meet all the prerequisites of the feat to select it.

Advanced Firearms Proficiency, Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (heavy), Archaic Weapons Proficiency, Attentive, Blind-Fight, Combat Expertise, Defensive Martial Arts, Dodge, Double Tap, Far Shot, Improved Trip, Personal Firearms Proficiency, Point Blank Shot, Track, Weapon Focus.

PROFILE

At 4th level, a Concord Administrator swiftly learns how to profile a criminal. By making a Gather Information check (DC 15) when talking to witnesses of a crime, the Concord Administrator compiles a rough mental picture of the suspect. This mental picture provides a physical description, including distinguishing markings and visible mannerisms. Success makes the profile accurate, at least concerning a particular suspect as seen by witnesses. (For this Gather Information check, no money changes hands.)

The Concord Administrator can expand the profile by making an Investigate check (DC 15) after exploring the crime scene or other evidence linked to the suspect. If successful, the Concord Administrator combines eyewitness accounts with forensic evidence to develop a profile of the suspect's method of operation. This provides a +2 circumstance bonus on any skill checks made to uncover additional evidence or otherwise locate and capture the suspect—the Concord Administrator develops a sense of what the suspect is after and where he or she might go next.

STUNNING STRIKE

Once per day, a Concord Administrator of 4th level or higher can use her tri-staff to deal a stunning blow. The Concord Administrator must declare that she is using this ability before making the attack roll (thus, a failed attack roll ruins the attempt). A stunning strike forces a creature damaged by the tri-staff to make a Fortitude save (DC = damage dealt). A creature that fails the saving throw is stunned for 1 round (until just before the Concord Administrator's next action). A stunned creature can't act, loses any Dexterity bonus to Defense, and takes a –2 penalty to Defense.

Creatures immune to stunning effects or critical hits are not affected by the Concord Administrator's stunning strike.

At 7th level, a Concord Administrator can use her stunning strike ability twice per day. At 10th level, a Concord Administrator can use this ability three times per day.

HUNCH

At 10th level, a Concord Administrator becomes attuned to solving mysteries and rarely misses a clue. Whenever the Concord Administrator spends an action point to improve the result of a skill check made using certain skills (see below), she gets to add an additional 1d6 to the result.

The skills that the hunch ability applies to are Gather Information, Investigate, Research, Search, and Sense Motive.

STAR LAW

"Kieran Drax! By order of the United Frontier, you are under arrest for the murder of Senator U'thoc of Frometlar. Surrender peacefully or we will be forced to open fire."

SUMMARY

Star Law Officers ensure galactic peace by tracking, capturing, and bringing to justice the worst of all intergalactic criminals.

CAMPAIGN IN BRIEF

Interstellar space travel has enabled humans to colonize distant worlds. Humans now inhabit a galactic frontier made up of hundreds of independently governed, loosely aligned planets. More-or-less peaceful encounters with other sentient life forms have given rise to a galactic community that includes various diverse alien species. The United Frontier serves to bring worlds and species together, and although it strives to maintain order and peace through diplomacy and judicious use of military force, it has proven ineffective in dealing with the galaxy's criminal elements. To deal with criminals and criminal organizations, the United Frontier formed Star Law—a law enforcement agency with the power and resources to locate and arrest criminals on any Frontier world. Although Star Law activities are closely monitored by the United Frontier's intelligence community, the agency has been given sufficient latitude to pursue its directives as it sees fit.

The heroes are officers working for Star Law, the only recognized intergalactic law enforcement agency operating in the United Frontier. Star Law Officers are drawn from all corners of the galaxy, but they share an unwavering sense of duty to protect the innocent and uphold the laws of the Frontier. Every year, thousands of hopefuls apply to Star Law, for the job of a Star Law Officer is one of neverending exploration, excitement, and peril. However, only a few hundred applicants can pass the rigorous physical, intellectual, and psychological testing, and even fewer make it through the months of training and indoctrination once they're accepted.

A Star Law campaign consists of a series of missions, and almost all missions begin the same way: A squad of Star Law Officers receives an assignment to locate a capture a wanted criminal (or gang of criminals). How they pursue their quarry is up to them; sometimes the direct approach works best, but Star Law Officers must also be prepared for undercover work, relying on their keen wits as well as sharp reflexes to take down their targets.

ROLE OF THE HEROES

Two or more heroes constitute a Star Law squad assigned to track down criminals and bring them to justice. Their overarching mission—to protect the people of the United Frontier—is served by confronting and capturing these criminals. Sometimes it's a dirty and thankless job, but most Star Law Officers take heart in the fact that their work counts for something and makes the galaxy a safer place.

A Star Law squad usually consists of two to four officers. The squad leader is usually the most senior member, although a squad can survive without a designated leader if its members work especially well together.

Star Law Officers specialize in capturing criminals, not exterminating them. In the United Frontier, all sentient life forms have equal rights. A Star Law Officer must recognize that even the worst criminal has the right to a tribunal and therefore kills only as a last resort.

Star Law Officers are well treated and respected by their superiors, and most take great pride in their duties and accomplishments. They are trained to follow orders and generally go where they're sent without a fuss. Once assigned to a particular squad, a hero usually stays with that squad for as long as it remains intact. Not surprisingly, Star Law squads operate as tightly knit units, and replacing a member of a tightly knit squad can sometimes prove challenging for a new recruit.

CAMPAIGN TRAITS

A *Star Law* campaign is about enforcing the law and catching the bad guys, pure and simple. Every mission offers a new target (or group of targets) that poses some threat to the people of the United Frontier. The heroes overcome challenges as they try to catch their quarry without endangering innocent lives. Further complications may occur as the heroes become more immersed in the criminal underworld or when criminals strike back for the "injustices" inflicted upon them.

Petty larceny, vandalism, and other minor infractions are of no concern to Star Law, which deals mainly with terrorists, murderers, extortionists, counterfeiters, pirates, slavers, and the like. Given that criminals tend to be well armed, the agency always provides its officers with the best tools for the job at hand.

The *Star Law* campaign is set at Progress Level 7 and assumes the prevalence of interstellar travel.

RULES SET

A *Star Law* campaign many incorporate any or all of the *d20 Future* rules modules, including the rules for starship combat in Chapter 7.

Star Law Officers are expected to respect sentient life. They receive no experience points if they kill the target they are assigned to capture; however, they receive normal XP for capturing their quarry and an additional 50% bonus once the criminal is safely delivered to a Star Law detention facility. Star Law officers gain only one-half XP for any other sentient creature killed in the line of duty.

STAR LAW EQUIPMENT

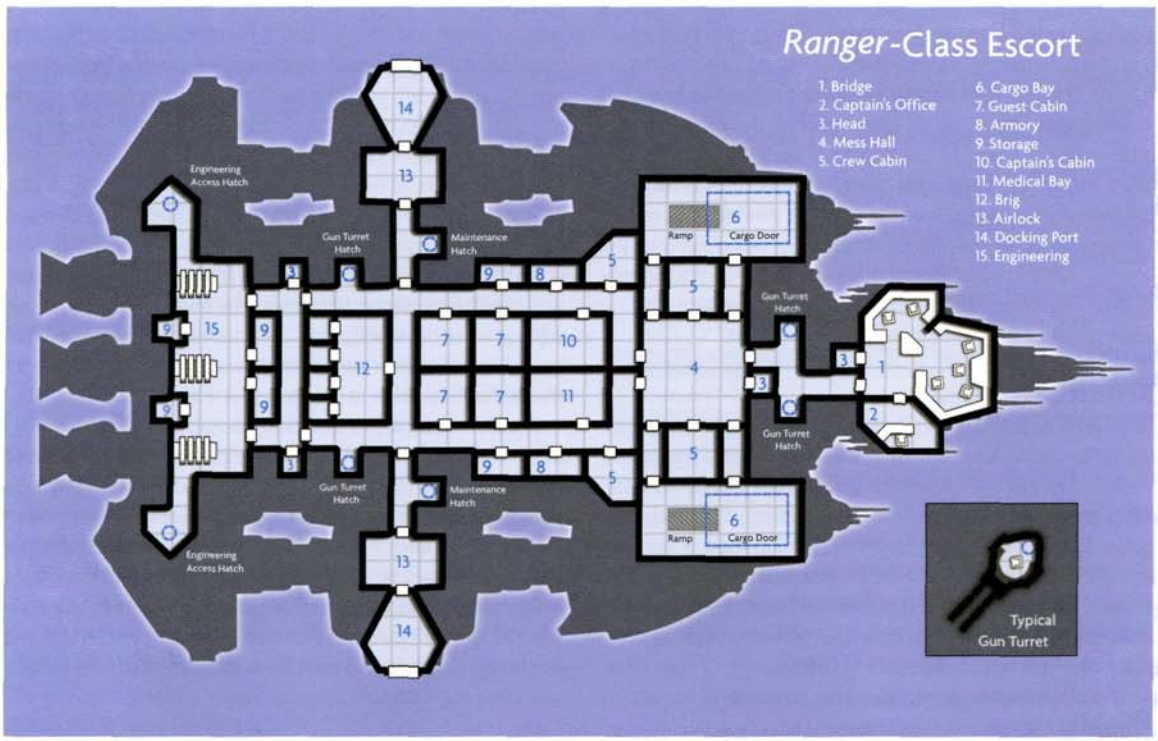
A Star Law Officer gains free access to the following equipment:

Star Law Badge: Every Star Law Officer is given a titanium badge emblazoned with the Star Law insignia. Wearing or presenting the badge on a United Frontier world grants the Star Law Officer a +2 circumstance bonus on all Charisma-based skill checks. A lost badge can be replaced in 1d4+1 days.

Armor and Weapons: *A Star Law Officer assigned to a mission* receives the following gear at no cost:

—A suit of light or medium armor (medium combat armor is standard issue).

—A fully loaded firearm of Medium or smaller size (a plasma pistol is standard issue).



—Four grenades of a type that doesn't deal lethal damage (stun grenades are standard issue).

Miscellaneous Gear: With each new mission, a Star Law Officer may also request and receive up to four additional pieces of equipment of purchase DC 14 or lower; however, items that are not depleted must be returned at the end of the mission.

Vehicles: A squad of two or more Star Law Officers may requisition and receive an AD-Bright police cruiser for professional use only. In addition, a Star Law Officer may requisition and receive an AutoDyn hoverbike for personal or professional use. See Chapter 8: Vehicles for each vehicle's statistics.

Starship: A Star Law squad assigned to interstellar missions has its own ship: a *Ranger*-class escort. (The ship's statistics are presented below.) If the squad lacks the expertise to safely operate the starship, additional personnel may be assigned to perform these functions; these nonheroic, GM-controlled characters are paid by Star Law but are not trained Star Law Officers. The GM may create statistics for these ordinaries as needed.

RANGER-CLASS ESCORT (PL 7)

For missions that require interstellar travel, Star Law Officers depend on the swift and well-armed *Ranger*-class escort. The ship has comfortable quarters for the Star Law squad and a brig with force fields for holding prisoners.

This ship uses the standard PL 6 escort (described in Chapter 7: Starships) with the *Ranger*-class template applied (see sidebar).

Type: Ultralight	**Size:** Colossal (–8 size)
Subtype: Escort	**Tactical Spd:** 4,000 ft. (8 sq.)
Defense: 7	**Length:** 180 feet
Flat-footed Defense: 5	**Weight:** 900 tons
Autopilot Defense: 5	**Targeting System Bonus:** +5
Hardness: 30	**Crew:** 8 (trained +4*)
Hit Dice: 20d20 (400 hp)	**Passenger Capacity:** 24
Initiative Modifier: +4	**Cargo Capacity:** 30 tons
Pilot's Class Bonus: +3*	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2*	**Base Purchase DC:** 52
Gunner's Attack Bonus: +2*	***Restriction:*** *Military (+3)*

* Replace with the heroes' modifiers, as appropriate.

Attack:
2 fire-linked heavy particle beams –1 ranged (24d8) and
2 fire-linked heavy neutron guns –6 ranged (15d8) and
mass reaction missile –6 ranged (20d8/19–20)

Attack of Opportunity:
Point-defense system +5 ranged (1d12×10)

Standard PL 6 Design Specs:

Engines: Induction engine, thrusters

Armor: Cerametal

Defense Systems: Damage control system (1d10), magnetic field, point-defense system, radiation shielding, repair drones

Sensors: Class V sensor array, improved targeting system

Communications: Laser transceiver, radio transceiver

Weapons: 2 fire-linked heavy particle beams (range incr. 5,000 ft.), 2 fire-linked heavy neutron guns (range incr. 6,000 ft.), 1 CHE missile launcher (8 missiles)

Grappling Systems: Tractor beam emitter

RANGER-CLASS TEMPLATE (PL 7)

The *Ranger*-class template can be applied to any PL 6 ultralight or light starship with 15 Hit Dice or more (see Chapter 7: Starships for details). The starship's design specs should be adjusted as follows.

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

Armor Upgrade: Cerametal (hardness 30).

Defense System Upgrade: Repair drones (perform damage control as a free action; replaces a PL 5 or PL 6 defense system).

Sensors Upgrade: Class V sensor array (+2 initiative), improved targeting system (targeting system bonus +5).

Communications Upgrade: Drivesat comm array, mass transceiver.

Weapons Upgrade: 2 fire-linked heavy particle beams (24d8 damage; range incr. 5,000 ft.; replaces PL 5 or PL 6 fire-linked weapon system), 1 mass reaction missile launcher (8 missiles; 20d8/19–20 damage; replaces PL 5 or PL 6 missile launcher).

Grappling System Upgrade: Tractor beam emitter (replaces grapplers).

Restriction: Military (+3).

ALLIES AND OPPONENTS

Star Law Officers routinely face off against the galaxy's worst criminals. Some of these heinous villains operate alone, while others are inexorably connected to powerful crime syndicates. This section highlights some of the organizations that might hinder or actively oppose the heroes.

UNITED FRONTIER INTELLIGENCE AGENCY

Star Law enjoys tremendous autonomy, but the agency is funded by the United Frontier. Consequently, the United Frontier Intelligence Agency (UFIA) has agents, called Watchers, who monitor Star Law activities. If a Star Law Officer violates local laws or endangers innocent civilians during a mission, a Watcher may be sent to evaluate the officer and file a report with her superiors.

THE MALTHAR'S CRIME SYNDICATE

The Malthar is an impossibly obese dralasite (see Chapter 13: Xenobiology) who lives aboard a privately owned space station in a remote star system. Over the years, the dralasite crime lord has amassed a sizable fleet of pirate ships comprised mainly of well-armed freighters and escorts. The Malthar has also dipped his fat pseudopods into the smuggling business, and many fear that he has corrupted or blackmailed more than a handful of United Frontier officials.

Star Law Officers sent to track down ruthless smugglers and vicious pirates might find themselves at odds with the Malthar and other high-ranking members of his syndicate, which is believed to have tendrils stretching throughout the known galaxy. Of course, bringing the Malthar himself to justice could be the highlight of the heroes' campaign—although many others have already tried and failed.

THE SHADOW WORLDS

The United Frontier includes hundreds of worlds, and each member world is expected to adhere to Frontier law. However, many of the Frontier's outermost planets are poorly defended, lawless backwater colonies stricken by poverty, greed, and corruption. They have become havens for the wicked, the wretched, and the unwanted. In addition, certain worlds have refused to join the United Frontier solely because their governments—petty tyrants and greedy "ore barons" mostly—refuse to acknowledge Frontier law or respect Frontier politics.



Star Law

Planets that fall within the boundaries of the United Frontier but aren't member worlds are referred to as the Shadow Worlds. Star Law officers visiting these worlds can expect no cooperation from local officials—not unless they are willing to pay bribes, turn a blind eye to oppression, and consort with sinister, morally bankrupt characters.

STAR LAW OFFICER

The United Frontier represents the greatest of all achievements—a planetary federation comprised of more than one hundred worlds, all invested in galactic peace. Although the Frontier maintains a sizable military force to deal with civil uprisings and threats from beyond, criminals operating within Frontier space continually undermine the peace, threaten trade, and endanger innocent citizens. The military's inability to eradicate crime led to the formation of Star Law, a law enforcement agency dedicated to bringing the worst of the Frontier's criminals to justice. The long arm of Star Law reaches every corner of the galaxy, and its officers are trained to execute their missions with forethought and precision.

A Star Law Officer and the other members of her squad specialize in finding, capturing, and transporting dangerous criminals. When dealing with the criminal element, a squad must be prepared for anything, including undercover work. Star Law Officers take their duties very seriously and strive to make a difference in the galaxy. They respect Frontier law and the rights of all sentient beings—even the lowlife vermin they have sworn to take down.

Select this advanced class if you want to serve the United Frontier by hunting down criminals and bringing them to justice.

The fastest path into this advanced class is from the Dedicated hero basic class, though other paths are certainly possible.

REQUIREMENTS

To qualify to become a Star Law Officer, a character must fulfill the following criteria.

Base Attack Bonus: +2.

Skills: Knowledge (civics) 6 ranks, Knowledge (tactics) 6 ranks.

Feats: Armor Proficiency (light), Personal Firearms Proficiency.

Special: A character convicted of a capital crime cannot join Star Law and become a Star Law Officer.

CLASS INFORMATION

The following information pertains to the Star Law Officer advanced class.

HIT DIE

The Star Law Officer gains 1d8 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Star Law Officer gains a number of action points equal to 6 + one-half his character level, rounded down, every time he attains a new level in this class.

CLASS SKILLS

The Star Law Officer's class skills are as follows.

Bluff (Cha), Computer Use (Int), Diplomacy (Cha), Drive (Dex), Gather Information (Cha), Investigate (Int), Knowledge (civics, streetwise, tactics) (Int), Pilot (Dex), Profession (Wis), Read/Write Language (none), Repair (Int), Sense Motive (Wis), Sleight of Hand (Dex), Speak Language (none), Spot (Wis), Treat Injury (Wis).

Skill Points at Each Level: 5 + Int modifier (4 + Int modifier for nonhumans)

TABLE 2–5: THE STAR LAW OFFICER

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+1	+1	+1	+2	Special training, Star Law allegiance, Star Law equipment	+1	+1
2nd	+2	+2	+2	+3	Bonus feat	+1	+1
3rd	+3	+2	+2	+3	—	+2	+1
4th	+4	+2	+2	+4	Bonus feat	+2	+2
5th	+5	+3	+3	+4	Team effort 1/day	+3	+2
6th	+6	+3	+3	+5	Bonus feat	+3	+2
7th	+7	+4	+4	+5	—	+4	+3
8th	+8	+4	+4	+6	Bonus feat	+4	+3
9th	+9	+4	+4	+6	Team effort 2/day	+5	+3
10th	+10	+5	+5	+7	Bonus feat	+5	+4

CLASS FEATURES

The following class features pertain to the Star Law Officer advanced class.

SPECIAL TRAINING

Thanks to special training, a Star Law Officer gains the bonus feats Armor Proficiency (medium) and Combat Martial Arts.

STAR LAW ALLEGIANCE

A Star Law Officer must select Star Law as one of her allegiances (see Allegiances on page 37 of the *d20 Modern Roleplaying Game*). If she ever gives up her allegiance to Star Law, she loses the privileges of being a Star Law Officer (including her badge and all other Star Law property) and loses her team effort ability (see below). Furthermore, she may no longer advance in this class.

STAR LAW EQUIPMENT

A Star Law Officer gains limited free access to armor, weapons, equipment, and vehicles (see Star Law Equipment for details).

BONUS FEATS

At 2nd, 4th, 6th, 8th, and 10th level, the Star Law Officer gets a bonus feat. The bonus feat must be selected from the following list, and the Star Law Officer must meet all the prerequisites of the feat to select it.

Advanced Combat Martial Arts, Aircraft Operation, Armor Proficiency (heavy), Armor Proficiency (powered)*, Brawl, Combat Expertise, Combat Throw, Dead Aim, Defensive Martial Arts, Double Tap, Elusive Target, Endurance, Far Shot, Force Stop, Improved Brawl, Improved Combat Martial Arts, Improved Combat Throw, Improved Disarm, Improved Knockout Punch, Improved Trip, Knockout Punch, Oathbound (Star Law)*, Point Blank Shot, Precise Shot, Quick Draw, Quick Reload, Run, Shot on the Run, Skip Shot, Starship Gunnery*, Starship Operation*, Surface Vehicle Operation, Trustworthy, Unbalance Opponent, Urban Tracking*, Vehicle Dodge, Vehicle Expert, Weapon Focus, Zero-G Training*.

* *Indicates a feat described in Chapter One.*

TEAM EFFORT

Once per day starting at 5th level, a Star Law Officer can spend an action point as a free action on her turn to give her and her fellow Star Law squad members a +1 morale bonus on all attack rolls, skill checks, and saving throws. These benefits last until the beginning of the Star Law Officer's next turn.

Only characters with at least one level in the Star Law Officer advanced class gain the benefits of this ability. Affected characters must also be within sight or hearing distance of the Star Law Officer who spent the action point.

Starting at 9th level, a Star Law Officer can use this ability twice per day.

THE WASTELAND

"I just came from the ruins of Chicago, where I ran into a nasty band of Marauders. I think some of them might be following me. Mind if I share your bunker for the night?"

SUMMARY

Roving warriors and nomadic pirates fight for a meager existence in a post-apocalyptic world.

CAMPAIGN IN BRIEF

The Wasteland is a true post-apocalyptic setting in the tradition of films and books inspired by the Cold War. The world has become a desolate place with little in the way of civilization. At some point in the past, foolish men and women chose to use weapons of such destructive power that they brought their own society to its knees. Billions were killed in a senseless war, and millions more died in the aftermath as food and supplies became scarce. Vast swathes of land are completely irradiated and inhospitable, while the concept of cities seems almost a myth. Once bustling metropolises like New York and Tokyo are now vacant ruins—the toppled remnants of an arrogant civilization.

Out of the wreckage of the shattered world come a few bold survivors who try to regain what passes for a normal life. These people band together and form settlements in order to survive, pooling their limited resources and relying on one another for almost everything. Other men and women degenerate into lawless barbarism, banding together in groups collectively known as Marauders and raiding settlements for whatever they need. Violence rules the streets and highways, and justice remains a scarce commodity.

ROLE OF THE HEROES

The heroes of *The Wasteland* are the descendants of the survivors of a great nuclear holocaust. They live in a world where monuments to ancient technology are everywhere, yet they are forced to scrape up a meager existence with only what they can make themselves. Most heroes are simply trying to survive another day and make a living for themselves, but the Marauders make life difficult. Most heroes in the setting choose to fight against the lawless barbarians in some form or another, toppling Marauder kings that threaten their homes or wiping out a Marauder gang for pay, like exterminators clearing up an insect infestation.

The heroes might be members of a community that has banded together for mutual protection. Other heroes make their own fate by wandering across the land, moving from settlement to settlement in search of a home, peace, or just the next meal.

CAMPAIGN TRAITS

The Wasteland is one part post-apocalyptic science fiction and one part western, mixed together in surprising ways. The world is anyone's for the taking, and amid the lawless ruins of civilization can be found repairable technology. Within a burned-out city or desolated bomb shelter, characters might find a laser weapon or computer system in working order. Cybernetics may still be found in some remote areas, and even robots whose power cells never died still wander the planet looking to fulfill their half-forgotten missions. That said, most of society has been reduced to a more primitive state, forcing many people to resort to archaic tool use.

Not only has *The Wasteland* imposed a more primitive lifestyle upon humanity, but nuclear radiation has changed humanity in other ways as well. Mutations abound. Humans with darkvision feast on lone stragglers in the abandoned subway tunnels of New York City, while winged humans roost atop blackened skyscraper skeletons. Physical deformities and other mutations segregate humans in strange new ways, as humans of *The Wasteland* manage to find new reasons to despise and distrust one another.

POWER GROUPS

Humanity is still disorganized and reeling from the apocalyptic war. Consequently, only one "power group" has emerged since the fall of society: the Marauders. Even then, the Marauders are little more than loosely organized bands of criminals that take advantage of

the weak for their own pleasure. In fact, bands of Marauders are constantly at war with one another, showing that even they have no true allegiance to one another. Marauders live in a cutthroat world where they must kill or be killed, and this translates over into how they deal with others outside their organization. The Marauders are brutal warriors and thieves who hoard what little technology they can find and use it to further harass the scattered settlements.

ALLIES AND OPPONENTS

One of the most likely places for the heroes to find assistance is in a settlement. Scattered towns and villages dot the landscape, some in the remains of pre-apocalypse cities and towns and some established far from what was once civilization, outside fields of lingering radiation.

Settlements are home to simple people trying to survive and rebuild their once great society. Heroes who aid members of a settlement are treated to food and shelter. A larger settlement might have a small economy in place that can provide heroes with a place to purchase goods or even refurbished technology.

Other possible allies include the "nuclear nomads" who wander *The Wasteland*. More than simple vagabonds, nuclear nomads move from settlement to settlement carrying news. They ensure that the lines of communication between distant settlements remain open. Some even take jobs as protectors for small settlements, fending off attacks for a while before moving on. Hardy and tough, they eat raging sandstorms and Marauders for breakfast. In short, nomads are solid companions to have in combat.

Certainly the biggest threat to a group of heroes will be the groups of roving outlaws known as Marauders. Most of the barbaric leaders of these bands hold a grudge, and should the heroes ever run afoul of a group, they will not see an end to the feud until one or both parties are dead. As the primary villains in *The Wasteland*, marauders take on many forms, from thugs and soldiers to technology-mongers and mad scientists.

RULES SET

The Wasteland campaign can be run at Progress Level 6 or higher. It may incorporate any of the rules modules presented in this book, although the radiation rules presented in Chapter 4: Environments are especially appropriate. Mutant characters can be created using the rules in Chapter 12: Mutations.

BARTER SYSTEM

The *d20 Modern Roleplaying Game*—and, by extension, *d20 Future*—uses an abstract Wealth system that may seem out of place in the post-apocalyptic world of *The Wasteland* campaign setting. In *The Wasteland*, a Wealth check does not represent cash on hand, availability of credit, or loans. Rather, the Wealth bonus represents trinkets and valuable baubles, random pieces of old technology, and any other items that can be used to barter with other citizens scratching out an existence in a desolate world.

In situations where two characters are bartering over one or more items, the Gamemaster may call for opposed Wealth checks. The bartered items change hands, and the result of the check determines who comes out better in the deal. The winner of the opposed check suffers no reduction in wealth as a consequence of the trade; the loser of the opposed roll also gains the items he is trading for, but his Wealth bonus decreases by 1.

Before the opposed Wealth checks are made, a Gamemaster may call for opposed Diplomacy checks to account for good negotiating. The winner of this contest gains a +2 bonus on the opposed Wealth check.

NUCLEAR NOMAD

A Nuclear Nomad is a roving survivor in a post-apocalyptic wasteland. He has not sunken into barbarism like the Marauders, nor has he tried to settle down and recreate civilization. He wanders the countryside, moving from settlement to settlement with no final destination in mind. He is part vagabond and part messenger, carrying news across a broken landscape. At times, when the mood strikes him, a Nuclear Nomad may bring a little bit of law and justice to those in need. A Nuclear Nomad with a reputation for meting out justice will find plenty of work in settlements threatened by Marauders or other ruffians.

Nuclear Nomads are tough survivors skilled at living off the land. Most carry their belongings on their backs in huge knapsacks, filled to the brim with survival gear and trinkets from before the destruction of the world's civilization. Most Nuclear Nomads also equip themselves with pre-apocalypse weapons and equipment beyond the reach of most other humans.

Select this advanced class if you want your character to be a roving, tough-as-nails survivor in a post-apocalyptic hell.

The fastest path into this advanced class is from the Tough hero basic class, though other paths are certainly possible.

REQUIREMENTS

To qualify to become a Nuclear Nomad, a character must fulfill all the following criteria.

Base Attack Bonus: +2.
Skills: Survival 6 ranks.
Base Fortitude Save: +2.

CLASS INFORMATION

The following information pertains to the Nuclear Nomad advanced class.

HIT DIE

The Nuclear Nomad gains 1d10 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Nuclear Nomad gains a number of action points equal to 6 + one-half his character level, rounded down, every time he attains a new level in this class.

CLASS SKILLS

The Nuclear Nomad's class skills are as follows.

Bluff (Cha), Climb (Str), Craft (electronic, mechanical, pharmaceutical) (Int), Decipher Script (Int), Disable Device (Int), Drive (Dex), Gather Information (Cha), Handle Animal (Cha), Knowledge (history, streetwise, technology) (Int), Navigate (Int), Perform (any) (Cha), Read/Write Language (none), Repair (Int), Ride (Dex), Sense Motive (Wis), Sleight of Hand (Dex), Speak Language (none), Spot (Wis), Survival (Wis), Swim (Str), and Treat Injury (Wis).

Skill Points at Each Level: 7 + Int modifier (6 + Int modifier for nonhumans).

CLASS FEATURES

The following features pertain to the Nuclear Nomad advanced class.

DANGER SENSE

Once per day, a Nuclear Nomad may reroll an initiative check he's just made. He may use the better of the two rolls. The Nuclear Nomad must decide to reroll before the round starts.

TABLE 2–6: THE NUCLEAR NOMAD

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+2	+1	+0	Danger sense, steadfast 1/day	+1	+0
2nd	+1	+3	+2	+0	Mutation or radiation resistance	+1	+0
3rd	+2	+3	+2	+1	Bonus feat	+2	+1
4th	+3	+4	+2	+1	Steadfast 2/day	+2	+1
5th	+3	+4	+3	+1	Geiger counter (60 feet), mutation or radiation resistance	+3	+1
6th	+4	+5	+3	+2	Bonus feat	+3	+2
7th	+5	+5	+4	+2	Steadfast 3/day	+4	+2
8th	+6	+6	+4	+2	Mutation or radiation resistance	+4	+2
9th	+6	+6	+4	+3	Bonus feat	+5	+3
10th	+7	+7	+5	+3	Geiger counter (120 feet)	+5	+3

STEADFAST

Once per day, a Nuclear Nomad may reroll a failed saving throw against massive damage. He can use this ability twice per day at 4th level and three times per day at 7th level.

MUTATION OR RADIATION RESISTANCE

At 2nd level, a Nuclear Nomad's exposure to radiation gives him a mutation or heightens his resistance to radiation sickness. The Nuclear Nomad gains a minor mutation of his choice (see Table 12–1: Mutations, on page 202), or he gains a +2 resistance bonus on Fortitude saves against radiation sickness (see Chapter 4: Environments for more information on radiation sickness).

At 5th level, the Nuclear Nomad may select another minor mutation or improve his resistance bonus on Fortitude saves against radiation sickness by an additional +2.

At 8th level, the Nuclear Nomad may select a major or minor mutation (see Table 12–1: Mutations, on page 202) or improve his resistance bonus on Fortitude saves against radiation sickness by an additional +4.

A Nuclear Nomad who gains a minor or major mutation ignores the mutation's MP cost and does not need to offset the benefit by taking a drawback (see Chapter 12: Mutations for details).

BONUS FEATS

At 3rd, 6th, and 9th level, the Nuclear Nomad gains a bonus feat. The bonus feat must be selected from the following list, and the Nuclear Nomad must meet all the prerequisites of the feat to select it.

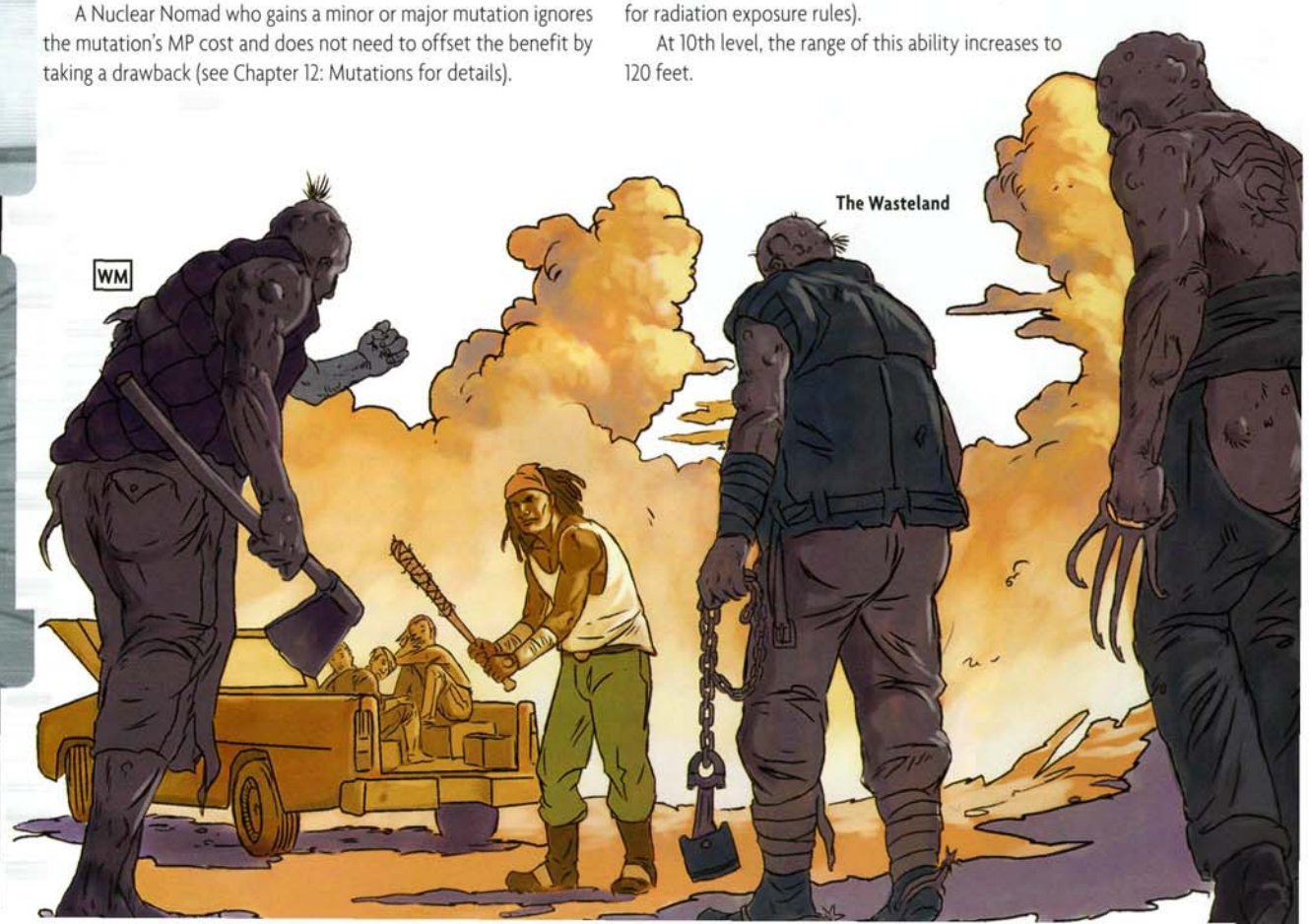
Action Boost*, Alertness, Archaic Weapons Proficiency, Athletic, *Endurance, Exotic Melee Weapon Proficiency, Great Fortitude,* Guide, Improved Damage Threshold, Iron Will, Jack of All Trades*, Lightning Reflexes, Low Profile, Personal Firearms Proficiency, Renown, Salvage*, Toughness, Track, Ultra Immune System*.

** Indicates a feat described in Chapter One.*

GEIGER COUNTER

At 5th level, a Nuclear Nomad can detect the presence of harmful radiation out to a range of 60 feet. He can also pinpoint the relative distance and direction of the source, if there is one. By spending a full-round action and making a successful Survival check (DC 20), he can determine whether an area is lightly, moderately, highly, or severely irradiated, or whether a radiation source is lightly, moderately, highly, or severely radioactive (see Chapter 4: Environments for radiation exposure rules).

At 10th level, the range of this ability increases to 120 feet.



CHAPTER THREE:

GEAR



Got Gear?

This chapter covers weapons, armor, and other gear across the Progress Levels covered by this book.

Weapons, armor, and equipment are all purchased using the Wealth system. (See Chapter Four of the *d20 Modern Roleplaying Game*.)

Some purchase DCs for gear in this chapter vary depending on modifications to the equipment. Other pieces of gear may have multiple purchase DCs representing different options available. If a purchase DC is given as "Special," be sure and check the item's description for the specifics on how much the item costs.

The equipment in this chapter is grouped into the Progress Levels in which it is most likely to be developed. As such, the purchase DC of each item reflects its value in its own age. Some GMs may wish to move objects from one Progress Level to another, especially for campaign settings that have developed technological concepts uncommon to other societies of a similar Progress Level. Always check with your GM to see if any equipment is off-limits, or perhaps permitted outside its normal Progress Level, for any particular campaign.

Most items available at one Progress Level can also be found at later Progress Levels; for example, items from the Information Age are also available in the Fusion, Gravity, and Energy Ages. Of course, the GM may rule that antiquated and outdated equipment is no longer as readily available, or only available at an increased purchase DC. Additionally, it is occasionally, but only rarely, the case that some items from later tech levels might appear in earlier ages. For example, an alien race might bestow advanced technology on a civilization too young to appreciate it, or time travelers might leave a relic of their own era to be found in the past. These are rare exceptions, and for the most part are more plot points than common occurrences.

In many cases, the items listed in this chapter represent the "base" models from which more specific equipment is derived. To make the equipment list useful to all campaigns, most weapons and objects are intentionally generic and are not given manufacturer names or hard-and-fast limitations. Through the use of the gadget system (see below), each of these weapons and objects can be customized to better fit your character or campaign.

Finally, another side effect of the use of generic descriptions for items and concepts is that it allows objects of a

particular function to be represented in multiple campaigns and technology levels in different ways. For example, though one campaign setting might have laser guns and rifles that resemble massive and bulky weapons in the "bigger is better" philosophy, others may have the same weapons in sleek and aerodynamic forms more suited to an aesthetically minded society. Some items may evolve in form over different eras; for example, the sonic grenade might be a handheld weapon the size of a tennis ball during the Information Age but might be only the size of a marble in the Gravity Age. Players and GMs should choose the form of their weapons and objects in a manner that fits the campaign and should not be limited by preconceived notions of what form a particular piece of gear might take.

THE GADGET SYSTEM

The gadget system is a way to customize weapons, armor, and equipment to more appropriately fit a given campaign or character. Since each campaign will likely use very different items based on its unique setting, the gadget system allows total freedom in designing specific models of equipment from the generic base items found throughout this chapter.

Using the gadget system is a simple matter of mixing and matching various elements of a piece of gear until it fits what is needed. First, pick a base weapon, armor, or piece of equipment to be modified. Select a gadget for the appropriate type (armor gadgets for armor, and so on) that is either a universal gadget or a gadget from the same (or lower) Progress Level. Modify the Purchase DC of the base item according to the gadget's instructions, and then purchase the gadget-modified item as normal. Some gadgets have additional restrictions placed on them that must be considered before making the gadget modification.

For example, suppose we wanted to create a flight suit and helmet that had a heads-up display (HUD) built into the pilot's visor. Looking at the Universal Armor Gadgets (page 61), we see that the integrated equipment gadget allows us to do exactly that. The integrated equipment gadget increases the flight suit and helmet purchase DC by +2, bringing it to a total purchase DC of 12.

UNIVERSAL WEAPON GADGETS

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

ALTERNATE WEAPON

Some weapons are capable of serving multiple purposes by integrating two types of weapon into one. This can encompass everything from having a bayonet installed on a rifle to allowing a weapon to switch between two different energy types at any given time. When dealing with firearms and other ranged weapons, this usually involves only mixing like types; for example, energy weapons are only combined with energy weapons, and ballistic weapons are only combined with ballistic weapons. This is not a hard-and-fast limitation but rather a suggestion based on the logistics of designing such a weapon.

When selecting the alternate weapon gadget, choose a second weapon. That weapon is integrated into the base weapon and can be used at any time. Additionally, you must choose whether or not the alternate weapon may be physically separated from the base weapon or not at the time of purchase. This gadget may be selected multiple times, each time adding a single additional weapon to the base model.

Restrictions: The character must also purchase the weapon to be integrated separately from the primary weapon, before the gadget modification is made.

Purchase DC Modifier: +4.

COST BY PROGRESS LEVEL

When the GM decides to allow a type of technology not normally found at the Progress Level of his campaign, no change need be made to the purchase DCs of equipment based on that technology. The purchase DC represents the object's value relative to the economy of the time and place, so it doesn't need to be changed if the gear is normally available in that time and place.

On the other hand, should a character wish to purchase an object normally not found at her technology level (such as a super high-tech prototype or some sort of alien weapon), the purchase DC for the object does change, based upon how far removed from its own time the item is. See the Purchasing Items of Lower or Higher Progress Level sidebar in the Introduction (page 5).

AUTOFIRE MODULE

Some firearms and energy weapons are capable of firing in single-shot or semiautomatic forms only. The autofire module gadget allows these weapons to be fired on autofire.

Restrictions: Ranged weapon without autofire only.

Purchase DC Modifier: +2.

AUTOLOADER MODULE

Many weapons rely on box magazines or power packs to function. The autoloader gadget facilitates quick reloading. This may come in the form of an integrated power pack alternator, or in spring-mounted magazine loaders worn on the wrist of the user. Regardless of their location on the owner's body or the form that the autoloader takes, a weapon with the autoloader module gadget is always automatically reloaded as a free action as soon as the previous magazine or power pack is expended. This module cannot be transferred from one weapon to another, even those of similar types, due to the fact that each autoloader module is keyed to the individual weapon for which it was designed.

Restrictions: Ranged weapons using box magazines or power packs only.

Purchase DC Modifier: +3.

BOOBY TRAPPED

Those characters with a more paranoid outlook on life may consider the booby trapped gadget for protecting their personal belongings. Any weapon with this gadget is designed to function properly only for the owner or owners of the weapon, or for a particular group of characters. If an unauthorized character picks up or attempts to use the weapon, a special trap is immediately triggered. After a trap is triggered, only an authorized user can reset the weapon to its normal state. When selecting the booby trap gadget, the character must designate a single person or a particular group (for example, members of the 101st Space Marines) that can use the weapon safely without triggering the trap. Additionally, the character must select a single trap from the list below. GMs may wish to allow traps from other sources, but always consult with the GM before using any such modification.

Barbs: The weapon rapidly projects spikes or blades from its grip, dealing 1d6 points of damage to the user each round the weapon is held.

Electric Shock: Power cells in the weapon's grip discharge and deal 1d6 points of electricity damage to the user.

Stun Bolt: A stun shock (Fortitude save DC 15) is discharged from a special nozzle built into the weapon. See the stun module gadget (page 61) for more information on the effects of stun shocks.

Trigger Integrated Weapon: An integrated weapon is triggered and targets the unauthorized user. This trap requires that the weapon make use of the alternate weapon gadget (see above) and is typically used to trigger an explosive device.

Restrictions: None.
Purchase DC Modifier: +6.

COLLAPSIBLE

In situations that call for stealth and deception, it is of great value to be able to separate an item into its parts and transport them in their broken down state. A weapon that makes use of the collapsible gadget is easily disassembled and reassembled at a moment's notice. Breaking down a weapon into its individual parts requires a full-round action, while reassembling them in the correct order requires another full-round action. Obviously, the weapons must be fully assembled to be used. In its disassembled state, a weapon is not easily identified; a Knowledge (technology) check (DC 17) is required to identify a collapsed weapon for what it really is.

Restrictions: None.
Purchase DC Modifier: +2.

COMPACT

By eliminating wasted space and using smaller components, some engineers are capable of producing weapons far smaller than their standard counterparts. Any weapon that makes use of the compact gadget is one size smaller than normal, to a minimum size of Diminutive.

This gadget can only be added to ranged weapons, as most melee weapons rely on size and mass to deliver damage.

Restrictions: Ranged weapons only.
Purchase DC Modifier: +2.

EXPANDED MAGAZINE

Some weapon engineers recognize that stopping to reload a weapon in combat is a dangerous and potentially life-threatening maneuver. Taking steps to reduce the amount of time required to keep the weapon full, these engineers have increased the ammunition capacity of the weapon to reduce the frequency with which it must be reloaded. Any weapon with the expanded magazine gadget doubles its normal magazine capacity. This gadget may only be taken once per weapon.

Restrictions: Ranged weapons only.
Purchase DC Modifier: +2.

GENETIC TAGS

Some law enforcement agencies and military units go out of their way to track the exact actions of their members by placing an identifying marker on any ammunition expended. This marker may come in the form of a serial number stamped on a weapon's casing, or may be as subtle as a chemical compound sprayed on the outside of the ammunition it leaves the weapon's chamber. Regardless of form, each round of ammunition that is fired from the weapon bears a unique tag that corresponds to the genetic code of the person to whom the weapon is assigned, immediately identifying the attacker to any forensic analysis.

Restrictions: Ranged ballistic weapons only.
Purchase DC Modifier: +2.

INTEGRATED EQUIPMENT

A particular piece of nonweapon equipment has been integrated into the weapon and can be used by the weapon's bearer at any time. This gadget is often used to give ranged weapons features like glow-lamps or flares, though it is not limited to those applications. Some weapons may use the integrated equipment gadget to incorporate a small computer or sensor module, reducing the amount of equipment the character has to carry.

When selecting the integrated equipment gadget, choose a piece of equipment. That equipment is integrated into the base weapon and can be used at any time. Additionally, you must choose whether or not the equipment may be physically separated from the base weapon or not at the time of purchase. This gadget may be selected multiple times, each time adding a single additional piece of equipment to the base model.

Restrictions: The character must also purchase the piece of equipment to be integrated separately from the weapon, before the gadget modification is made.
Purchase DC Modifier: +1.

MINIATURIZED

By eliminating wasted space and using microscopic components, some engineers are capable of producing weapons vastly smaller than normal. Any weapon that makes use of the miniaturized gadget is two size categories smaller than normal, to a minimum size of Diminutive.

A weapon to which the miniaturized gadget has been added cannot fire standard ammunition. It must fire appropriate ammunition modified by the miniaturized universal equipment gadget.

This gadget can only be added to ranged weapons, as most melee weapons rely on size and mass to deliver damage.

Restrictions: Ranged weapons only.
Purchase DC Modifier: +5.

SCOPE, RANGEFINDING LASER

One of the most valuable additions to any weapon is a scope, allowing the bearer to target opponents farther away than normal. What makes the rangefinding laser scope gadget so valuable is that it serves two purposes. First, a weapon with this gadget increases its range increment by one-half (multiply by 1.5). Additionally, the scope also sends out an invisible laser that can determine the exact range to a target, and then relay that information via a computer link. If that information is relayed to another weapon with the rangefinding laser scope gadget targeting the same character or object, the second attacker gains a +1 equipment bonus on his first attack roll against the target. This allows multiple characters with rangefinding laser scope gadgets to triangulate the exact position of a target and ensures greater accuracy.

Restrictions: Ranged weapons only.
Purchase DC Modifier: +1.

SENSOR BAFFLING

From simple metal detectors to advanced x-ray scanners, there's a way to detect every weapon. As the technology level increases, so does the accuracy of weapons sensing devices. The ability to confuse these sensors can be invaluable, especially when smuggling weapons past security. Any weapon with the sensor baffling gadget grants a +4 bonus on any checks made to conceal the weapon from sensors or other detection devices.

Restrictions: None.
Purchase DC Modifier: +2.

SPRING-LOADED

Some weapons are designed to be concealed from sight and then quickly drawn into the hand at a moment's notice. The spring-loaded gadget ensures that small weapons can remain hidden under layers of clothes or armor and still be called to action at any time. The bearer of a weapon with this gadget automatically gains the benefits of the Quick Draw feat with this weapon only, even if the weapon is hidden from sight on that character's person.

Restrictions: Weapons of size Small or smaller only.

Purchase DC Modifier: +2

STUN MODULE

One advantage of energy weapons over their ballistic and physical counterparts is that they are capable of altering their own output on the fly. With the stun module gadget, this means that an energy weapon can be used to apply nonlethal force. The stun module is an alternate firing mode; switching to or from stun mode is a free action (just like changing a weapon's rate of fire). Whenever a character fires a weapon set to stun and successfully hits the target, the target must make a Fortitude save (DC determined by cost of the gadget) or be stunned for 1d4 rounds.

Restrictions: Energy weapons only.

Purchase DC Modifier: +2 (Fort DC 12); +4 (Fort DC 15); +6 (Fort DC 18).

TECHNO-ORGANIC MAKEUP

Though the technology of Earth is based on electronics and mechanics, some alien cultures may have developed technology based on living organisms working in harmony for an intended purpose. Additionally, advanced civilizations may make use of certain biological forms of technology integrated with their own mechanical devices to form a techno-organic hybrid capable of performing certain tasks with increased efficiency.

A weapon with the techno-organic makeup gadget is composed of living tissue or a biological/mechanical hybrid material. Unlike normal weapons, the weapon with this gadget heals itself at a rate of one hit point per hour when damaged. Additionally, weapons with this gadget are susceptible to diseases and poisons specifically designed to target techno-organic material.

Restrictions: None.

Purchase DC Modifier: +2.

VARIABLE AMMUNITION

Firearms typically draw their ammunition from a single source and do so until they are reloaded with a fresh magazine. The variable ammunition gadget changes this; it allows the user to load an additional type of ammunition. This essentially doubles the ammunition capacity of the weapon and allows the user to switch between the two different types of ammunition as a free action. So, for example, a weapon with this gadget might be loaded with one magazine of standard ammunition and a second magazine of shrapnel ammunition. This gadget may be selected multiple times, each time adding a single additional magazine capacity for a *different type of ammunition.*

Restrictions: Ranged ballistic weapons only.

Purchase DC Modifier: +4.

VARIABLE CHARGE

As with the stun module gadget, the variable charge gadget takes advantage of an energy weapon's ability to modify the damage caused by its own shots. This gadget gives the user the ability to "power up" his or her shots by focusing more energy into a single blast. A weapon with the variable charge gadget may be primed as an attack action, increasing the damage of its next shot by +1 die. For example, a weapon that normally deals 2d6 points of damage deals 3d6 points of damage after being primed for one round. A weapon may be primed for up to three rounds. If primed for more than three rounds, it becomes unstable; on the fourth round the weapon must be fired or else it explodes and deals the fully charged damage (normal weapon damage, +4 dice) to the user. When this occurs, the weapon is completely destroyed.

Restrictions: Ranged energy weapons only.

Purchase DC Modifier: +6.

VOICE RECOGNITION SYSTEM

A countermeasure commonly built into weapons is the voice recognition system gadget. It requires any user to speak a command word to unlock the weapon before it can be used. Some weapons couple the voice recognition system with the booby trap gadget to require a voice command to reset the weapon to its previous state. Any weapon with the voice recognition system gadget will not fire or activate unless the owner (or designated group) gives the command word to the weapon.

Restrictions: None.

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.

ENVIRONMENT SEAL

Since many armors are designed with a particular environment in mind, this gadget provides the wearer protection from harsh conditions. The environment seal gadget transforms any armor into a stable and insulated artificial environment. This provides the wearer with the right amount of breathable air and external pressure to assure comfort and survival for up to eight hours, ensuring that the armor can function in the extremes of the deep sea or deep space, along with any environment in between. Only certain types of armor can handle this modification and those that do usually integrate a sealed helmet, body glove, and emergency air tanks to generate internal atmosphere.

Restrictions: Medium, heavy, or powered armor only.

Purchase DC Modifier: +4.

INTEGRATED EQUIPMENT

A particular piece of nonweapon equipment has been integrated into the armor and can be used by the armor's wearer at any time. This gadget is often used to add features such as glow-lamps or duracable to armor, though it is not limited to those applications. Indeed, some armors are intended to make their wearers into independent one-person armies, and sport a dozen or more such equipment integrations.

When selecting the integrated equipment gadget, choose a piece of equipment. That equipment is integrated into the base armor and *can be used at any time. Additionally, you must choose whether or* not the equipment may be physically separated from the base armor or not at the time of purchase. This gadget may be selected multiple times, each time adding a single additional piece of equipment to the base model.

Restrictions: The character must also purchase the piece of equipment to be integrated separately from the armor, before the gadget modification is made.

Purchase DC Modifier: +2.

INTEGRATED WEAPON

Some armors are designed with specific combat purposes in mind and build in certain weapons as standard equipment. Examples run from a pair of pop-out wrist blades to shoulder-mounted plasma cannons. Additionally, many armors link their weapons to integrated heads-up displays, turning the user into a walking combat machine.

When selecting the integrated weapon gadget, choose a single weapon. That weapon is integrated into the base armor and can be used at any time. Additionally, you must choose whether or not the weapon may be physically separated from the base armor or not at the time of purchase. This gadget may be selected multiple times, each time adding a single additional weapon to the base armor.

Restrictions: The character must also purchase the weapon to be integrated separately from the base armor, before the gadget modification is made.

Purchase DC Modifier: See text.

STORAGE COMPARTMENT

A simple but often overlooked modification that can be of great benefit in almost any situation is the ability to store and carry small items in a safe place. The storage compartment gadget accomplishes just that, incorporating an empty space where other objects can be carried by the wearer with relative ease. Each storage compartment gadget allows the wearer to carry two items of size Small or smaller in a container built into the armor. This gadget may be taken multiple times, each time providing another compartment where small items may be carried.

Restrictions: None.

Purchase DC Modifier: +1.

TECHNO-ORGANIC MAKEUP

Though the technology of Earth is based on electronics and mechanics, some alien cultures may have developed technology based on living organisms working in harmony for an intended purpose. Additionally, advanced civilizations may make use of certain biological forms of technology integrated with their own mechanical devices to form a techno-organic hybrid capable of performing certain tasks with increased efficiency.

An armor with the techno-organic makeup gadget is composed of living tissue or a biological/mechanical hybrid material. Unlike normal armors, armor with this gadget heals itself at a rate of one hit point per hour when damaged. Additionally, armor with this gadget is susceptible to diseases and poisons specifically designed to target techno-organic material.

Restrictions: None.

Purchase DC Modifier: +4.

ULTRALIGHT COMPOSITION

The development of new and experimental alloys constantly allows armor technology to advance to the point where once bulky and heavy armors become as easy to carry as lighter models. Any armor with the ultralight composition gadget weighs significantly less than similar pieces of armor and is more easily used and worn. The armor reduces its Armor Check Penalty (if any) by 1. Furthermore, the armor's speed limitation is increased by 5 feet (to a maximum of the user's normal speed). So, for example, an armor with an Armor Check Penalty of –2 and a speed limitation of 20 feet now has an Armor Check Penalty of –1 and a speed limitation of 25 feet.

Restrictions: None.

Purchase DC Modifier: +4.

UNIVERSAL EQUIPMENT GADGETS

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

COMPACT

By eliminating wasted space and using smaller components, some engineers are capable of producing equipment far smaller than its standard counterparts. Any piece of equipment that makes use of the compact gadget is one size smaller than normal, to a minimum size of Diminutive.

Restrictions: None.

Purchase DC Modifier: +1.

MINIATURIZED

By eliminating wasted space and using microscopic components, some engineers are capable of producing equipment vastly smaller than normal. Any weapon that makes use of the miniaturized gadget is two size categories smaller than normal, to a minimum size of Diminutive.

Restrictions: None.

Purchase DC Modifier: +3.

MULTIPLE USE ITEM

Similar in function to the alternate weapon gadget, the multiple use item gadget allows the character to integrate the function of two separate items into a single device.

When selecting the multiple use item gadget, choose a second object. That object is integrated into the base object and can be used at any time. Additionally, you must choose whether or not the alternate object may be physically separated from the base weapon or not at the time of purchase. This gadget may be selected multiple times, each time adding a single additional piece of equipment to the base object.

Restrictions: The character must also purchase the piece of equipment to be integrated separately from the armor, before the gadget modification is made.

Purchase DC Modifier: +1.

PAINT-ON LCD

One of the most revolutionary advances in computer technology during the Information Age and beyond is the paint-on LCD gadget. This allows almost any surface to be used as a computer display, as it grafts the color-changing pixels common to all display devices onto another surface. While mundane applications of this technology might be used in fields like advertising (to display company logos and advertisements on cars, the sides of buildings, and even clothing, for example), other applications are found almost everywhere. The surface of a desk can be transformed into a display for face-to-face communications, or a riot shield can be made do display warnings in multiple languages to potential dissidents.

Any piece of equipment with the paint-on LCD gadget can be used as a display for any piece of computer or communications equipment. Additionally, weapons and armor may make use of the paint-on LCD gadget at the normal cost, but gain no special benefit from the modification other than being able to display data.

Restrictions: None.

Purchase DC Modifier: +4.

SATELLITE DATALINK

At the dawn of the Information Age, the value of knowledge and accurate intelligence became a crucial aspect of warfare. The ability to connect to a global communications network was critical to the success of any army, as intelligence traveled at the speed of light across the globe to command centers safe behind defended battle

lines. The satellite datalink gadget enables any piece of equipment, from computer to communication device to heads-up display, to connect to a global (or, if in place, galactic) satellite network and communicate with computer systems in far remote areas.

Restrictions: This gadget may only be used with gear containing computerized communications equipment.

Purchase DC Modifier: +1.

STORAGE COMPARTMENT

Like the gadget used for armor, the ability to store and carry small items in a safe place can sometimes be of critical importance. The storage compartment gadget accomplishes just that, incorporating an empty space where other objects can be carried with relative ease. Each storage compartment gadget allows the wearer to carry two items of size Small or smaller in a container built into the piece of equipment. This gadget may be taken multiple times, each time providing another compartment where small items may be carried.

Restrictions: None.

Purchase DC Modifier: +1.

PROGRESS LEVEL 5 GEAR

The Information Age is the era closest to our own in terms of technology level. Most of the weapons and equipment from the Information Age are similar to those in our own world and are usually evolutions of currently existing technology. Many near-future campaigns make use of Information Age technology as their primary source of gear.

INFORMATION AGE WEAPONS

The following weapons are available at PL 5 and later.

FALCON .45

The law enforcement response to the ever-growing firepower found in the hands of criminals and gang members, the Falcon pistol not only possesses increased stopping power but also integrates the ability to fire in full automatic mode. Additionally, the Falcon is lightweight and easy to carry.

GRENADE, SHRAPNEL

Similar in concept to the standard fragmentation grenade, the shrapnel grenade propels dangerous shards of metal outward at high velocity when it explodes. Unlike the fragmentation grenade, the shrapnel grenade incorporates aerodynamic metal shards and directional tubes to ensure that each shard is propelled at lethal velocity along a set path. The result is a calculated field of flying shrapnel that is far more effective than the simple pop-and-spray chaos of a fragmentation grenade.

GRENADE, SONIC PULSE

A sonic pulse grenade deals 3d6 points of nonlethal sonic damage to any living creature in the burst radius. (Robots and other nonliving creatures are not affected.) In addition, creatures that take damage from the sonic pulse grenade must also succeed on a Fortitude save (DC 12) or be shaken for 1d4 rounds.

OICW ASSAULT RIFLE

One of the most technologically advanced weapons to ever reach production during the Information Age, the OICW (Objective Individual Combat Weapon) assault rifle is a combination weapon. The weapon houses a 5.56mm compact assault rifle as well as a 20mm grenade launcher (the weapon uses the alternate weapon gadget to add a mini-grenade launcher). The grenade launcher features multiple detonation modes, including detonate-on-impact mode (in which the grenade explodes on impact) and air burst mode (in which the grenade explodes in the air after traveling a certain distance).

The rifle includes a combat-capable scope with built-in targeting computers that are designed to link into the Land Warrior combat system. This system, known as TA/FCS (Target Acquisition/Fire Control System), functions as a built-in night vision scope as well as a rangefinding scope (the scope, rangefinding laser gadget). Additionally, the weapon has an integrated computer link that can hook directly into the Land Warrior armor and transmit images and data to the armor's onboard computer system. On its own, separate from the Land Warrior system, the OICW assault rifle is one of the most dangerous and effective weapons on the market.



Land Warrior Armor, OICW Assault Rifle

This weapon has a two-round burst setting. When the Burst Fire feat is used with this weapon, the penalty on the attack roll is lessened to –2 instead of –4. Also, the weapon fires only two bullets instead of five and can be used with only two bullets in the weapon. However, the weapon only deals +1 die of damage instead of +2 dice of damage. (In effect, using the Burst Fire feat with this weapon results in the effect of the Double Tap feat.) This setting does not grant the ability to make burst fire attacks without the Burst Fire feat; if you use the setting without the feat, you make a normal attack, and the extra two bullets are wasted. Because it does

TABLE 3–1: PROGRESS LEVEL 5 RANGED WEAPONS

Weapon[1]	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Magazine	Size	Weight	Purchase DC	Restriction
Falcon .45	2d6	20	Ballistic	40 feet	S, A	20 box	Medium	2.5 lb.	18	Lic (+1)
OICW assault rifle	2d8	20	Ballistic	70 feet	S	30 box	Large	18 lb.	26	Mil (+3)
TacMil sniper rifle	2d10	20	Ballistic	120 feet	S	15 box	Large	14 lb.	21	Res (+2)
Twin thunder machine gun	2d10	20	Ballistic	100 feet	A	Linked	Huge	42 lb.	22	Mil (+3)

1 All weapons listed in this table require the Personal Firearms Proficiency feat.

TABLE 3–2: PROGRESS LEVEL 5 EXPLOSIVES AND SPLASH WEAPONS

Weapon	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Magazine	Size	Weight	Purchase DC	Restriction
Grenade, shrapnel	5d6	—	Slashing	20 ft.	15	10 ft.	Tiny	1 lb.	18	Mil (+3)
Grenade, sonic pulse	3d6 nonlethal plus special[1]	—	Sonic	15 ft.	12	10 ft.	Tiny	1 lb.	15	Res (+2)

1 See the weapon description for details.

TABLE 3–3: PROGRESS LEVEL 5 ARMOR

Armor	Type	Equipment Bonus	Nonprof. Bonus	Max Dex Bonus	Armor Penalty	Speed (30 ft./20 ft.)	Weight	Purchase DC	Restriction
Light Armor									
Flight Suit and helmet	Tactical	+2	+1	+6	–0	30 ft./20 ft.	2 lb.	10	Lic (+1)
Heavy Armor									
Land warrior armor	Tactical	+6	+3	+3	–3	20 ft./15 ft.	10 lb.	20	Lic (+1)
Space suit	Tactical	+7	+3	+0	–10	15 ft./10 ft.	50 lb.	26	Lic (+1)

GRENADES, MISSILES, AND MINES

Most of the explosives in this chapter are given in the form of grenades. These grenades provide the base form for these weapons, but equivalent missiles or mines can also exist.

To create a missile from a grenade covered here, simply take the base statistics of the grenade and use them as the statistics for ammunition for a missile launcher. Be sure to adjust the range increment, since missiles travel much farther than thrown grenades.

Mines are treated in almost the opposite way; their range increment is eliminated. A mine must be placed to be effective.

Despite differences in their form, missiles, mines, and grenades all have the same primary effect regardless of the method of delivery for their payloads.

not have the automatic rate of fire, this weapon cannot be used to make autofire attacks.

TACTICAL MILITARY (TACMIL) SNIPER RIFLE

With the success of the OICW assault rifle, a sniper rifle equivalent was developed. The rifle itself fires a standard 7.62mm round and sports a rangefinding scope (the scope, rangefinding laser gadget) that can connect to a Land Warrior combat armor computer. Additionally, the TacMil sniper rifle features a flash suppressor as well as an effective sound suppressor, ensuring maximum stealth.

TWIN THUNDER MACHINE GUN

The Twin Thunder is a reduced-recoil .50 caliber machine gun capable of dispensing roughly 260 rounds per minute. The machine gun is designed for use in combat by two soldiers, a single gunner and an aide to feed the ammunition belt into the weapon. What makes the Twin Thunder unique from other modern machine guns is that its reduced recoil allows for greater accuracy over longer distances with less variance in the aim of the user.

INFORMATION AGE ARMOR

The following armors are available at PL 5 and later.

FLIGHT SUIT AND HELMET

The flight suit and helmet combination worn by combat pilots doubles as body armor that protects grounded pilots. The flight suit contains kevlar-lined pouches on the chest, back, arms, legs, and abdomen, into which armor plates are inserted. The helmet protects the head.

The armored flight suit carries over into later Progress Levels. Most military pilots in later eras wear armored flight suits and helmets essentially the same as this PL 5 version, though in the design appropriate to their society.

LAND WARRIOR ARMOR

The Land Warrior combat system was a major Information Age step in the ongoing effort to increase the efficiency of the individual solder. The primary benefits of Land Warrior armor are found in its communications and sensor gear; each Land Warrior armor has a built-in computer that is capable of sending and receiving text and image transmissions (via a display built into the armor), including images captured from the scope of a linked OICW assault rifle or TacMil sniper rifle. Additionally, the display can be linked to the scopes on those weapons to provide real-time representations of what the scope can see, allowing the wearer to fire around corners with ease.

In addition to the communications and data equipment, the armor functions as standard infantry battle armor complete with bullet-resistant plating and kevlar protective gear. The armor allows for instantaneous transmission of coordinates and targeting information, allowing teams of Land Warrior-capable soldiers to communicate and coordinate with ease and efficiency.

SPACE SUIT

The standard space suit used by NASA and other space programs is a completely enclosed environment suit capable of sustaining life in extremes of temperature and a lack of breathable air. The suit is large and bulky, composed of a thick body suit and helmet with a transparent mask, all parts of which are capable of deflecting micro-meteors and other space-borne projectiles. Inside the suit, internal air tanks and environmental filters maintain temperature and pressure. Additionally, a communications system not only allows for radio transmissions to the space shuttle but also allows internal sensors to monitor biological functions that can be observed from mission control. The space suit is poor combat armor, but allows for movement and action in space.

INFORMATION AGE EQUIPMENT

The following equipment is available at PL 5 and later.

DISPLAY GLASSES

A logical advancement of video display and VR technology, display glasses provide on-the-go monitors that can be hooked up to

everything from computer systems to televisions and other audio-video equipment. Each pair of display glasses looks like a darkened pair of sunglasses and features one or two earpieces that wrap around the back of the ear. The glasses are semitransparent and allow the wearer to see both the display and the user's surroundings simultaneously.

DURACABLE

Strong as steel, flexible as rubber, and almost as light as normal rope, duracable replaces most cables and ropes as the standard device for lifting, pulling, and support. Duracable is made of lightweight and durable wiring wrapped hundreds of times in a swirl that reinforces itself as more stress is placed on the coil. Duracable is able to support up to 10 metric tons of weight.

GRAPPLER TAG

Often used in conjunction with duracable, the grappler tag is a small disc roughly six inches in diameter. When placed against a solid surface, the grappler tag attaches to that surface by magnetism (if the surface is ferrous) or by an array of nearly microscopic metal barbs (if not). The tag can then be attached to duracable and used as an anchor for climbing, pulling, or any other purpose. A button on the top of the disc releases the grappler tag's hold.

EXPLORER OUTFIT

The explorer's outfit is the standard uniform for bold adventurers taking their first steps into the unknown. It includes a set of cargo pants and a utility vest, each covered in numerous pockets and pouches for holding miscellaneous gear. Additionally, the explorer outfit features a pair of durable all-weather boots with a built-in knife sheath, as well as a neck-shading cap, a pair of utility sunglasses, and a belt that holds pouches of all kinds. The chief premise of the explorer's outfit is versatility, giving the explorer a basic set of clothing that can be added to and augmented for each particular mission.

HACKCARD

A marvel of computer technology, the hackcard is a disposable, one-use item designed to allow those who are not computer savvy to bypass technological and computer barriers or perform computer-related tasks. Each hackcard is an individual data-carrying card roughly the size of a credit card with a hole in its center and a magnetic strip on one side. Each hackcard carries a single program designed for a single purpose; this may be to open doors, bypass security restrictions, crash a computer, or even to modify information. Almost any task that can be performed by using the Computer Use skill can be encoded into a hackcard. Hackcards can be swiped in magnetic keycard readers and can be inserted into disc drives on computers with the same ease.

When a character uses a hackcard for its designated purpose, the hackcard's Computer Use bonus (+15) is used in the place of the character's. After a single use, the card triggers small fibers of combustible material and the hackcard self-destructs, leaving behind no trace of tampering. For example, a character with a hackcard designed to open security doors needs to pass through a door with an electronic lock. The GM determines that the Computer Use DC to open the door is 30, since it is a high-security installation. Instead of rolling his own Computer Use skill, the character uses the hackcard and rolls 1d20 with a result of 17. Adding the hackcard's bonus brings the total to 32—enough to open the door. After the door is open, the hackcard disintegrates and cannot be used again.

TABLE 3–4: PROGRESS LEVEL 5 EQUIPMENT

Name	Size	Weight	Purchase DC	Restriction
Computer Equipment				
Display glasses	Tiny	1 lb.	12	—
Hackcard	Diminutive	—	14	Lic (+1)
Miscellaneous Equipment				
Duracable	Medium	3 lb.	4	—
Grappler tag	Tiny	1 lb.	5	—
Explorer outfit	Medium	2 lb.	6	—
Heads-up display	Tiny	1 lb.	7	—
Laser tripwire	Diminutive	—	5	—
Nanobeacon	Fine	—	8	—
Shepherd chip	Fine	—	12	—
Spray LCD	Tiny	0.5 lb.	8	—
Survival Equipment				
Portable environment generator	Medium	5 lb.	13	—
Portable glow lamp	Tiny	0.5 lb.	4	—
Puritizer	Small	2 lb.	9	—
Soother pulse	Diminutive	—	14	—

HEADS-UP DISPLAY (HUD)

One of the most valuable innovations in portable information technology is the personal heads-up display (HUD). A HUD is composed of optical sensors for taking in data and a display device that projects an overlay in the user's field of vision. A HUD also typically incorporates some sort of communications link or data link to allow another person or computer to see what the wearer sees and transmit valuable information back to the HUD.

Over the years, the HUD display device transforms from a simple eyepiece worn on a headband to contact lenses that can display data, all the way up to a neural interface that simply taps into the bearer's optical nerve and tampers with the signals sent to the brain.

The standard HUD can be used to highlight the outline of a person or object on voice command, granting a +2 bonus on Spot checks when pursuing a specific target. Additionally, a person with a link to the HUD can freely send data and images to the wearer at any time. Individual software packages (represented as gadgets) can further augment the abilities of a HUD.

LASER TRIPWIRE

The laser tripwire is a simple device that replaces the standard physical tripwire. A single focused beam of light is projected out from the tripwire generator until it hits a solid surface. If the beam is broken by, for example, a person passing through the beam, the tripwire generator immediately sends out a signal from its data port. This can be used to activate an alarm, trigger an explosive device, or even just turn on the lights in a particular room, depending on what event the signal is set to trigger.

NANOBEACON

An invaluable device used in tracking and search and rescue, the nanobeacon is a small microchip that is placed on a target's body (or on an object). It sends out a pulse every second that can be detected by sensors attuned to the beacon's frequency. The nanobeacon projects its pulse at up to a 500 mile radius, each nanobeacon with its own unique identification code. Nanobeacons are often used to coordinate combat squads, track wanted criminals, and even to help recover kidnapped or lost children. A beacon can be placed on any character or object by making a simple touch attack against the target.

PORTABLE ENVIRONMENT GENERATOR

As an important piece of survival gear that can be taken on almost any expedition, the portable environment generator is an all-in-one device coveted by explorers and outdoors enthusiasts alike. Resembling a tall cylinder roughly two feet in height, the portable environment generator can project a 30-foot sphere of custom environment under any conditions. In cold weather areas, the generator produces heat. In arid deserts, the generator produces both cool air and moisture. At night, the generator acts as a glow lamp and provides the area with light. Thanks to a special energy bubble produced by the generator, any atmospheric changes stay within the 30 foot radius and do not escape until the device is deactivated. Essentially, the portable environment generator can produce a sphere inside which a group of people can be relatively comfortable despite extremely harsh conditions outside the generator's influence.

PORTABLE GLOW LAMP

The portable glow lamp is the most efficient and beneficial form of lighting equipment known to man. It can function as a directional lighting device (like a flashlight) or as an area-covering lantern. Glowlamps have long-lasting power cells and bulbs that never need to be replaced, and can be adjusted to provide light in any radius up 50 feet.

PURITIZER

The puritizer is a small, semitransparent cylinder roughly one foot tall that removes impurities from water food. The puritizer's onboard computer recognizes chemicals that can be harmful to the human body and separates them from the food and drink.

SHEPHERD CHIP

The shepherd chip is a tiny microchip implanted beneath the surface of the wrist. It contains the bearer's identification information. Some computers can read the shepherd chip and extract its information, while all shepherd chips can be made to receive another person's identification information via handshake—once a mere method of greeting, the handshake becomes a permanent way to introduce oneself and clearly identify yourself to another person. Of course, the shepherd chip can be made to not broadcast information via handshake for privacy's sake.

In addition to basic identification information, many people have their banking and credit information keyed to their shepherd chips so that they no longer have to use physical money or credit cards. Businesses love this as it allows them to prevent shoplifting; if a person carries an item from the store, that item's value is immediately deducted from their bank account. Additionally, in later years the shepherd chip can be linked to computers (particularly neural implants) such that any information can be transferred between two shepherd chips—a great boon to the espionage community as it allows for discrete information transfers.

Some governments use shepherd chips (occasionally combined with nanobeacons) to monitor the activities of their citizens. This oppressive, watchful eye of the government is exactly what opponents of the shepherd chip fear. Additionally, a black market for forged or stolen shepherd chips emerged as soon as the chips themselves became widespread, making identity theft and falsification an ever-present crime in some communities.

SOOTHER PULSE

A small box that fits in one hand, the soother pulse emits sub-audible noises and subtle vibrations that can soothe almost any animal. It carries in its memory banks the codes of pulses to soothe almost every animal on the planet, and new pulses can be loaded into the device whenever they are discovered. A character using the soother pulse gains a +6 equipment bonus on all Handle Animal checks when dealing with an animal identified in the soother pulse's database.

SPRAY LCD

The rise to prominence of paint-on LCDs allowed many people freedom and portability with computing never before felt. The spray LCD is the logical extension of this technology. A pressurized canister similar to a can of spray paint, it can spray an LCD onto almost any surface. Any object coated with spray LCD automatically gains the paint-on LCD gadget for 1 hour. After that hour, the spray begins to dissolve and no longer functions. Each canister of spray LCD is enough to produce one working LCD.

PROGRESS LEVEL 6 GEAR

The Fusion Age is the first step to technology that seems to be beyond the reach of current scientific knowledge. Gear from this Progress Level is typically a stretch of the imagination, but could eventually be derived from current technology.

FUSION AGE WEAPONS

The following weapons are available at PL 6 and later.

AMMUNITION, BIO-AGENT

Unfortunately for its victims, biological warfare continues to be a common part of combat even in the Fusion Age. Bio-agent ammunition is a logical extension of previous military tactics with regards to biological warfare.

Bio-agent ammunition contains a miniscule amount of a biological weapon inside an insulated chamber within each round. Use of bio-agent ammunition causes a –1 penalty to damage. However, any living creature damaged by the round is injected with a poisonous bio-agent with effects identical to cyanogen gas (see Table 2–5: Poisons on page 54 of the *d20 Modern Roleplaying Game*).

GRENADE, CONCUSSION

Law enforcement officers in the Fusion Age use concussion grenades to knock out threatening targets. Living creatures within the concussion grenade's 10-foot burst radius take 4d6 points of nonlethal concussion damage, or half damage on a successful Reflex save (DC 15). Concussion grenades do not affect robots or other nonliving creatures.

GRENADE, EMP

An EMP grenade releases an electromagnetic pulse that instantly shorts out all electronic devices (including computers) within a 20-foot burst radius. Affected devices remain nonfunctional until repaired (see the Repair skill description in the *d20 Modern Roleplaying Game* for details).

The EMP grenade deals no damage to living creatures. However, a creature with cybernetic attachments takes 1d6 points of electricity damage per cybernetic attachment (maximum 5d6) and must succeed on a Fortitude save (DC 15) or be stunned for 1d4 rounds. If the cybernetically enhanced creature rolls a natural 1 on its Fortitude save, each of its cybernetic attachments takes 1d6 points of electricity damage as well.

An EMP grenade deals 5d6 points of electricity damage to a mecha or robot.

GRENADE, FIREFLUSH

A fireflush grenade contains a chemical compound that combusts immediately upon contact with oxygen

When a fireflush grenade detonates, it produces geysers of flame that fill a 10-foot burst radius. All creatures and objects within the burst radius take 3d6 points of fire damage. The blast also ignites clothing and other flammable items (see the rules for Catching on Fire on page 213 of the *d20 Modern Roleplaying Game*).


Laser Sniper Rifle

GRENADE, TANGLER

The tangler grenade operates on the same principle as the tangler gun (see page 68), but targets an area rather than one specific character.

Any time a character is struck by a tangler grenade, that character suffers a cumulative –2 penalty to Dexterity. This penalty remains in place until the compound is dissolved.

If the character is struck with enough tangler grenades that the penalty is equal to or greater than his Dexterity, he is immobilized and may take no actions until the compound is dissolved.

Dexterity penalties from tangler grenades stack with those from tangler guns.

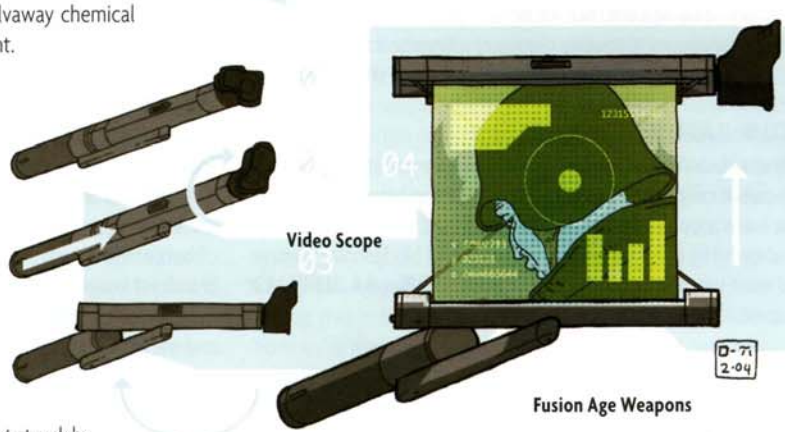
Hardened compound dissolves naturally after 8 hours or can be removed by using solvaway chemical (see page 70) or some other spray solvent.


Tangler Gun


Mini-Grenade Launcher

HIGH FREQUENCY SWORD

One of the few melee weapons to be developed in the Fusion Age, the high frequency sword is made of a durable metal alloy many times tougher than steel. Inside the blade itself, and controlled by a switch on the hilt of the weapon, are microscopic machines that cause the blade to vibrate at incredibly high speeds. Though the wielder of the weapon is shielded from these vibrations by a soft hilt, any character or object struck by the high frequency sword finds that the weapon is given extra cutting power thanks to its technological enhancements.


Video Scope

Fusion Age Weapons

LASER WEAPONS

Laser weapons come in many shapes and sizes, from pistols to rifles and other longarms. Many different forms of technology can be used to create laser weapons, resulting in many different forms of lasers; short, self-contained beams are as common as longer, solid stream lasers, while others produce spherical balls of energy and others fire laser rings. The coloration and noise created by the laser may vary, but the effect is the same.

Laser weapons do not use ammunition, but are instead powered by power packs (see Table 3–7).

MINI-GRENADE LAUNCHER

Though personal grenade launchers were commonly found in the Information Age, the mini-grenade launcher is somewhat different in that it is reduced to roughly the size of a large pistol. Additionally, the ammunition it uses, while still as potent as hand-held counterparts, is reduced in size to match the weapon.

TABLE 3–5: PROGRESS LEVEL 6 RANGED WEAPONS

Weapon[1]	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Magazine	Size	Weight	Purchase DC	Restriction
Laser pistol	2d8	20	Fire	40 feet	S	50 box	Medium	3 lb.	17	Lic (+1)
Laser rifle	3d8	20	Fire	80 feet	S, A	50 box	Large	8 lb.	19	Res (+2)
Laser sniper rifle	3d8	20	Fire	120 feet	S	50 box	Large	14 lb.	21	Res (+2)
Mini-grenade launcher	Varies[2]	20	Varies[2]	70 feet	Single	1 int.	Medium	4 lb.	20	Mil (+3)
Mini-rocket launcher	Varies[2]	20	Varies[2]	150 feet	Single	1 int.	Medium	5 lb.	23	Mil (+3)
Tangler gun	Special	—	—	20 feet	S, A	20 box	Large	8 lb.	16	Lic (+1)

1 All weapons listed in this table require the Personal Firearms Proficiency feat.

2 Damage and damage type varies depending on the ammunition.

TABLE 3–6: PROGRESS LEVEL 6 MELEE WEAPONS

Weapon[1]	Damage	Critical	Damage Type	Range Increment	Size	Weight	Purchase DC	Restriction
High frequency sword	2d6	19–20	Slashing	—	Large	2 lb.	15	—
Stun baton	1d6 + special	20	Bludgeoning	—	Medium	1 lb.	16	—

1 All weapons listed in this table require the Simple Weapons Proficiency feat.

TABLE 3–7: PROGRESS LEVEL 6 AMMUNITION TYPES

Ammunition (Quantity)	Damage Type	Purchase DC	Restriction
Bio-agent (20)	Ballistic	14	Mil (+3)
Power pack (50)	Special[1]	8	—

1 A power pack powers any ranged weapon that deals energy damage (such as a laser pistol). A power pack does not change the weapon's damage type.

TABLE 3–8: PROGRESS LEVEL 6 EXPLOSIVES AND SPLASH WEAPONS

Weapon	Damage	Critical	Damage Type	Burst Radius	Reflex DC	Range Increment	Size	Weight	Purchase DC	Restriction
Grenade, concussion	4d6 nonlethal	—	Concussion	15 ft.	15	10 ft.	Tiny	1 lb.	15	Mil (+3)
Grenade, EMP	Special[1]	—	Electricity	20 ft.	15	10 ft.	Small	2 lb.	16	Mil (+3)
Grenade, fireflush	3d6	—	Fire	10 ft.	15	10 ft.	Small	2 lb.	18	Res (+2)
Grenade, tangler	Special[1]	—	—	5 ft.	12	10 ft.	Tiny	1 lb.	14	Lic (+1)

1 See the weapon description for details.

MINI-ROCKET LAUNCHER

Though shoulder-carried missile launchers were commonly found in the Information Age, the mini-rocket launcher is somewhat different in that it is reduced to roughly the size of a large pistol. Additionally, the ammunition it uses is reduced in size to match the weapon.

STUN BATON

The stun baton is a long rod similar to those carried by modern-day police officers, though on one end of the baton a metal cap that emits a pulse of stunning energy when it strikes a target. Any creature hit by a stun baton takes 1d6 points of bludgeoning damage and must succeed on a Fortitude save (DC 10 + damage dealt) or be stunned for 1d4 rounds.

TANGLER GUN

A unique nonlethal weapon eagerly adopted by law enforcement agencies around the world, the tangler gun fires condensed balls of an incredibly sticky compound that can render a target immobile in a few short moments. The tangler gun fires pellets of an inert compound that, when broken, expand into a gelatinous substance that covers large portions of a target. Unfortunately for the target, the disgusting mess soon becomes more problematic as the compound hardens. Within second, a single pellet no larger than a fingernail has expanded into a ball of goop and then hardened into an immobilizing layer of tough chitin.

Any time a character is struck by a tangler gun, that character suffers a cumulative –2 penalty to Dexterity. This penalty remains in place until the compound is dissolved.

If the character is struck with enough tangler pellets that the penalty is equal to or greater than his Dexterity, he is immobilized and may take no actions until the compound is dissolved.

Dexterity penalties from tangler guns stack with those from tangler grenades.

Hardened compound dissolves naturally after 8 hours or can be removed by using solvaway chemical (see page 70) or some other spray solvent.

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.

SCOPE, VIDEO

The video scope is a special modification to ranged weapons that provides an easier way to survey remote portions of the battlefield from the comfort of a safe haven. The video scope is a three-inch-by-three-inch viewscreen attached to the rear of a standard scope. It allows the weapon's user to sit back and examine the details in the image rather than having to press his eye against the scope. Additionally, the viewscreen can be used to freeze-frame and take still images and boasts zoom and image enhancement software, allowing on-the-fly computer analysis and dissection of battlefield images. Some video scopes are capable of receiving broadcast images from remote locations, allowing the screen to be used for video communication (by jacking in an optional earpiece and microphone) or to transmit maps and movement orders with visual aides.

Restrictions: Ranged weapons only.
Purchase DC Modifier: +3.

FUSION AGE ARMOR

The following armors are available at PL 6 and later.

LIGHT COMBAT ARMOR

Light combat armor provides less protection than later, heavier types, but also allows increased mobility. Most light combat armors consist of a reinforced blast vest, shoulder and upper arm pads, thigh and abdomen pads, and kneepads. Some light combat armors also include helmets and visors, though not all incorporate this aspect of the armor.

SCOUT ARMOR

Scout armor is similar in many ways to light combat armor, but with a few notable exceptions. Scout armor is painted with camouflage patterns: woodland, desert, winter (primarily white), urban (gray patterned), and black are available. When worn in an appropriate setting, the armor grants a +2 bonus on Hide checks.

Additionally, scout armor lacks the kneepads and legwear of the light combat armor, increasing mobility but decreasing protection to the lower body. Scout armor more often incorporates survival gadgets as fits the terrain for which it is designed.

TABLE 3–9: PROGRESS LEVEL 6 ARMOR

Armor	Type	Equipment Bonus	Nonprof. Bonus	Max Dex Bonus	Armor Penalty	Speed (30 ft./20 ft.)	Weight	Purchase DC	Restriction
Light Armor									
Light combat armor	Tactical	+3	+1	+5	–2	30 ft./20 ft.	6 lb.	12	Lic (+1)
Scout armor	Tactical	+2	+1	+6	–1	30 ft./20 ft.	4 lb.	11	Lic (+1)
Survival suit	Concealable	+1	+1	+7	–0	30 ft./20 ft.	3 lb.	16	—

SURVIVAL SUIT

The survival suit is the natural evolution of wilderness survival gear popularized in the Information Age. Thanks to the continued miniaturization of technology along with advancements in chemical engineering, the survival suit allows its wearer to function for days or even weeks on end without a source of water or rations. The basic premise of the survival suit is that in order to continue living in harsh environments the human body must conserve and recycle resources. As a result, the survival suit, which looks much like a modern-day wetsuit covered with matte-black pads, is able to control the intake and waste of the human body in an efficient manner.

Water is stored in small pouches all over the survival suit and can be drawn through a small tube that protrudes from the collar; the suit recycles sweat and urine (which it chemically purifies) and then refills those pouches as needed. The outside of the survival suit bears a number of partially reflective black pads, which absorb solar energy and heat and store that energy in tiny heat cells throughout the suit. If the temperature begins to drop, these heat cells can release energy and sustain a comfortable temperature for the human body for up to 8 hours without needing to recharge. If these cells are empty, the suit also has chemical pouches that can be activated one time for another 8 hours of heat. A tiny intravenous feeding system provides nourishment when rations and food run out for up to six days. Tiny fans and vents built into the suit cool the body in temperatures of extreme heat without losing any body moisture.

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.

PREHENSILE APPENDAGE

Useful for scientists, explorers, and others that have need for an extra hand, the prehensile appendage gadget is both utilitarian and expensive. Essentially, this gadget consists of a long flexible cylinder capped at the end with a grasping claw that attaches to the armor's side or back. The prehensile appendage gadget essentially gives the wearer of the armor an additional hand with which to hold and manipulate objects. The gadget cannot be used to make normal melee attacks or fire ranged weapons, but it can make grapple attempts (with a Strength bonus of +2 and using the wearer's base attack bonus). The appendage is controlled through a pair of gloves worn by the user; by issuing commands via a specific set of hand signs, the wearer can order the gadget to pick up, drop, or manipulate an object once per round as a free action.

Restrictions: None.
Purchase DC Modifier: +6.

SELF-REPAIRING

The self-repairing gadget implements nanotechnology in its infancy to repair minor damage to armor. Whenever the armor is damaged, the self-repairing gadget immediately issues commands to a set of nanites that move to the problem spot and begin making repairs. The gadget repairs 1 point of damage per minute to the armor.

Restrictions: None.
Purchase DC Modifier: +6.

FUSION AGE EQUIPMENT

The following equipment is available at PL 6 and later.

AQUACONVERTER

Also known as "mechanical gills," the aquaconverter is a simple device that takes in water, separates its molecules into hydrogen and oxygen atoms, and then feeds the oxygen into a breather tube and the hydrogen into power-generating mechanisms. Worn as a backpack with a breather tube placed in the mouth, the aquaconverter is a limitless and self-powering way to breathe safely underwater.

CHEMICAL, ANTITOX

A chemical found in many first aid kits, antitox is a special hypodermic injection that can be used to save the life of any character infected with a poison. Each antitox injector contains a specialized analyzer linked to chemical generators. When the needle penetrates the skin of the target, it samples the target's blood and sends the data back to the analyzer, which determines the nature of the poison and generates an antidote from stored chemical compounds. Once the antitox delivers its specially formulated chemicals, the target character is completely cured of the poison and its effects in 1d6 rounds.

CHEMICAL, BOOST

A drug that is both beneficial and highly dangerous, boost functions as a temporary adrenaline-enhancer. Boost was originally conceived for military purposes in an attempt to make the soldiers of the Fusion Age stronger, faster, and more combat-capable. A single injection of boost grants the character a +4 bonus to Strength and a +2 bonus on Reflex saves, increases the character's movement speed by 10 feet, and increases the character's massive damage threshold by +4. These effects last for 1 minute (10 rounds).

Unfortunately, the side effects of boost almost outweigh the benefits. For one, the chemical is addictive and can alter the perceptions of a character so that she thinks she cannot live without a dose of the drug. Additionally, repeated use of boost has debilitating effects on the body's immune and nervous systems.

Each time a character uses a dose of boost, she has a 10% chance of suffering a –2 penalty to her Dexterity and a –1 penalty on Fortitude saves. These penalties last for 24 hours.

If the character uses the drug again before recovering from these penalties, the penalties increase and the recovery time extends for an additional 24 hours. For example, if a character uses another dose of boost while still under the effect of the penalties, the character suffers a –4 penalty to Dexterity and –2 on Fortitude saves, and the recovery time increases to 48 hours.

CHEMICAL, NEUTRAD

A chemical found in many first aid kits, neutrad is a special hypodermic injection that can be used to neutralize the effects of radiation poisoning. Each neutrad injector contains a specialized analyzer linked to chemical generators. When the needle penetrates the skin of the target,

TABLE 3–10: PROGRESS LEVEL 6 EQUIPMENT

Name	Size	Weight	Purchase DC	Restriction
Chemical and Medical Equipment				
Chemical, antitox	Diminutive	—	6	—
Chemical, boost	Diminutive	—	6	Illegal (+4)
Chemical, neutrad	Diminutive	—	6	—
Chemical, solvaway	Diminutive	—	5	—
Chemical, sporekill	Diminutive	—	6	—
Medkit, advanced	Small	3 lb.	7	—
Medkit, fast use	Small	3 lb.	7	—
Plastic surgery kit, personal	Tiny	1 lb.	11	Lic (+1)
Computer Equipment				
Computer, card	Diminutive	—	22	—
Display contacts	Fine	—	16	—
Miscellaneous Equipment				
Disguise kit, morphic	Tiny	1 lb.	12	—
Flash-seal	Tiny	1 lb.	8	—
Fusion torch	Medium	3 lb.	10	—
Intellipicks	Small	1 lb.	13	Lic (+1)
Jetpack	Large	22 lb.	16	Lic (+1)
Neural scrambler	Small	1 lb.	10	Res (+2)
Universal communicator	Tiny	0.5 lb.	6	—
Sensor Equipment				
Sensor, chemicomp	Small	1 lb.	18	—
Sensor, geocomp	Small	1 lb.	18	—
Sensor, motion	Tiny	0.5 lb.	14	—
Survival Equipment				
Aquaconverter	Medium	4 lb.	13	—
Violet rations	Fine	—	5	—

it samples the target's blood and sends the data back to the analyzer, which determines the nature of the radiation sickness and generates an antidote from stored chemical compounds. Once the neutrad delivers its specially formulated chemicals, the target character is completely cured of the radiation poisoning and its effects in 1d4 hours.

CHEMICAL, SOLVAWAY

Solvaway is a special spray-on chemical designed to break through the restricting compound fired by tangler guns and tangler grenades. A single application of solvaway completely dissolves any hardened compound and frees the character as though the compound had dissolved on its own.

CHEMICAL, SPOREKILL

A chemical found in many first aid kits, sporekill is a special hypodermic injection that can be used to neutralize the effects of most diseases. Each sporekill injector contains a specialized analyzer linked to chemical generators. When the needle penetrates the skin of the target, it samples the target's blood and sends the data back to the analyzer, which determines the nature of the disease and generates an antidote from stored chemical compounds. Once the sporekill delivers its specially formulated chemicals, the target character is completely cured of the disease and its effects in 1d10 hours.

Some genetically engineered diseases are created to circumvent sporekill chemical, and are unaffected by this piece of gear.

COMPUTER, CARD

As has been the case since the invention of the computer, the miniaturization of technology is most often seen in the area of computer size. The card computer functions as a standard computer but is no bigger than most credit cards or hackcards. The card computer may be hooked into any computer interface or display (including paint-on LCDs) and functions exactly like a personal computer.

DISGUISE KIT, MORPHIC

Most people forced to work undercover for extended periods rely on the morphic disguise kit. The kit features a pair of contact lenses that change color, a hair prosthetic that changes color, length, and texture, a paint-on LCD injector for instant tattoos that transform, and a vocal encoder (vocoder) that is attached to the throat to alter the user's voice. Each component can be altered on command. The morphic disguise kit grants a +6 equipment bonus on all Disguise checks while in use.

DISPLAY CONTACTS

Like the previous era's display glasses, display contacts are part of the further miniaturization of computers. These contact lenses fit perfectly over the eye and project a semitransparent image that appears to be roughly three feet from the user and comparable to a 52-inch monitor. This can be used to show the character any computer display it is linked to, and is also frequently implemented into the heads-up display device (using the multiple use item gadget; see page 62) to provide real-time data on objects and people in the character's field of vision.

MEDKIT, ADVANCED

The advanced medkit functions as a combined first aid kit, medical kit, and surgery kit. It also grants its user a +2 equipment bonus on all Treat Injury checks.

MEDKIT, FAST-USE

The fast-use medkit functions as both a first aid kit and a medical kit (as described in the *d20 Modern Roleplaying Game*). In addition, specialized computers and sensors prepare exactly what is needed to restore a character's hit points, treat a disease, stabilize a dying character, or revive a dazed, stunned, or unconscious character. A character may use the Treat Injury skill with the fast-use medkit as a move action.

The fast-use medkit cannot be used as a surgery kit.

FLASH-SEAL

Flash-seal looks like a block of metal roughly the size of a thin brick. It attaches to any door frame. When activated, chemical compounds inside the block of metal burn fast and hot enough to melt the metal into a liquid form. Almost instantaneously, a second chemical compound freezes the molten metal back into its solid state. The result is that the metal melts, sinks into the space between the door and its frame, and then solidifies again, essentially welding the door shut. A door that has been flash-sealed may not be opened by normal means and must be destroyed or cut through as though it were a wall.

FUSION TORCH

The fusion torch is the Fusion Age's equivalent of a blowtorch. The fusion torch produces a small, thin gout of flame that burns with such intensity that it creates temporary blobs of plasma all around it. The fusion torch consists of a small fuel canister attached to the torch generator. The torch deals 3d10 points of damage each round to immobile objects. Due to the nature of the fusion torch, a character using the torch must be meticulous in the way he cuts to maximize damage to whatever he is slicing through. If used as an improvised weapon, the fusion torch deals only 1d10 points of damage since it is being wielded in a more haphazard fashion.

INTELLIPICKS

Though not technically an actual set of lockpicks, intellipicks are a cluster of several tiny machines (though not quite small enough to be called nanites) that can pick almost any lock and open almost any door. Intellipicks come in a small box that, when placed on the lock to be opened, releases the miniscule robots to do their work. Once the intellipicks penetrate the lock, they move tumblers and shift bolts in an efficient and rapid manner, opening the lock in way that no human could. Intellipicks have an effective Disable Device modifier of +20 (this skill can only be used to open conventional locks). Intellipicks cannot open electronic or computerized locks, though they can open magnetic locks by generating a magnetic field of opposite polarity.

JETPACK

A jetpack consists of a backpack and fuel cells capable of producing powered flight for up to 2 hours. A character equipped with a jetpack can fly at a speed of 60 feet (good maneuverability). Replacement fuel cells have a purchase DC of 10.

NEURAL SCRAMBLER

The neural scrambler is a restraint device used by many law enforcement agencies in the place of physical restraints such as handcuffs. The neural scrambler consists of a six-pronged device that, when placed over the head, interrupts brainwave activity. A character wearing a neural scrambler may not take any actions whatsoever, though she moves her normal speed under the command of another individual. When the neural scrambler is removed, the character has no knowledge of events that took place while she was restrained.

PLASTIC SURGERY KIT, PERSONAL

The personal plastic surgery kit is fashionable with society's elite—and its criminal underworld. Consisting of a mask that fits neatly over any human face, the personal plastic surgery kit is a one-use item that completely and permanently changes a character's facial appearance.

The personal plastic surgery kit is first linked to a special imaging computer that programs the kit with the desired outcome. The kit is then placed on the face and activated. The kit sedates the person using it and then proceeds to alter his face according to the specifications, and can even go so far as to permanently alter eye and hair color. Using the kit takes one hour, during which the character is unconscious.

SENSOR, CHEMICOMP

The chemicomp sensor computer is a handheld computer or computerized gauntlet designed to find individual chemical compounds. Chemicomps can locate a specific chemical, providing a +10 equipment bonus on Search checks when attempting to find chemical compounds.

SENSOR, GEOCOMP

The geocomp sensor computer is a handheld computer or computerized gauntlet designed to find individual minerals. Geocomps can locate a specific mineral, providing a +10 equipment bonus on Search checks when attempting to find minerals.

SENSOR, MOTION

The motion sensor is capable of not only detecting motion but also of plotting it on a display screen in relation to other objects. The motion sensor plots motion relative to its own position, but can sense motion through walls and solid surfaces, indicating the location of any moving object within 100 feet.

UNIVERSAL COMMUNICATOR (UNICOM)

The unicom is an all-in-one piece of equipment that handles the communication needs of a single person. Each unicom has its own frequency and can send transmissions both directly to another individual unicom as well as to an entire group of unicoms. The unicom also has a data port so that it can be linked to a computer system and receive data as well as audio and visual communications. In later eras, the unicom also frequently incorporates the hologram recorder and projector devices (via the multiple use item gadget).

VIOLET RATIONS

The standard rations of Fusion Age militaries, violet rations are entire meals that come in pill form. The pill is placed under the tongue and dissolves, releasing not only the flavors of various foods but also the consumer's daily supply of nutrients and vitamins. Each violet ration is the equivalent of a single meal and is nutritious, filling, and relatively appetizing.

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.

HUD SOFTWARE, SENSOR LINK

A piece of software for the heads-up display device, the sensor link allows the user to directly link any computer sensor to the HUD. As a result, any sensor can be used hands-free as a free action, provided they are present on the character's person.

Restrictions: Heads-up display only.

Purchase DC Modifier: +1.

HUD SOFTWARE, TARGETING

A piece of software for the heads-up display device, targeting software links directly to a ranged weapon's video scope. This allows the character to see exactly what the video scope displays without having to look at the weapon. The character may fire around corners without exposing himself as normal. The software also grants a +1 equipment bonus on ranged attacks using the weapon to which it is connected.

Restrictions: Heads-up display only, requires weapon with video scope gadget.

Purchase DC Modifier: +2.

HUD SOFTWARE, VEHICLE LINK

A piece of software for the heads-up display device, the vehicle link allows the onboard computer system of any vehicle to be displayed on the HUD. This grants a +1 equipment bonus on all Drive or Pilot checks made on a vehicle linked to the device.

Restrictions: Heads-up display only, requires vehicle with onboard computer system.

Purchase DC Modifier: +2.

SELF-REPAIRING

The self-repairing gadget implements nanotechnology in its infancy to repair minor problems with any piece of equipment. Whenever the equipment is damaged, the self-repairing gadget immediately issues commands to a set of nanites that move to the problem spot and begin making repairs. The gadget repairs one point of damage per minute to the equipment.

Restrictions: None.

Purchase DC Modifier: +6.

PROGRESS LEVEL 7 GEAR

The Gravity Age sees many of the most revolutionary changes to technology, particularly to technology used on the battlefield. Plasma weapons are finally made small enough to become practical for battlefield use, while the first powered armors begin to take shape. The advent of gravity-related technology brings some new forms of construction as well, incorporating new gravity-based technologies in practical ways.

GRAVITY AGE WEAPONS

The following weapons are available at PL 7 and later.

AMMUNITION, DEFLECTING

Deflecting ammunition creates a gravity deflection field that causes the bullets to bounce off walls. When used properly, deflecting ammunition can be bounced around any barrier, around corners, underneath vehicles, and so forth for maximum penetration potential. *Any character using deflecting ammunition immediately gains* the benefit of the Skip Shot feat.

AMMUNITION, PLASMA-COATED

Consisting of an armor-piercing round enveloped in superheated plasma, this type of ammunition reduces the Defense bonus provided by armor by 2, to a minimum of +1. Half of the damage it deals is fire damage, and half of the damage is ballistic damage.

AMMUNITION, SEEKER

Each round of seeker ammunition contains a microscopic computer and gravity-bending generators. When seeking ammunition leaves the chamber, it immediately detects the distance to its current target. If that target moves, the gravity generators nudge the bullet into a new trajectory to intercept its target at its new location. Seeking ammunition grants a +1 bonus on all ranged attacks.

CONCUSSION RIFLE

A concussion rifle fires an artificial gravity pulse at the target with enough force to hurl it through the air (along a path away from the shooter). The discharged gravity pulse is mostly transparent, but bends light around itself, creating a ripple effect along its path. The pulse deals 2d10 points of concussion damage with a successful hit. In addition, the target is thrown back 5 feet for every 5 points of damage dealt by the weapon. The target must also succeed in a Fortitude save (DC = damage dealt) or be knocked prone. If the thrown target strikes a wall or other solid surface, it takes damage *as though it had fallen from a height equal to the number of feet* it was thrown back.

CONCUSSION ROD

Modeled after the medieval mace, this weapon has a miniature artificial gravity generator embedded in its alloy head, which increases in mass at the instant of impact. The rod deals 2d8 points of damage with each successful hit; half of the damage is bludgeoning damage; half is concussive damage.

GRAVITY SNARE

The gravity snare resembles a laser rifle but with two metal prongs where the muzzle should be. When fired, the prongs generate a strip of luminescent white energy that leaps from the end of the rifle toward the target. When the strip of energy strikes a target, the energy bolt bends and creates a ring of gravity around the target.

TABLE 3–11: PROGRESS LEVEL 7 RANGED WEAPONS

Weapon [1]	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Magazine	Size	Weight	Purchase DC	Restriction
Concussion rifle	2d10 + special	20	Concussion	20 feet	S	—	Large	6 lb.	22	Lic (+1)
Gravity snare	Special	—	—	30 feet	S	—	Large	7 lb.	17	Lic (+1)
Plasma pistol	2d10	20	Fire	40 feet	S	50 box	Medium	3 lb.	17	Lic (+2)
Plasma rifle	3d10	20	Fire	80 feet	S, A	50 box	Large	8 lb.	19	Res (+2)
Rail gun	3d12	20	Ballistic	100 feet	S	20 box	Large	18 lb.	24	Mil (+3)

1 All weapons listed in this table require the Personal Firearms Proficiency feat.

TABLE 3–12: PROGRESS LEVEL 7 MELEE WEAPONS

Weapon [1]	Damage	Critical	Damage Type	Range Increment	Size	Weight	Purchase DC	Restriction
Concussion rod	2d8	20	Bludgeoning/Concussion	—	Medium	3 lb.	17	—

1 All weapons listed in this table require the Simple Weapons Proficiency feat.

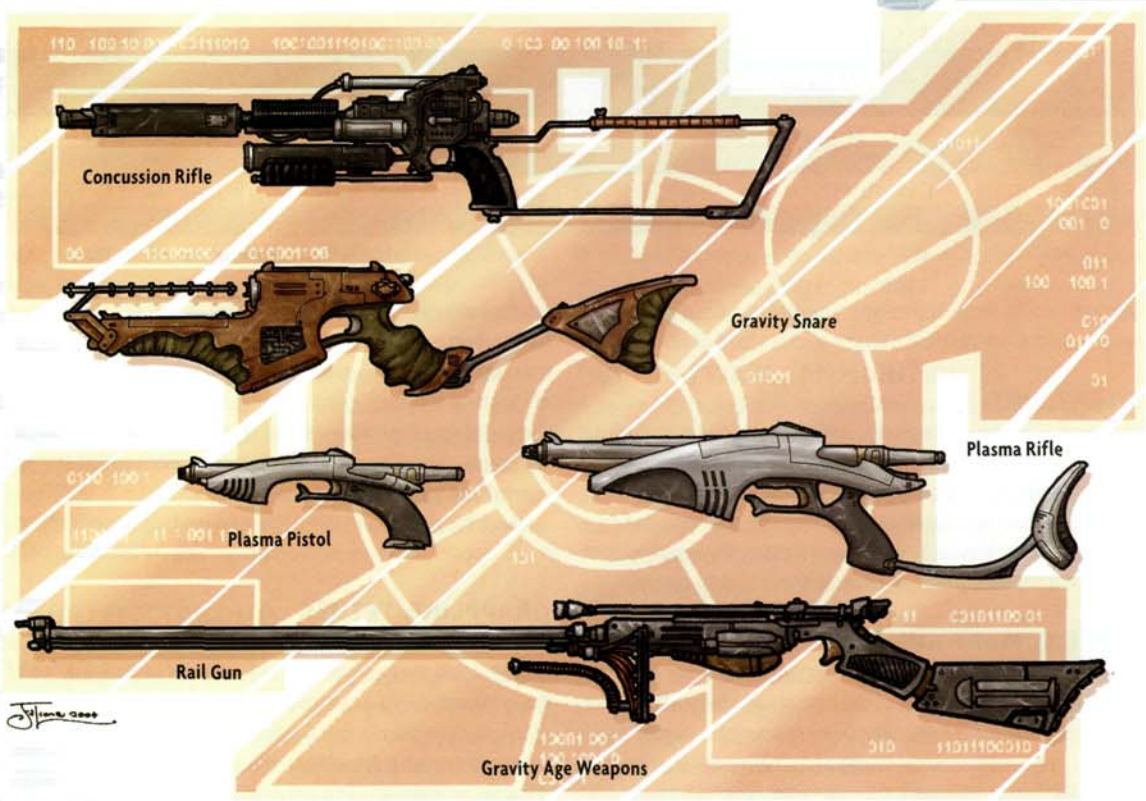
TABLE 3–13: PROGRESS LEVEL 7 AMMUNITION TYPES

Ammunition (Quantity)	Damage Type	Purchase DC	Restriction
Deflecting (20)	Ballistic	12	Lic (+1)
Plasma-coated (20)	Ballistic/Fire	13	Res (+2)
Rail gun shards (20)	Ballistic	10	—
Seeker (20)	Ballistic	15	Res (+2)

TABLE 3–14: PROGRESS LEVEL 7 EXPLOSIVES AND SPLASH WEAPONS

Weapon	Damage	Critical	Damage Type	Burst Radius	Reflex DC	Range Increment	Size	Weight	Purchase DC	Restriction
Grenade, dissolver	2d6	—	Acid	5 ft.	15	10 ft.	Small	2 lb.	14	Res (+2)
Grenade, gravitic	6d6	—	Bludgeoning	10 ft.	15	10 ft.	Tiny	1 lb.	20	Mil (+3)
Grenade, stun	Special [1]	—	—	10 ft.	18	10 ft.	Tiny	1 lb.	17	Mil (+3)

1 See the weapon description for details.



A creature hit by the gravity ring must succeed in a Reflex save (DC 13) to avoid its effects. On a failed save, the target is entangled and unable to move for 1d6 rounds, until the gravity ring dissipates. An entangled creature can escape the gravity ring with a successful Escape Artist check (DC 40) or break free with a successful Strength check (DC 30).

GRENADE, DISSOLVER

This grenade releases a cloud of gas that dissolves organic matter, dealing 2d6 points of acid damage per round to all living creatures and organic materials in a 5-foot-radius burst. Suspended in an artificial gravity well, the cloud persists until the gravity well collapses after 1 minute. The gravity well prevents even strong winds from dispersing the acid cloud.

GRENADE, GRAVITIC

When this grenade detonates, it releases incredible gravitational forces. All creatures within a 10-foot-radius burst are crushed for 6d6 points of bludgeoning damage. A successful Reflex save (DC 15) halves the damage.

GRENADE, STUN

A stun grenade deals no damage, but any creature within its 15-foot burst radius that fails a Reflex save (DC 18) must immediately make a Fortitude save (DC 15) or be stunned for 1d4 rounds. A creature that succeeds on the Reflex save is not required to make a Fortitude save and is unaffected by the grenade. A stun grenade has no effect on robots and other creatures immune to stunning effects.

PLASMA WEAPONS

Plasma occurs when gases become electrically charged after losing electrons. Plasma weapons condense this electrically charged gas into a destructive force that can eat through solid objects and cause severe damage. Like laser weapons, plasma weapons come in many varieties. Most plasma weapons generate their destructive ammunition by superheating gasses held inside specialized power packs and then compressing those gasses into a focused plasma round.

Plasma weapons do not use ammunition, but are instead powered by power packs (see Table 3–7).

RAIL GUN

The Gravity Age rail gun uses gravity pulses, not magnets, to propel a projectile at high velocities. Metal shards are accelerated along the rail gun's length, leaving the barrel at an extremely high velocity.

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.

SOUND SUPPRESSOR

Similar to the technology that produced the silent suit, the sound suppressor gadget is the Gravity Age replacement for the silencers of the modern era. Since energy weapons cannot make use of the traditional silencers found on most ballistic weapons, the sound suppressor takes over this function with almost all Gravity Age weapons. The sound suppressor generates a field of sonic energy that cancels sound produced within field, reducing weapon firing noise to a mere whine of sonic energy discharge. The sound suppressor adds +10 to the DC of Listen checks made to hear the weapon firing.

Restrictions: Ranged weapons only.

Purchase DC Modifier: +3.

GRAVITY AGE ARMOR

The following armors are available at PL 7 and later.

MEDIUM COMBAT ARMOR

Designed for heavy warfare and dangerous situations, medium combat armor covers the user almost head to toe in armor plating.

TABLE 3–15: PROGRESS LEVEL 7 ARMOR

Armor	Type	Equipment Bonus	Nonprof. Bonus	Max Dex Bonus	Armor Penalty	Speed (30 ft./20 ft.)	Weight	Purchase DC	Restriction
Medium Armor									
Medium combat armor	Tactical	+4	+2	+4	–2	20 ft./15 ft.	8 lb.	14	Lic (+1)
Silent suit	Concealable	+1	+1	+8	–0	30 ft./20 ft.	1 lb.	18	—
Powered Armor									
Space combat suit	Tactical	+9	+3	+1	–7	15 ft./10 ft.	40 lb.	17	Lic (+1)

Medium combat armor comes with a helmet that fits snugly on the head and does not interfere with the soldier's field of vision.

SILENT SUIT

The silent suit uses cutting-edge sonic dampening technology to increase the stealth of the user. Silent suits look like form-fitting bodysuits with padding on the shoulders, elbows, and knees. Sonic dampening field generators are built into the suit, reducing to a minimum the noise made by movement. A character wearing a silent suit gains a +10 equipment bonus on all Move Silently checks.

SPACE COMBAT ARMOR

Space combat armor is the first true powered armor to reach common use. Space combat armor consists of heavy body armor with an environmental seal and built-in communications gear. Additionally, space combat armor boasts a jetpack specifically designed to function in space, allowing the user to maneuver in zero-g conditions. Space combat armor can be difficult and unwieldy, but makes even individual soldiers a threat in ship-to-ship combat.

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.

CHAMELEONIC SURFACE

Chameleonic materials are the end result of the marriage of sensor technology and nanotechnology. Similar in many ways to the paint-on LCD of the Information Age, the chameleonic surface armor gadget allows any armor to remake its own image to better blend in with the background. Microsensors on the surface of the armor detect surrounding imagery and project it from the opposite side, in effect coloring the wearer to look just like whatever is behind him. The armor blends in with any background.

This gadget provides the armor's wearer a bonus on Hide checks. For light armor, this bonus is +4; for medium, +6, for heavy, powered, and environmentally sealed armor, +10.

Restrictions: None.

Purchase DC Modifier: +6.

GRAVITY AGE EQUIPMENT

The following equipment is available at PL 7 and later.

CHEMICAL, BIOCORT

Biocort is a unique chemical compound that enhances the human body's natural ability to heal. Biocort pushes the immune system into overdrive, and can cause the character to heal from grievous wounds at a greatly increased rate. Any character injected with biocort heals at twice the normal rate for a 24-hour period.

GALPOS DEVICE

The GalPos device is the Gravity Age equivalent of the GPS system of the modern era. Equipped with star charts and a link to the galactic satellite network, the GalPos device (known also as a GPD) triangulates its own position based on distance between satellite relays and its knowledge of stellar cartography. If the GalPos is taken to a region of space where it cannot contact the galactic satellite network, or to a region of space not included in its star charts, it does not function. Otherwise, the GPD can be used to indicate what planet the is on, or what star system she is in (if not on a planet).

A GalPos device with the satellite uplink gadget can function as a GPS receiver on worlds where such systems are available.

GRAPPLING TETHER

Replacing duracable and the grappling tag, the grappling tether is another application of gravity technology put to practical use. The grappling tether is a beam of pure gravity energy, up to 200 feet in length, fired from a metal tube. At the end of the tether is an anchor of intense gravity. When the anchor touches a solid object, it latches on with a grip that can only be broken by an equally strong anti-gravity force.

While the tube is held with the anchor attached to an object, the user can retract the tether to either pull the object to her (if the object is smaller in mass than the character), or pull herself to the object (if the object is greater in mass than the user, or the anchor is attached to a wall, ceiling, or other fixed surface). The anchor is released with a simple push of a button.

PIERCING VISOR

The piercing visor allows a person to see through solid objects. Through a combination motion-sensor data, gravity fluctuations, ambient light penetration, x-rays and ultraviolet light, heat and infrared signatures, sound waves and sonar, and other sensory inputs, the visor creates an accurate computer-rendered image of what lies beyond intervening objects. Any character wearing a piercing visor may, as an attack action, activate the visor's sensors and see through a wall, floor, object, or creature at a range of up to 100 feet.

The visor can penetrate 6 inches of metal (except lead, which it cannot see through) and 1 foot of other materials, including concrete, wood, and plaster.

POWER BACKPACK

The power backpack is essentially a portable generator. While worn, the power backpack can replace the power packs used by laser and plasma weapons, granting an infinite supply of ammunition while attached. Additionally, the power backpack can provide energy to almost any device requiring electrical power.

PROJECTILE DEFLECTOR

A defensive item that is in many ways the predecessor to the personal shield, the projectile deflector generates a field of gravity-altering energy around its user. Often worn as a belt or other piece of jewelry, the device actually bends the path of incoming high-speed projectiles, making the target harder to hit. The projectile deflector grants a +4 equipment bonus to Defense against ranged attacks. Melee attacks are unaffected by this device.

SENSOR, ARMACOMP

The armacomp sensor is a hand-held computer or computerized gauntlet designed to detect and locate weapons of all types. It grants a +6 equipment bonus on Search checks when searching for weapons. Additionally, the armacomp sensor's advanced data on weapons of all types makes it a valuable resource when repairing weapons, granting a +4 equipment bonus on all Repair checks made on weapons. This does not include explosives and other demolitions devices, which are covered under the democomp sensor.

SENSOR, DEMOCOMP

The democomp sensor is a hand-held computer or computerized gauntlet designed to detect and locate explosives of all types. It grants a +6 equipment bonus on Search checks when searching for explosives. Additionally, the democomp sensor's advanced data on explosives of all types makes it a valuable resource when planting them, granting a +4 equipment bonus on all Demolitions and Disable Device checks made involving explosives.

SENSOR, ELECTRICOMP

The electricomp sensor is a hand-held computer or computerized gauntlet designed to detect and locate electronic devices of all types, including computers. It grants a +6 equipment bonus on Search checks when searching for electronics of a specific type. Additionally, the electricomp sensor's advanced data on electronics of all types makes it a valuable resource when repairing computers and other electronics, granting a +4 equipment bonus on all Repair checks made on them. Additionally, the electricomp can be used to identify any flaws in cybernetics.

SENSOR, MECHANICOMP

The mechanicomp sensor is a hand-held computer or computerized gauntlet designed to assist in the evaluation and repairs of mechanical devices. The mechanicomp can identify a vehicle's, starship's, or mecha's current and maximum hit points. Additionally, thanks to the mechanicomp's extensive library of mechanical blueprints, any repairs made using the mechanicomp as a reference are more efficient, granting a +4 equipment bonus on all Repair checks made to vehicles, starships, and mecha.

SENSOR, MEDICOMP

The mechanicomp sensor is a hand-held computer or computerized gauntlet designed to assist in the evaluation and healing of the human body. The medicomp can identify a creature's current and maximum hit points. Additionally, thanks to the medicomp's extensive library of medical records and biological knowledge, any treatments administered using the medicomp as a reference are more efficient, granting a +4 equipment bonus on all Treat Injury checks.

TABLE 3–16: PROGRESS LEVEL 7 EQUIPMENT

Name	Size	Weight	Purchase DC	Restriction
Chemical and Medical Equipment				
Chemical, biocort	Diminutive	—	6	—
Miscellaneous Equipment				
GalPos device	Small	3 lb.	6	—
Grappling tether	Small	2 lb.	9	—
Piercing visor	Small	1 lb.	15	Mil (+3)
Power backpack	Medium	3 lb.	8	—
Projectile deflector	Small	0.5 lb.	15	Lic (+1)
Sensor Equipment				
Sensor, armacomp	Small	1 lb.	18	—
Sensor, democomp	Small	1 lb.	18	Lic (+1)
Sensor, electricomp	Small	1 lb.	18	—
Sensor, mechanicomp	Small	1 lb.	18	—
Sensor, medicomp	Small	1 lb.	18	Lic (+1)

GRAVITY AGE EQUIPMENT GADGETS

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

HUD SOFTWARE, AMMUNITION TRACKER

A piece of software for the heads-up display device, the Ammunition Tracker is able to keep track of exactly how many shots have been expended from a particular weapon. Additionally, when a character starts to get low on ammunition, a warning flashes on the HUD indicating that a reload must occur soon.

Restrictions: Heads-up display only, requires a weapon with an integrated computer.

Purchase DC Modifier: +1.

SOUND SUPPRESSOR

Similar to the technology that produced the silent suit, the sound suppressor gadget silences almost any noise. It generates a field of sonic energy that cancels sound produced within field, reducing all noise to a mere whine of sonic energy discharge. The sound suppressor adds +10 to the DC of Listen checks made to hear the weapon firing.

Restrictions: None.

Purchase DC Modifier: +3.

PROGRESS LEVEL 8 GEAR

The Energy Age is the most advanced technological age covered in this book. (That is not to say that no civilization ever advances beyond the Energy Age, just that they aren't covered here.) The Energy Age sees the miniaturization of most power production systems, allowing for more powerful personal weapons and travel to distant stars. The invention of the StarDrive connects the far-flung reaches of the galaxy in new ways, and almost any technology imaginable is available in civilized areas.

ENERGY AGE WEAPONS

The following weapons are available at PL 8.

AMMUNITION, PHASING

Phasing bullets contain microscopic computers and teleporters. When a phasing bullet encounters an obstacle between it and its target, it simply teleports past the obstacle and continues on course. In game terms, phasing bullets negate the benefits of cover.

BEAM SWORD

The beam sword is the Energy Age's most potent melee weapon. A small metal handle generates a solid beam of plasma contained by a gravity-induced force field

CRYONIC RIFLE

The perfection of cryogenic technology finally reaches its most portable form in the Energy Age. A cryonic rifle draws power from a canister of compressed mutagen, which is transmitted, via an energy beam into the target. The cryonic beam deals 3d6 points of cold damage. A target reduced to negative hit points by the weapon instantly stabilizes. Furthermore, if the ray deals sufficient damage to reduce the target to –10 or fewer hit points, the target instead

TABLE 3–17: PROGRESS LEVEL 8 RANGED WEAPONS

Weapon [1]	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Magazine	Size	Weight	Purchase DC	Restriction
Cryonic rifle	3d6	20	Cold	20 feet	S	10 box	Large	8 lb.	21	Lic (+1)
Disintegrator	3d8	20	Energy [2]	30 feet	S	10 box	Large	6 lb.	23	Mil (+3)
Lightning gun	3d6	20	Electricity	50 feet	S, A	30 box	Huge	30 lb.	24	Mil (+3)
Pulse rifle	3d10	20	Fire	80 feet	S, A	50 box	Large	11 lb.	21	Res (+2)
Sonic beam	2d6 + special	20	Sonic	40 feet	S	50 box	Medium	3 lb.	18	Lic (+1)

1 All weapons listed in this table require the Personal Firearms Proficiency feat.

2 This weapon deals damage of a nonspecific energy type that is not subject to energy resistance.

TABLE 3–18: PROGRESS LEVEL 8 MELEE WEAPONS

Weapon [1]	Damage	Critical	Damage Type	Range Increment	Size	Weight	Purchase DC	Restriction
Beam sword	2d8	19–20	Fire	—	Medium	1 lb.	17	—

1 All weapons listed in this table require the Simple Weapons Proficiency feat.

TABLE 3–19: PROGRESS LEVEL 8 AMMUNITION TYPES

Ammunition (Quantity)	Damage Type	Purchase DC	Restriction
Phasing (20)	Ballistic	16	Res (+2)

TABLE 3–20: PROGRESS LEVEL 8 EXPLOSIVES AND SPLASH WEAPONS

Weapon	Damage	Critical	Damage Type	Burst Radius	Reflex DC	Range Increment	Size	Weight	Purchase DC	Restriction
Grenade, cryonic	8d6	—	Cold	10 ft.	15	10 ft.	Small	2 lb.	19	Res (+2)
Grenade, psionic	Special [1]	—	—	10 ft.	18	10 ft.	Tiny	1 lb.	22	Res (+2)
Grenade, singularity	15d6	—	Energy [2]	5 ft.	15	10 ft.	Small	2 lb.	26	Mil (+3)

1 See the weapon description for details.

2 This weapon deals damage of a nonspecific energy type that is not subject to energy resistance.

drops to –9 hit points and stabilizes automatically (in other words, the target does not die).

Cryonic rifles do not use ammunition, but are instead powered by special power packs that allow 10 shots each (purchase DC8).

DISINTEGRATOR

Resembling a laser rifle, a disintegrator fires a micro-singularity that obliterates the target's molecular structure on impact. Any living creature reduced to –10 hit points by the weapon completely disintegrates. Objects and nonliving creatures (including robots) reduced to 0 hit points by the weapon are likewise disintegrated.

Disintegrators do not use ammunition, but are instead powered by special power packs that allow 10 shots each (purchase DC 8).

GRENADE, CRYONIC

When a cryonic grenade explodes, it deals 8d6 points of cold damage to all creatures in a 10-foot burst radius. A successful Reflex save (DC 15) halves the damage. The freezing cold automatically stabilizes any creature reduced to negative hit points by the blast. If the cryonic blast deals sufficient damage to reduce a target to –10 or fewer hit points, the target instead drops to –9 hit points and stabilizes automatically (in other words, the target does not die).

GRENADE, PSIONIC

A psionic grenade releases a 10-foot-radius psionic blast that affects only creatures with psionic abilities or powers. Any such creature that fail a Reflex save (DC 18) cannot use its psionic abilities or psionic powers for 1d4 rounds. In addition, it must succeed on a Will save (DC 15) or suffer 1d6 points of temporary Intelligence, Wisdom, and Charisma damage.

GRENADE, SINGULARITY

A singularity grenade generates a gravity field so powerful that it bends space into a miniature black hole. The black hole instantly devours all light and matter before collapsing and vanishing. Any character or object in the grenade's 5-foot burst radius takes 15d6 points of damage. A successful Reflex save (DC 15) halves the damage. If the damage is enough to reduce a creature to –10 hit points, the grenade leaves no trace of the creature behind.

LIGHTNING GUN

A bulky and unwieldy weapon, the lightning gun is usually mounted on a tripod. It fires a crackling ray of electricity capable of sweeping large areas quickly. Characters wielding a lightning gun automatically gain the benefits of the Strafe feat.

Lightning guns do not use ammunition, but are instead powered by special power packs that allow 30 shots each (purchase DC 8).

PULSE RIFLE

The pulse rifle is a fully automatic laser assault rifle capable of firing a rapid barrage of laser rounds. The pulse rifle is the standard issue weapon given to most heavy assault soldiers in the Energy Age.

Pulse rifles do not use ammunition, but are instead powered by power packs (see Table 3–7).

SONIC BEAM

The sonic blaster fires a pulse of destructive sound at the target, dealing 2d6 points of sonic damage. In addition, any creature damaged by the sonic pulse must succeed on a Fortitude save (DC 15) or be deafened and shaken for 1d4 rounds.

Sonic beams do not use ammunition, but are instead powered by power packs (see Table 3–7).

ENERGY AGE WEAPON GADGETS

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

TELEPORTING MAGAZINE

One disadvantage to the use of ranged weapons has always been limited ammunition. Unless the weapon's bearer is willing to cart around a bulky power backpack or ribbons of ammunition, reloading is always a problem. The teleporting magazine gadget allows a character to reload without ever having to actually reload; when the weapon detects that it has run out of ammunition, the current box magazine is teleported out of the weapon and another one is teleported in instantaneously. Though the character never has to reload, he must possess enough magazines or power packs to be teleported in or else the gadget does not function.

Restrictions: Ranged weapons only.
Purchase DC Modifier: +6.

ENERGY AGE ARMOR

The following armors are available at PL 8.

BOOST ARMOR

Boost armor is powered armor that augments the character's physical abilities. A character wearing boost armor is stronger, faster, and more nimble than ever before. Special mechanisms augment physical strength, granting a +4 bonus to the character's Strength score. Sensors can detect incoming attacks and augment reaction times, granting a +2 bonus on all Reflex saves. Additionally, boost armor can improve traction and augment the ability to move quickly, increasing the character's movement speed by 10 feet. Boost armor is lightweight and form-fitting, and provides less protection than heavier combat armors.

UNISOLDIER HEAVY COMBAT ARMOR

The ultimate step in the creation of the one-soldier army, unisoldier heavy combat armor is an all-in-one package that makes the wearer a formidable opponent in combat. The wearer is covered from head to toe. The helmet includes a built-in heads-up display and a visor that changes tint to dampen the effects of sudden bright lights, making flash-bang grenades useless against the wearer. Additionally, the armor usually has built-in slots for the addition of onboard computer systems, though not all armors make use of the option.

ENERGY AGE ARMOR GADGETS

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

GRAVITY ANCHOR

With space combat almost as common as ground combat in the Energy Age, armor manufacturers seek to make their armor more useful in both space and atmospheric combat. One such enhancement is the gravity anchor gadget, which generates a field of artificial gravity around the armor's wearer. In low gravity and zero gravity conditions, the gravity anchor can be activated to give the wearer the benefits of full gravity in any situation. Characters with this gadget are unaffected by low gravity and zero-g conditions.

Restrictions: None.
Purchase DC Modifier: +4.

MORPHIC METAL ALLOY

A combination of nanotechnology and armor engineering, morphic metal alloy is a special material used in the construction of armor to enhance the user's ability to move freely. When activated, morphic metal bends and shapes itself to the contours of the wearer's body,



TABLE 3–21: PROGRESS LEVEL 8 ARMOR

Armor	Type	Equipment Bonus	Nonprof. Bonus	Max Dex Bonus	Armor Penalty	Speed (30 ft./20 ft.)	Weight	Purchase DC	Restriction
Heavy Armor									
Unisoldier combat armor	Tactical	+10	+3	+1	–6	20 ft./15 ft.	30 lb.	19	Lic (+1)
Powered Armor									
Boost Armor	Tactical	+7	+2	+4	–3	20 ft./15 ft.	20 lb.	18	Lic (+1)

giving it both a snug fit and increased mobility. An armor with the morphic metal alloy gadget reduces its armor check penalty by 1 and increases the maximum Dexterity bonus by 1 as well.

Restrictions: None.

Purchase DC Modifier: +6.

NEG-GRAV BOOSTERS

Similar in design to the gravity anchor, but with an opposite purpose, neg-grav boosters can be installed into any armor to give the wearer the benefits of low gravity conditions. Neg-grav boosters create a low-gravity field around the user and counteract the effects of gravity, allowing the character to jump to incredible heights. Any armor with this gadget grants a +10 bonus on all Jump checks in any situation where gravity is a factor. This gadget has no function in zero-g environments.

Restrictions: None.

Purchase DC Modifier: +4.

ENERGY AGE EQUIPMENT

The following equipment is available at PL 8.

CHEMICAL, PLASTIFLESH

Contained in a small spray can, plastiflesh bonds with human skin on contact and accelerates the healing process by providing a layer of artificial skin to seal the wound. The target of the spray immediately recovers 1d4 hit points. No Treat Injury check is required to use plastiflesh.

CHEMICAL, TRUTHTELL

Truthtell is a specially formulated chemical that targets areas of the brain that handle creativity and, particularly, lying. By temporarily neutralizing these areas of the brain, truthtell makes it impossible for a character to lie while under the drug's influence.

A character injected with truthtell may make a Will save (DC 18) to negate its effects. On a failed save, the character is compelled to speak truthfully for the next 3d10 minutes. A subject under the effect of truthtell is aware of its influence and may still refuse to answer questions.

ENERGY SHIELD

The energy shield is a potent defense mechanism that protects the user from dangerous energy.

An energy shield grants its wearer one of the following types of energy resistance, as determined by the wearer upon activation: cold resistance 5, electricity resistance 5, fire resistance 5, or sonic/concussion resistance 5. As a move action, the wearer can adjust the shield to provide a different type of energy resistance, selected from the list above.

FORCE FIELD, PERSONAL

The most reliable and powerful personal defense mechanism in the Energy Age, the personal force field projects a defensive bubble around a single Medium-size or smaller character or item. The personal force field comes in two varieties, one that provides a DR of 5/— and another that provides DR 10/—. The device contains a power pack that provides up to 2 hours of use. A power backpack may be used to extend this duration to 8 hours.

HOLOGRAM PLAYER

A hologram player is a small disc with several small light projectors arranged around its outer edge. When activated, the device projects a three-dimensional image in full color as small as three inches in height or as large as a Medium-size character. The hologram player can be hooked into a hologram recorder (capable of storing three-dimensional images), or even to a unicom to receive three-dimensional images for real-time communications.

HOLOGRAM RECORDER

A hologram recorder is a cylinder no larger than a pen with a bulbous, transparent cap on one end. The device can make a three-dimensional recording of anything within its cone-shaped recording area. Hologram recorders can store up to one hour of three-dimensional images to be played back on a hologram player or transferred to a computer as video data. Most hologram recorders can also be attached to a unicom to serve as a video input device for real-time holographic communications. The hologram recorder is commonly carried by law enforcement agents, as it allows for the accurate collection of evidence and can prevent abuse on the part of the authorities.

HOLOGUISE

The hologuise is a combination hologram projector and digital imaging computer system that is worn like a headband over the forehead. When activated, the hologuise projects a three-dimensional image over the face that completely obscures the character's natural features. This image is commonly a different face, but can be a black veil or some other decorative image instead. With practical and fashionable uses, hologuises are employed by the wealthy elite as well as by criminals and spies. An active hologuise grants the wearer a +10 equipment bonus on all Disguise checks.

MATTER SHIELD

Designed to protect off-world miners from micrometeorites and the debris of mining explosions, matter shields were quickly adapted for military and law enforcement use.

The matter shield grants its wearer DR 5/— against ballistic, bludgeoning, piercing, and slashing attacks.

MICRO-AURAL COMMUNICATOR (MICROCOM)

The micro-aural communicator consists of three components. A tiny earpiece transmits incoming communications directly into the ear, at a volume far too low to allow others to hear. A small node placed on the inside of the lip allows the user to broadcast while speaking no louder than a whisper. Finally, a wristband functions as the input/output port for hooking other devices into the microcom.

Using a microcom does not provoke a normal Listen check and cannot be heard by any normal means.

NEURAL COMPUTER LINK

The most advanced form of computer interface in the Energy Age, the neural computer link creates a direct connection between the brain and a computer system. The neural computer link eliminates the need for a physical interface. Instead, the user simply "thinks" commands to the computer. Output from the computer is sent straight to the user's brain, tapping into the visualization centers to project images and displays directly into the user's mind, eliminating the need for any sort of display device. In all other ways, the neural computer link allows the user to access the computer as if used conventionally. The neural computer link connects to a computer system via a network jack built into the base of the skull.

TABLE 3–22: PROGRESS LEVEL 8 EQUIPMENT

Name	Size	Weight	Purchase DC	Restriction
Chemical and Medical Equipment				
Chemical, plastiflesh	Tiny	0.5 lb.	6	—
Chemical, truthtell	Diminutive	—	8	Lic (+1)
Regen wand	Small	1 lb.	18	—
Computer Equipment				
Neural computer link	Fine	—	25	—
Neural network jack, wireless	Fine	—	12	—
Miscellaneous Equipment				
Energy shield	Tiny	0.5 lb.	16	—
Force field, personal (DR 5/–)	Tiny	0.5 lb.	18	Mil (+3)
Force field, personal (DR 10/–)	Tiny	0.5 lb.	22	Mil (+3)
Hologram player	Small	2 lb.	6	—
Hologram recorder	Diminutive	—	9	—
Hologuise	Small	1 lb.	15	—
Matter shield	Tiny	0.5 lb.	20	Mil (+3)
Micro-aural communicator	Fine	—	6	—
Neural recorder	Small	1 lb.	15	Lic (+1)
Photon shield	Small	2 lb.	24	Mil (+3)
Polyvox	Tiny	0.5 lb.	10	—
Sensor Equipment				
Sensor, robocomp	Small	1 lb.	18	—

One advantage this gives a character is that information may be downloaded directly into the brain. The character's own mind becomes a hard drive for basic information, granting the character direct knowledge of a particular subject almost instantaneously. Though this does not allow the character to gain skill ranks, it does reduce the time required for Computer Use and Research checks to free actions. This applies only when the user is connected to a specific computer used for the Computer Use or Research check.

The neural computer link can be connected, via the body's central nervous system, directly into the user's shepherd chip (see page 66). Whenever data is transferred via the shepherd chip, such as a person's identity, that knowledge is immediately loaded into the character's brain. Essentially, this means that any two characters with shepherd chips and neural computer links may instantly know one another simply by shaking hands.

Neural computer links can also be connected to nanites in a character's bloodstream. As in the case of piloting and driving assisting nanites, these nanites interface directly with the neural link and allow the character to give commands simply by thinking them.

NEURAL NETWORK JACK, WIRELESS

A natural extension of neural computing technology, the wireless neural network jack plugs into the neural computer link and allows for remote access to computer networks. Additionally, the wireless neural network jack with the satellite datalink gadget can connect to any global or galaxy-spanning computer network instantaneously. If the neural computer link is the basic means of connecting the human mind to a computer, the wireless neural network jack is the means of connecting the human mind to massive computer networks.

A wireless neural network jack is useless unless the user also has a neural computer link.

NEURAL RECORDER

A flexible cap that resembles a grasping clawed hand, the neural recorder can collect data directly from the human mind. Any visual or auditory memories or thoughts can be transmitted through the neural recorder and stored in its memory. Capable of storing up to two hours of data, the neural recorder requires a Computer Use check (DC 15) to activate and operate. If the subject of the neural recording is willing, the neural recorder collects images and sounds from the subject's mind and stores them as either two-dimensional or three-dimensional recordings. An unwilling subject may make a Will save (DC 17) to prevent the recorder from functioning.

PHOTON SHIELD

The photon shield is a technology loosely based on the light-bending properties of black holes. By using controlled gravity waves to create millions of microscopic black holes around the user, the photon shield bends light renders him invisible.

A photon shield can cover a Medium-size or smaller creature or a Huge or smaller object. It grants a +40 equipment bonus on Hide checks if the subject is standing still, or a +20 equipment bonus if the subject is moving. Pinpointing the location of a character wearing a photon shield that isn't attempting to hide requires a Spot check (DC 40 if the character is not moving, DC 20 if he or she is moving). Additionally, a character wearing a photon shield gains total concealment (50% miss chance) against attacks, even if the attackers correctly pinpoint its fighting space.

POLYVOX

The polyvox translates the languages of different cultures and species.

REGEN WAND

A regen wand is a tubular device roughly fifteen inches long. It emits waves of energy that promote cellular growth and healing. A character can use a regen wand as a first aid kit or medical kit. Because of the device's simplicity, Treat Injury checks made with the regen wand gain a +4 equipment bonus.

SENSOR, ROBOCOMP

The robocomp sensor is a hand-held computer or computerized gauntlet designed to assist in the evaluation and repairs of robots and robotic life forms. The robocomp can identify a robot's current and maximum hit points. Additionally, thanks to the robocomp's extensive library of robotic blueprints, any repairs made using the robocomp as a reference are more efficient, granting a +4 equipment bonus on all Repair checks made to robots.

ENERGY AGE EQUIPMENT GADGETS

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

HUD SOFTWARE, BIOSENSOR

A piece of software for the heads-up display device, biosensor software allows the wearer of the HUD to identify potential weaknesses in enemies. When worn, the biosensor software integrates elements of the medicomp sensor (though the sensor itself is not required) and can identify exactly how many hit points a target has left. Initiating this scan requires a full-round action, however, as the target must be kept precisely within the sensor's range for the duration of the scan.

Restrictions: Heads-up displays only.

Purchase DC Modifier: +4.

CHAPTER FOUR:

ENVIRONMENTS



Zero-G Attack

In any science fiction adventure, the setting deserves as much attention as the GM characters and plot elements. After all, an imaginative or immersing backdrop is conducive to good storytelling. Additionally, the environments that serve as the backdrop for adventures can also provide challenges and encounters themselves, giving the heroes more to contend with than just other characters and creatures.

This chapter provides many of the elements a Gamemaster needs to come up with unique and interesting settings for a *d20 Future* adventure. This chapter provides game rules for radiation sickness, variable gravity conditions, and hazardous atmospheres (including vacuum). It concludes with rules on generating star systems. In addition, this chapter also offers GMs guidelines and inspiration for crafting exotic and memorable locales that support the tone of the adventure and the overall "feel" of the game.

RADIATION SICKNESS

Exposure to radiation should be a constant concern to characters in science fiction games due to the vast number of sources that can produce it. Radiation can be naturally or artificially produced. All stars produce radiation in some variety, and planets closer to these stars typically suffer more severe effects than worlds farther away. Many starships and other pieces of technology incorporate radioactive parts and fuel cells that can flood an area with harmful radiation when ruptured or exposed. Ancient alien civilizations might leave behind powerful artifacts that emit harmful radiation. Whether the source of the radiation is natural or artificial, any character in an environment rich with radiation may suffer some negative effects for exposure.

When characters are exposed to radiation, they may be afflicted with radiation sickness. Radiation sickness functions exactly like exposure to any other disease, following the normal rules for diseases (see Disease in Chapter Seven: Gamemastering of the *d20 Modern Roleplaying Game*). The Fortitude save DC and the effects of radiation sickness vary with the dose of radiation to which a creature is exposed.

Radiation exposure has five degrees: mild, low, moderate, high, and severe. To determine the degree of exposure, start with the type of exposure: either an irradiated area (such as the area near a nuclear explosion, after the fact, or a lab that has been flooded with radioactive gas), or a specific source of radiation (such as a lump of radioactive material). Then consult Table 4–1: Radiation Exposure to determine the degree of exposure based on the

TABLE 4–1: RADIATION EXPOSURE

Situation	Time of Exposure (Minimum)				
	1 round	1 minute	10 minutes	1 hour	1 day
Character in irradiated area:					
Lightly irradiated	mild	mild	mild	mild	low
Moderately irradiated	mild	mild	low	low	moderate
Highly irradiated	low	low	moderate	moderate	high
Severely irradiated	moderate	moderate	high	high	severe
Character exposed to radiation source:					
Lightly radioactive materials	mild	mild	low	low	low
Moderately radioactive materials	low	low	moderate	moderate	moderate
Highly radioactive materials	moderate	moderate	high	high	high
Severely radioactive materials	high	high	severe	severe	severe

total time of exposure within a given 24-hour period (rounding up). For example, say a character is involved in a lab accident. He runs into the lab (and is exposed to radioactive materials) four times to evacuate unconscious colleagues. Each trip takes 3 rounds, which means the character is exposed to the radiation source for a total of 12 rounds. This counts as a 10-minute exposure, since 12 rounds is more than 1 minute.

The degree of the exposure determines the severity of the radiation sickness, as indicated on Table 4–2: Radiation Sickness. At low levels, radiation sickness is a slow disease. Often, a sick character suffers no severe short-term effects. This is reflected in the fact that even with a failed Fortitude save, the character might not suffer any Constitution loss.

TABLE 4–2: RADIATION SICKNESS

Degree of Exposure	Fortitude Save DC	Incubation Period	Initial and Secondary Damage
Mild	12	1 day	1d4–2 Con*
Low	15	4d6 hours	1d6–2 Con*
Moderate	18	3d6 hours	1d6–1 Con*
High	21	2d6 hours	1d6 Con
Severe	24	1d6 hours	2d6 Con

* Minimum damage 0 Con.

TREATING RADIATION SICKNESS

Radiation sickness is considered a treatable disease that can be cured using the "treat disease" aspect of the Treat Injury skill. Treating radiation sickness requires a medical kit. Advanced medicine (such as neutrad) and advanced technology (including nanites and cybernetic implants) can also eliminate radiation sickness or obviate its harmful effects.

GRAVITY

The force that gravity exerts on a person determines how they develop physically as well as their ability to perform certain actions. In addition, gravity affects the amount of damage a character takes from falling.

Gravity conditions may vary considerably from one environment to the next. However, for ease of play, *d20 Future* presents four simplified gravity environments: normal gravity (1.0 g), low gravity (<1.0 g), high gravity (>1.0 g), and zero gravity (0 g). The following sections summarize the game effects for each type of environment.

NORMAL GRAVITY

"Normal gravity" equates to gravity on Earth. Environments with normal gravity impose no special modifiers on a character's ability scores, attack rolls, or skill checks. Likewise, normal gravity does not modify a creature's speed, carrying capacity, or the amount of damage it takes from a fall.

LOW-GRAVITY ENVIRONMENTS

In a low-gravity environment, the pull of gravity is significantly less than what we experience living on Earth. Although an object's mass doesn't change, it becomes effectively lighter. This means that creatures bounce when they walk. It becomes easier to move and lift heavy objects as well as perform Strength-related tasks. In addition, creatures take less damage from falling.

Speed: A creature's speed increases by +5 feet in a low-gravity environment. This bonus applies to all of the creature's modes of movement.

Carrying Capacity: A creature's normal carrying capacity is doubled in a low-gravity environment. In addition, the creature gains a +10 bonus on any Strength check made to lift or move a heavy unsecured object.

Skill Check Bonuses: Creatures in a low-gravity environment gain a +10 bonus on Strength-based skill checks (including Climb, Jump, and Swim checks).

Attack Roll Penalty: Creatures take a –2 penalty on attack rolls in a low-gravity environment unless they are native to that environment or have the Zero-G Training feat (described in Chapter 1: Characters).

Damage from Falling: Creatures do not fall as quickly in a low-gravity environment as they do in a normal- or high-gravity environment. Falling damage is reduced from 1d6 points per 10 feet fallen to 1d4 points per 10 feet fallen.

Long-Term Effects: Long-term exposure to low-gravity conditions can cause serious problems when returning to normal gravity. A creature that spends 120 hours or more in a low-gravity environment takes 1d6 points of temporary Strength damage upon returning to normal gravity.

HIGH-GRAVITY ENVIRONMENTS

In a high-gravity environment, the pull of gravity is significantly greater than that which we experience living on Earth. Although an object's mass doesn't change, it becomes effectively heavier. It becomes harder to move and carry heavy objects as well as perform Strength-related tasks. In addition, creatures take more damage from falling. Even the simple task of walking or lifting one's arms feels more laborious.

Speed: A creature's speed decreases by –5 feet (to a minimum of 0 feet) in a high-gravity environment. This penalty applies to all of the creature's modes of movement.

Carrying Capacity: A creature's normal carrying capacity is halved in a high-gravity environment. In addition, the creature takes



Energy Age armor featuring gravity control

a –10 penalty on any Strength check made to lift or move a heavy unsecured object.

Skill Check Bonuses: Creatures in a high-gravity environment take a –10 penalty on Strength-based skill checks (including Climb, Jump, and Swim checks).

Attack Roll Penalty: Creatures take a –2 penalty on attack rolls in a high-gravity environment unless they are native to that environment.

WEIGHT VS. MASS

While an object in zero gravity loses weight, it does not lose mass or momentum. Thus, while a character could push a 10-ton piece of equipment around in space, albeit slowly, getting it to stop is a bit more difficult. If a character were to come between that piece of equipment and a solid object, that character would be crushed as if he were in full gravity—just more slowly.

For simplicity, assume that a Strength check to lift or move an object in zero gravity gains a +20 circumstance bonus. However, stopping an object already in motion does not receive this same bonus.

Damage from Falling: Creatures fall more quickly in a high-gravity environment than they do in a normal- or low-gravity environment. Falling damage is increased from 1d6 points per 10 feet fallen to 1d8 points per 10 feet fallen.

Long-Term Effects: Long-term exposure to high-gravity conditions can cause serious problems when returning to normal gravity. A creature that spends 120 hours or more in a heavy-gravity environment takes 1d6 points of temporary Dexterity damage upon returning to normal gravity.

ZERO-GRAVITY ENVIRONMENTS

Creatures in a zero-gravity environment can move enormously heavy objects. As movement in zero gravity requires only the ability to grab onto or push away from larger objects, Climb and Jump checks no longer apply.

Most creatures find zero-gravity environments disorienting, taking penalties on their attack rolls and suffering the effects of Space Adaptation Syndrome (space sickness). In addition, creatures in zero gravity are easier to bull rush than in other gravity environments.

Space Adaptation Syndrome: A creature exposed to weightlessness must make a Fortitude save (DC 15) to avoid the effects of space sickness. Those who fail the save are shaken, and those who fail the save by 5 or more are also nauseated. The effects persist for 8 hours. A new save is required every 8 hours the creature remains in a zero-g environment. Creatures with the Zero-G Training feat (see page 15) do not suffer the effects of space sickness.

Speed: While in a zero-gravity environment, a creature gains a fly speed equal to its base land speed, or it retains its natural fly speed (whichever is greater). However, movement is limited to straight lines only; a creature can change course only by pushing away from larger objects (such as bulkheads).

Carrying Capacity: A creature's normal carrying capacity increases by 10 times in a zero-gravity environment. In addition, the creature gains a +20 bonus on any Strength check made to lift or move a heavy unsecured object.

Attack Roll Penalty: Creatures take a –4 penalty on attack rolls and skill checks while operating in a zero-gravity environment unless they are native to that environment or have the Zero-G Training feat (described in Chapter 1: Characters).

Modified Bull Rush Rules: A creature affected by a bull rush is pushed back 10 feet, plus 10 feet for every 5 points by which its opponent's Strength check result exceeds its own.

Long-Term Effects: Long-term exposure to zero-gravity conditions can cause serious problems when returning to normal gravity. A creature that spends 120 hours or more in a zero-gravity environment takes 2d6 points of temporary Strength damage upon returning to normal gravity.

ATMOSPHERIC CONDITIONS

As with variants in gravity, a change in atmospheric conditions can cause major problems for characters. Unfortunately, not every planet will have the same atmospheric density or chemical composition as Earth, meaning that worlds otherwise hospitable to human life may not be ideal for humans born and raised on Earth.

Various atmospheric conditions (and their effects) are presented below.

CORROSIVE ATMOSPHERE

Some atmospheres (breathable or not) contain corrosive chemicals and gases. Corrosive atmospheres slowly eat away at foreign equipment and can cause significant equipment failure. The corrosion can be particularly troublesome in atmospheres that demand special survival gear, as any breach in a protective environmental suit renders it useless. Unprotected equipment exposed to a corrosive atmosphere takes 1d4 points of acid damage per hour of exposure. This damage ignores hardness and deals damage directly to the equipment, eating away at it slowly.

Creatures not wearing protective gear in a corrosive atmosphere take 1d4 points of acid damage per round of exposure.

THIN ATMOSPHERE

Planets with thin atmospheres have less oxygen per breath than the standard Earth atmosphere. Many thin atmospheres are the equivalent of being at a high elevation on Earth, such as on top of a mountain or in the upper atmosphere. When dealing with thin atmosphere conditions, the character must make a Fortitude save to see if he or she suffers any ill effects. Being under such conditions can be disorienting and can cause a character to become sluggish, slowly whittling the character down as the brain is deprived of normal levels of oxygen. See the atmospheres table for any ability modifiers and special conditions caused by thin air conditions.

THICK ATMOSPHERE

Thick atmospheres are those that contain a more dense concentration of certain elements, like nitrogen, oxygen, or even carbon dioxide, than the standard Earth atmosphere. These dense atmospheres sometimes contain a different balance of elements, while others simply contain a higher number of gas particles in each breath. Regardless of the form, a thick atmosphere can be just as dangerous as a thin atmosphere over a long period of time. Though atmospheres that are slightly thicker than normal do not have as significant an effect as slightly thinner atmospheres, remaining in a thicker atmosphere causes the same drain on the body. See the atmospheres table for any ability modifiers and special conditions caused by thick air conditions.

TOXIC ATMOSPHERE

Some atmospheres (breathable or not) contain toxic gases that are debilitating or lethal to some or all forms of life. A GM who wishes for a particular planet or environment to have a toxic atmosphere should select an inhaled poison from the poisons listed on page 54 of the *d20 Modern Roleplaying Game*. Treat the atmosphere as always containing that type of poison.

VACUUM

Despite some popular myths, moving into a vacuum does not cause the body to explosively decompress, nor does it cause instant freezing as heat bleeds away from the body. Rather, the primary hazards of surviving in the vacuum of space are the lack of air and exposure to unfiltered ionizing radiation.

On the third round of exposure to vacuum, a creature must succeed on a Constitution check (DC 20) each round or suffer from aeroembolism ("the bends"). A creature that fails the save experiences excruciating pain as small air bubbles form in its bloodstream; such a creature is considered stunned and remains so until returned to normal atmospheric pressure. A creature that fails the Constitution check by 5 or more falls unconscious.

The real danger of vacuum comes from suffocation, though holding one's breath in vacuum damages the lungs. A character who attempts to hold his breath must make a Constitution check (DC 15) every round; the DC increases by 1 each round, and on a successful



check the character takes 1 point of Constitution damage (from the pressure on the linings of his lungs). If the check fails, or when the character simply stops holding his breath, he begins to suffocate. In the next round, he falls unconscious with 0 hit points. The following round, he drops to –1 hit points. On the third round, he drops to –10 hit points and dies.

Unfiltered radiation bombards any character trapped in the vacuum of space without protective gear. A creature exposed to this ionizing radiation suffers from severe sunburn as well as the effects of radiation exposure; the degree of exposure depends on the nearest star's classification (see Star Systems below for more information).

DECOMPRESSION

The sudden decompression of a starship, vehicle, or other object can be dangerous to creatures inside. Whenever a sealed environment within a vacuum is breached, all of the air inside rushes out quickly to equalize the air pressure. Creatures within the decompressing environment must succeed on a Reflex save (DC 15) or be thrust toward the breach (and possibly beyond it) at a speed of 60 feet per round. Creatures that are three size categories larger than the breach's size category are big enough not to get dragged toward the breach (no Reflex save required). For example, a Fine breach pulls only Fine, Diminutive, and Tiny creatures toward it; creatures of Small size or larger are unaffected.

If the breach's size category is larger than the creature's size category, the creature passes through the opening and is blown out into the vacuum. If the breach's size category is the same as the creature's size category, the creature is blown out into the vacuum and takes 1d6 points of damage as it gets pushed through the breach. If the breach is one or two size categories smaller than the creature's size category, the creature isn't thrust into the vacuum but takes 2d6 points of damage as it slams against the area around the breach. It takes another 2d6 points of damage each round until the air completely evacuates from the decompressed compartment or until the creature pulls itself away from the breach with a successful Strength check (DC 20).

The time it takes for all of the air to evacuate from a compartment depends on the size of the breach and the volume of the decompressing compartment, as shown in Table 4–3: Decompression Times.

Once the air has completely rushed out through the breach, the pressure equalizes and the interior environment becomes a vacuum.

TABLE 4–3: DECOMPRESSION TIMES

Breach Size	Decompression Time
Fine (1-inch square)	3 rounds per 10-foot cube of air
Diminutive (3-inch square)	3 rounds per 10-foot cube of air
Tiny (6-inch square)	2 rounds per 10-foot cube of air
Small (1-foot square)	2 rounds per 10-foot cube of air
Medium (2 1/2-foot square)	1 round per 10-foot cube of air
Large (5-foot square)	1 round per 10-foot cube of air
Huge (10-foot square)	1 round per 20-foot cube of air
Gargantuan (15-foot square)	1 round per 30-foot cube of air
Colossal (20-foot square)	1 round per 40-foot cube of air

STAR SYSTEMS

A star system can contain one star or multiple stars. Humans are more likely to find habitable planets in systems with single stars. In reality, more than half of all star systems have two or more stars, and these systems typically contain planets that are inhospitable to human life. Granted, any *d20 Future* game can feature a hospitable planet orbiting a binary or trinary star system, and indeed it does make a more interesting vista, but the reality is that such systems usually produce planets that are too hot, cold, or irradiated to support human life.

STAR TYPE

Stars are classified using a lettering system that describes the star and gives information about its type. Known as the spectral class of a star, a designation of O, B, A, F, G, K, or M is given to the star based on its mass and energy output. Class O stars are the hottest, largest, and brightest stars, and class M stars as the smallest and coldest, with a gradual scale between them. Since a star's mass determines how hot it burns (as well as how strong its gravity pull is), the star's classification actually helps extrapolate the kinds of planets that might be in that star's system. Since larger stars burn hotter and smaller stars burn cooler, the mass of a star determines the climate of the worlds that orbit it.

In addition to the standard array of star types, several other types of stars (or what were once stars) might be found at the center of a star system. Most of these stars (called "non-main sequence stars") have characteristics that make certain planetary conditions impossible, and no type of non-main sequence star is likely to support worlds hospitable to human life. Types of non-main sequence stars include black holes, neutron stars, white dwarf stars, black dwarf stars, brown dwarf stars, and red supergiants.

Degree of Ionizing Radiation: Ionizing radiation—radiation that breaks down atoms within living tissue—is common in space. All stars produce and emit harmful levels of ionizing radiation, and a star system is considered an "irradiated area" for the purposes of determining radiation exposure, particularly in the vacuum of space. (Planetary atmospheres and protective environment suits can protect a creature from ionizing radiation.) The degree of radiation exposure depends on the nearest star's classification, as shown in Table 4–4: Star Systems. For systems with two or more stars, increase the degree of radiation by one grade (lightly becomes moderately, moderately becomes highly, and highly becomes severely).

Number of Planets: The number of planets in a given star system can be determined by rolling on Table 4–4: Star Systems. For systems with multiple stars, use the star with the fewest planets allowable to determine the number of planets in the system. For example, a binary star system with a Class G star (4–10 planets) and a Class M star (3–10 planets) can have as few as 3 planets and as many as 10 planets.

HOSPITABLE STARS

The chief classifications of hospitable stars are F, G, and K. These stars produce the right amounts of heat and the right types of radiation to allow human-compatible worlds to exist. Not every world around a Class F, G, or K star is hospitable; however, even inhospitable worlds within such systems could be made to support human life with artificial modifications to their ecosystems (a long a painstaking process called "terraforming").

TABLE 4–4: STAR SYSTEMS

Star's Classification	System's Degree of Ionizing Radiation [1]	Number of Planets
Class O (blue-white)	Highly irradiated	1d4+1
Class B (blue-white)	Moderately irradiated	1d4+2
Class A (blue)	Moderately irradiated	1d6+2
Class F (green)	Lightly irradiated	1d6+3
Class G (yellow)	Lightly irradiated	1d6+4
Class K (orange)	Moderately irradiated	1d6+5
Class M (red)	Highly irradiated	1d8+2

Non-Main Sequence Star's Classification	System's Degree of Ionizing Radiation [1]	Number of Planets
Black hole	Highly irradiated	—
Neutron star	Severely irradiated	1d4–1
White dwarf	Moderately irradiated	1d4+1
Black dwarf	Lightly irradiated	1d4+2
Brown dwarf	Lightly irradiated	1d4+1
Red supergiant	Highly irradiated	1d4–1

1 Refer to Table 4–1: Radiation Exposure for details.

INHOSPITABLE STARS

Class O, B, A, and M stars are the least likely to support planets capable of hosting human life. The stars toward the hotter end of the spectrum simply produce too much heat to allow living, breathing organisms to thrive. Class M stars do not give off enough heat to support life at the distance Earth orbits its sun, and these stars are also known to be violently unstable and prone to bursts of stellar activity.

BLACK HOLES

Black holes are stars that have expended their fuel sources and exploded in a massive supernova. Few, if any, planetary bodies survive the initial death of such a star. Once the star has exploded, its gravity is so great that it collapses in on itself and warps light, time, and space around it. Black holes drag all nearby matter into its center, collecting rings of cosmic debris called accretion discs that can be seen at great distances. Some planets and asteroids might survive being pulled into a black hole long enough for some adventuring, but they are incredibly dangerous places to explore.

NEUTRON STARS

A neutron star is a large star that has exhausted its fuel source but hasn't collapsed in on itself. Instead, the entire star's remaining matter compresses into a much smaller body mere kilometers in diameter. Within this tightly packed core, the star's density crushes the atoms into an object composed entirely of subatomic particles known as neutrons. Planets orbiting a neutron star are typically cold, lifeless, and severely irradiated. Another type of neutron star is the pulsar, which emits severe levels of radiation at great distances.

WHITE DWARF STARS

A white dwarf star is so much smaller than a neutron star that it does not have the mass to collapse in on itself. Instead, white dwarfs are typically small and dense and surrounded by rings of wreckage that were once planetary bodies in its system. White dwarfs emit little light or energy, and the rings surrounding them are usually cold and dark. However, these rings are not bombarded by as high levels of radiation as in a neutron star and could potentially support life, assuming enough heat could be generated.

BLACK DWARF STARS

Black dwarf stars completely burn out after expending their fuel. Truly the most stable of dead stars, black dwarfs simply consume their fuel supply and then cool into a cinder that emits no light or heat. Any planetary systems that existed around a black dwarf will remain intact; however, they usually become barren and frozen once their heat and light source is gone.

BROWN DWARF STARS

In many ways, the brown dwarf is not even a star. Brown dwarf stars are stellar bodies that almost coalesced into true stars but never managed to form completely. Brown dwarfs are dim and small. They may have planets in their system, but rarely can these worlds support life due to the lack of heat or light.

RED SUPERGIANTS

Most red supergiants begin their lives as average-sized stars. However, they burn hot and expend their hydrogen fuel supplies quickly. When its hydrogen supply is depleted, a red supergiant begins burning other, heavier elements such as helium, causing the star to expand to enormous size. An expanding red supergiant consumes its innermost planets and then burns so hot and bright that it renders all other planets in its system incapable of supporting life naturally.

STELLAR HAZARDS

Two types of stellar hazards can create higher-than-normal levels of ionizing radiation: solar flares and cosmic rays.

SOLAR FLARES

Solar flares release tremendous amounts of electromagnetic energy (including harmful ultraviolet rays and X-rays), as well as highly charged protons and electrons. The effects are comparable to a radioactive blast from one hundred million billion tons of TNT (compared to the 20,000-ton equivalent blasts that destroyed Hiroshima and Nagasaki). Fortunately, while solar flares aren't rare, they are predictable.

An unprotected creature exposed to radiation from a solar flare is treated as "severely irradiated" for the purposes of determining the radiation's effects (see Table 4–1: Radiation Exposure).

COSMIC RAYS

Cosmic rays, unlike solar flares, cannot be predicted. Consisting of subatomic particles moving at relativistic speeds, these rays can penetrate miles of solid mass (though extremely few get through the Earth's atmosphere without colliding with other atoms or molecules, effectively rendering them harmless). In space, these subatomic particles can cause severe cell damage, even genetic mutation.

An unprotected creature exposed to radiation from a cosmic ray shower is treated as "highly irradiated" for the purposes of determining the radiation's effects (see Table 4–1: Radiation Exposure).

CHAPTER FIVE:

SCIENTIFIC ENGINEERING



Cloning 101

One of the great quests of science has always been to completely understand the most basic functions of the human body—to be able to find the chemical basis for everything from intelligence to emotions, physical characteristics to the process of aging. Only a small step or so behind that goal is the desire to control these processes—to ensure that an individual creature or plant is born with specific positive traits (or is safe from specific negative ones), and to eventually be able to eliminate defects (or merely unwanted characteristics) in mature specimens.

In other words, we want to control the process of creation. We want the capability to make all plants and animals—particularly human beings—in whatever image we deem is most appropriate.

Scientists have come to understand that all of a creature's abilities, potential, and limitations are based to a greater or lesser extent on its genetic makeup. If they can determine how DNA, RNA, and chromosomal replication work together to create specific traits, they believe they can learn to control both the process and the result.

GENETICS AND PROGRESS LEVELS

Of all the scientific arenas, genetics is perhaps the most difficult to attach to specific progress levels. Simply look at the news headlines and you'll see the boundaries of this science are constantly expanding.

Already we have seen successful experiments in cloning, gene therapy, and the creation of new simple life forms. In some cases, what was considered the most speculative of fiction fewer than five years ago is now irrefutable scientific fact.

Because of this, assigning specific progress levels to the scientific advances and processes described in this chapter is an uncertain process. On top of the usual caveat that the GM is always free to adjust the recommended PL of any scientific advance, we must add a warning that advances in real-world science may quickly prove some of the speculations and rulings made in the next few pages wrong.

GENETIC MANIPULATION

A great many of the real-world advances found in *d20 Future* campaigns originated with scientists tinkering with cells at the most basic level. Clones, mutant viruses, genetically bred super-humans, cybernetics, and dozens more tropes of the genre have their roots in genetic manipulation. This is the groundwork on which much of future science is built.

Genetic manipulation becomes possible at PL 5 when technology advances enough to create electron microscopes, computer-aided

imagery, and the tools to delicately examine and manipulate the tiniest building blocks of life—genes. At this point, scientists are able to experiment with DNA, gene splicing, and other activities that eventually lead to more advanced techniques.

PRIMORDIAL SOUP

The earliest experiments in genetic manipulation invariably involve isolated strands of DNA or simple, single-celled organisms. These procedures, while crucial to development of the technology, do not have a great deal of potential for use in adventures. The scientists are merely testing their ability to manipulate material on the chromosomal scale and end up with a viable sample or creature when their work is done.

The biggest potential for drama is the possibility that in altering an otherwise inconsequential chromosome, the researchers trigger an unpredictable reaction. This is so unlikely as to be impossible in the real world, but certainly is a common occurrence in the world of fiction. For example, an experiment that replaces a single-celled animal's DNA with that from another creature could result in the subject suddenly gaining sentience, or becoming extraordinarily toxic.

PERFORMING EXPERIMENTS

Science is not a process that happens quickly, although key developments often happen accidentally, reshaping the knowledge base overnight. Performing basic experiments in genetic manipulation realistically would take a researcher months (and more likely years) of effort. However, once the scientific groundwork is laid, tests and procedures can be attempted more rapidly.

In general, testing any single hypothesis about a procedure, or discovering the effects of performing a specific genetic modification, requires 3d10 days and a successful Research check. The DC for this check should be no lower than 20 and can be as high as the GM prefers. Scientific research is painstaking and even experiments based on solid theories must often be attempted several times before providing a conclusive result.

If the GM is running a more cinematic campaign where scientists develop theories and produce solutions in quick succession, she may opt to change the time required to 3d10 hours and the Research DC to a minimum of 15.

DESIGNER DISEASES

One of the most basic implementations of genetic manipulation is modifying existing microscopic organisms such as bacteria and viruses. At PL 5, scientists are able to alter existing diseases to be resistant to particular medicines and resilient enough to survive in conditions that would kill their naturally occurring relatives.

At a later stage of PL 5, researchers learn to splice together the DNA of two or more different diseases to create super viruses. At this point, they can tailor such characteristics as the disease's incubation period and primary, secondary, and tertiary symptoms. They can even make it resistant to all known treatments and, at the same time, create a wholly effective remedy—putting them in the position of being able to infect the entire world and only providing the cure to those they deem worthy.

The flip side of this, naturally, is that scientists are able to create synthetic medicines—antibiotics and other drugs—that combat diseases that were previously uncontrollable. Unfortunately, nature is at least as inventive and resourceful as science. Whenever a new cure is developed, it is not long before scientists discover one or more diseases that have natural immunity to it.

PLAYING GOD

The majority of real-world debates regarding genetic manipulation revolve around the question of whether or not we humans have the right to "play god." As a result, most GMs who use this science as a cornerstone of their campaigns find the issue cropping up time and again.

One side of the debate believes that life—all life—is sacred, and the process of its creation and control over its expression belongs solely in the hands of god. (Exactly which or whose god remains a completely different, and much more divisive, issue.) They hold that although humanity has discovered ways to affect the basic elements of life, we neither understand nor have the capacity to control the ramifications of such meddling.

On the other hand, many people believe that life is simply an incredibly complex, wildly robust, occasionally unpredictable series of chemical reactions. To them, the creation and manipulation of living cells is not intrinsically different than combining elemental compounds to create pharmaceuticals, ceramics, and other materials that do not occur in nature. In general, they believe this issue becomes more complicated and morally murky when viable living creatures are involved, but they do not consider gene splicing, altering DNA strands, and cloning individual cells to be any more immoral than selectively breeding a herd animal or grafting vegetation to produce seedlings with specific characteristics.

No matter which side the GM favors, she should keep the debate and its repercussions in the forefront of her mind when designing adventures, NPCs, and other details for her campaign. Otherwise, the decision whether or not the people of her setting have the moral right (or scientific obligation) to meddle with the building blocks of life is left in the hands of the players. Their answer, no matter what it is, will cause innumerable ripples throughout the campaign—this would, admittedly, create an intriguing setting and pose unique challenges to the GM.

THE FRUITS OF RESEARCH

The first step in genetic engineering for more complex organisms lies in manipulating plant DNA. Near the end of PL 5, scientists are able to create plants with particular traits—including those never before seen in their particular species. In fact, they are able to design plants specifically suited for certain ecological niches. For example, scientists could develop a type of wheat that grows in arid, sandy conditions—an ideal crop for desert-dwelling cultures.

A more sinister mind could turn this ability to evil ends. GMs might plot adventures in which nefarious scientists create plants that purposely leach all the nutrients from the soil and excrete a substance that leaves the land toxic and uninhabitable.

BUILDING THE PERFECT BEAST

The ultimate goal in genetic engineering is to safely affect the development of humans and other animals. The complexity of animal DNA is such that merely learning to understand its design and most basic functions is a colossal undertaking.

WHAT IF IT ESCAPES?

One of the greatest fears many people have regarding genetic manipulation is the possibility that a creature, disease, or lab-induced mutation will escape containment and threaten all life on the planet. While this makes for good fiction, it is a highly improbable turn of events in the real world.

In 1995, a terrorist organization released a deadly toxin in the Tokyo subway. This attack took place in near-perfect conditions for maximum damage—a small, contained space with hundreds of potential victims crowded closely together, and a toxin that did not require special atmospheric conditions to be effective. And while it was a tragedy that 11 people were killed and thousands were injured, it could have been worse. In theory, this incident could have killed hundreds, if not thousands of innocent people. This event is a lesson in how difficult it is for a toxic agent to be spread in even a highly controlled environment.

Specimens for use in laboratory experiments are generally bred to be short-lived, require specific temperatures and conditions to thrive, and often are sterilized. If a sample escapes or is accidentally released, it is nearly impossible for it to survive outside the laboratory, and even more unlikely that it would be able to reproduce. A virus that has a life cycle of 12 hours and can only live in a pH3 solution of 30% saline between 60°F and 70°F is extremely unlikely to survive long enough in the wild to affect anyone or anything.

When scientists are working with a hardier organism, they often genetically manipulate it so the creature has one of the following flaws.

Dependent: The organism requires a particular item or condition to survive. For example, it may need to consume a particular chemical.

The frequency with which the organism requires its dependent condition varies widely. The GM may use the table below or decide the frequency on a creature-by-creature basis.

Creature Size	Frequency
Fine	Once every round
Diminutive	Once every minute
Tiny	Once every hour
Small	Once every 4 hours
Medium-size	Once every 6 hours
Large	Once every 8 hours
Huge	Once every 12 hours
Gargantuan	Once every 24 hours

If the organism's dependent need is not met, it suffers 1d4 points of Constitution damage each time the specified period passes.

Particular: The organism has an extreme preference (or an extreme dislike) for a certain condition. Examples include darkness or bright light, wetness, heat or cold.

When faced with the condition it is particular about, the organism must make a successful Will save (DC 20) to resist the urge to remain where it is (or flee, as appropriate).

Susceptible: The organism is damaged by a specific condition or material. Examples include environments above or below a certain acidity or temperature, or the presence of a particular gas or liquid.

When the organism comes in contact with the substance or condition to which it is susceptible, it takes damage. The amount of damage is equal to the creature's Hit Die plus it's Constitution modifier, if the modifier is a positive number (having a low Constitution score does not allow the organism to lessen the damage rolled).

This damage is in addition to any other damage caused by the contact. If, for example, the organism was susceptible to steel and it was struck in melee by a steel weapon, the creature would take the normal melee damage plus the damage for being susceptible.

In 1990, the U.S. Department of Energy and the National Institute of Health cosponsored and coordinated a massive research endeavor called the Human Genome Project (HGP). The goal of this project was to identify the 30,000 genes in human DNA, determine the sequence of the three billion chemical base pairs that make up human DNA, store the data, and improve the tools at scientists' disposal for future experiments.

Originally planned as a fifteen-year undertaking, unanticipated advances in technology allowed HGP to be completed in 2003, two years ahead of schedule. In addition to mapping human DNA, the project also provided scientists with in-depth understanding of the genetic makeup of several nonhuman organisms (including fruit flies, mice, and intestinal bacteria).

With this information, it is possible in the closing stages of PL 5 for scientists to develop effective forms of gene therapy. These treatments can be used on mature creatures to replace defective genes, or genes that are linked to particular diseases, with a more benign gene. Usually this is done using modified retroviruses (viruses that can create DNA copies of their own RNA), however, several other methods exist, all of which are capable of targeting specific cells—lung or liver cells, for example—within a living organism.

No gene therapy regimens are approved for use on humans in the U.S., but scientists are currently working toward that end.

GENE SCREENING

Using advanced PL 5 techniques, it is possible for scientists to learn a great deal about an organism even while it is gestating. By taking a sample of a developing creature's DNA, they can tell what physical and mental qualities it is liable to possess, what diseases or conditions it is predisposed toward, and even what its emotional temperament is likely to be.

At first, gene screening is seen as a wholly beneficial process, allowing doctors to identify and prevent birth defects and congenital diseases in humans. However, as science gains a greater understanding of the significance of each gene within a fetus's DNA, the possibility arises of altering the DNA to create the "perfect child"—changing superficial characteristics such as hair, eye, and skin color, and even increasing physical or mental potential. More frightening still is the possibility that doctors and parents may decide on the viability of a child based solely on the fetus's genetic predisposition.

These and other issues raised by gene screening have such deep moral and ethical connotations that it is impossible to provide a comprehensive position on them in this chapter. These are matters to be answered individually for each campaign in which they play a vital role.

MORE HUMAN THAN HUMAN

Beginning early in PL 6, scientists discover ways to not only replace abnormal or defective genes, but also to safely improve on otherwise healthy genes. Even more importantly, they discover ways to create retroviruses that target all of an organism's cells, thus allowing them to change various aspects of a creature. It becomes possible to upgrade a living being.

At first, these processes only modify existing traits—increasing (or decreasing) one of the subject's innate abilities, or sharpening his or her senses. But as the technology is perfected and scientists map and catalog the genetic structure of various other creatures, it is possible to alter a subject so that he or she has traits that humans have never possessed.

Genetic manipulation can endow a creature with any of the special qualities listed in Chapter 8 of the *d20 Modern Roleplaying Game*. Developing the appropriate therapy is no different than any other genetic experiment (see Performing Experiments, above). Once the therapy begins, the subject must make a Fortitude saving throw (DC varies) once per day until such time as he achieves a specific number of successes linked to the genetic modification being attempted (at which point he permanently gains that special quality). Every time a save fails, the subject suffers 2 points of Constitution damage.

Type of Special Quality	Fort Save DC	Number of Successes
+1 to one ability score	15	10
Extraordinary ability (Ex)	15	15
Supernatural ability (Su)	20	25
Spell-like ability (Sp)	20	50

During therapy, the ability remains latent, so the patient receives no benefits from the intended manipulation. Immediately upon completing the required number of Fortitude saves, the ability activates and becomes a permanent special quality of the patient.

Alternatively, the GM may want to introduce treatments with short-term durations. (According to most scientific authorities, these are not realistically feasible, but they can be found in many places in fiction.) A short-term treatment automatically takes effect in 1d4 minutes and lasts for 1d3 hours. At the end of that time, the character reverts to his normal state, is fatigued, and suffers 4 points of Constitution damage. A successful Fortitude saving throw (DC 15) reduces this to only 2 points of Constitution damage.

The main idea to remember is that according to our best understanding of genetics, each gene tends to affect only a single trait (or a small set of closely linked traits). At PL 6 it is only possible to modify one gene at a time. To create more drastic changes, the patient must undergo several gene therapy treatments, each one requiring a separate set of Fortitude saving throws.

At PL 7 mastery of this process is such that multiple modifications may be combined into one treatment. Have the patient make Fortitude saves as if the regimen was for a single Supernatural special quality.

GENE THERAPY TEMPLATES

The potential uses of gene therapy are not limited to the abilities found in Chapter 8 of the *d20 Modern Roleplaying Game*. GMs can simulate just about any simple modification by creating templates that characters can acquire by undergoing the proper program of gene therapy. This is identical to the process described above, except that the GM must set the value for the DC and the number of successful saves required. Use the table above as a guide.

Below are several example gene therapy templates.

AQUAN (TEMPLATE)

"Aquan" is an acquired template that can be added to any humanoid or monstrous humanoid (referred to hereafter as the character). It uses all the character's statistics and special abilities except as noted here.

The aquan template allows the character to survive on both land and under water. A character acquires the aquan template by undergoing a course of gene therapy (see More Human than Human). The regimen requires 25 successful Fortitude saving throws (DC 20).

Special Qualities: An aquan retains all the special qualities of the character and gains the additional special qualities listed below.

Amphibious (Ex): Aquans can breathe equally well in air and water.

Blindsight (Ex): Aquans have blindsight with a range of 60 feet when under water only.

Low-Light Vision (Ex): Aquans have low-light vision with a range of 60 feet on land and in water.



Aquan Adam

Skills: Same as the character, with a +2 species bonus on Listen checks while under water, a +2 species bonus on Move Silently checks while in the water, a +2 species bonus on Navigate checks while under water, and a +4 species bonus on all Swim checks.

Feats: An aquan gains Athletic as a bonus feat.

Advancement: By character class.

HEALER (TEMPLATE)

"Healer" is an acquired template that can be added to any humanoid or monstrous humanoid (referred to hereafter as the character). It uses all the character's statistics and special abilities except as noted here.

The healer template allows the character to heal wounds more rapidly. A character acquires the healer template by undergoing a course of gene therapy (see More Human than Human, page 89). The regimen requires 25 successful Fortitude saving throws (DC 30).

Special Qualities: A healer retains all the special qualities of the character and gains the additional special qualities listed below.

Fast Healing 3 (Ex): A healer heals 3 points of damage each round. Fast healing stops working when the healer is reduced to –10 hp or fewer.

Lowered Damage Threshold (Ex): A healer's massive damage threshold is equal to Con –3.

Skills: Same as the character, with a +2 species bonus on any Treat Injury checks made to treat himself.

Advancement: By character class.

MORPHEAN (TEMPLATE)

"Morphean" is an acquired template that can be added to any humanoid or monstrous humanoid (referred to hereafter as the character). It uses all the character's statistics and special abilities except as noted here.

The morphean template allows the character to go for long periods without sleep and still function normally. It also allows the character to enter into a sleeplike trance that lasts for many days without suffering the effects of dehydration or starvation. A character acquires the morphean template by undergoing a course of gene therapy (see More Human than Human, page 89). The regimen requires 25 successful Fortitude saving throws (DC 20).

Special Qualities: A morphean retains all the special qualities of the character and gains the additional special qualities listed below.

Hibernate (Ex): A morphean can enter into a sleeplike state that lasts for an extended period. While in this state, the morphean does not suffer the effects of dehydration or starvation. Hibernation can last up to a number of days equal to twice the character's Constitution. The morphean decides how long the hibernation will last before entering into the sleeplike state. If outside forces disturb or try to awaken the character, the morphean must succeed at a Will saving throw (DC 15) to end the hibernation prematurely.

Sleepless (Ex): The morphean does not suffer the detrimental effects of sleep deprivation. Once per day, the morphean can spend 10 minutes meditating and receive all the benefits of a full 8 hours of sleep. However, morpheans cannot go indefinitely without sleep. Once every 30 days, the character must get 2 full days of uninterrupted sleep or hibernation. Failure to do so makes the morphean fatigued.

RECESSIVE GENES

Not all qualities encoded into a parent's genes are passed to her offspring. Some traits are recessive. Even when the traits are in an organism's DNA, they require a second matching gene to be active. This is why two brown-eyed parents can sometimes have blue-eyed children.

It is up to the GM to decide whether or not a particular genetic trait is dominant or recessive.

Saving Throws: A morphean gains a +2 species bonus on all Will saving throws.

Advancement: By character class.

NOCTURNAL (TEMPLATE)

"Nocturnal" is an acquired template that can be added to any humanoid or monstrous humanoid (referred to hereafter as the character). It uses all the character's statistics and special abilities except as noted here.

The nocturnal template allows the character to function in darkness the way normal humans do in the light. A character acquires the nocturnal template by undergoing a course of gene therapy (see More Human than Human, page 89). The regimen requires 25 successful Fortitude saving throws (DC 20).

Special Qualities: A nocturnal retains all the special qualities of the character and gains the additional special qualities listed below.

Darkvision (Ex): Nocturnals have darkvision with a range of 60 feet.

Light Sensitivity (Ex): Nocturnals are blinded by sunlight, flashlights, fluorescent lights, halogen lamps, and other sources of bright illumination. They can counter the blindness and see normally by wearing dark-tinted sunglasses or tinted visors.

Skills: Same as the character, with a +2 species bonus on Listen and Move Silently checks.

Feats: Nocturnals gain Blind-Fight as a bonus feat.

Advancement: By character class.

UNNATURAL SELECTION

Gene therapy as practiced at PL 5—targeting specific cells for localized modification—affects only the patient directly receiving the treatment. She is unable to pass the modifications on to her offspring. However, once the technology reaches the point in PL 6 that it can imbue the subject with new special qualities, the subject has been changed at a basic genetic level and the traits may be passed along to children.

This process has the potential to create an entirely new race—winged humans, for example. And if the genetic manipulation is extensive enough that the subject's DNA is no longer compatible with naturally occurring DNA—if she can no longer mate with normal members her own kind—the subject has actually been transformed into a new species. Such manipulation generally is not possible until PL 7.

The most common use for such extensive genetic manipulation is to create humans or other creatures who are capable of surviving in conditions that would normally be deadly—for example, creating a race of humans that can breathe in a methane-based atmosphere, thrive in locations with extremely high levels of radiation, or function on a planet where the gravity is many times greater than on Earth.

CLONING

Another type of genetic engineering found in many futuristic settings is cloning. A sample of one creature's DNA is used to make an exact physical duplicate of the creature. A clone is identical to the original creature in every genetic way—blood type, birth defects, fingerprints, and retinal pattern. However, the clone does not have any scars, tattoos, or other identifying marks gained during the course of the original creature's life.

If, for example, the original creature was born with only one kidney, the clone has only one kidney. However, if the original creature has had a kidney removed, any clone made of him will have two kidneys (as the original creature did at birth).

HELLO, DOLLY

In March of 1997, scientists announced the birth of the first cloned animal—a sheep named Dolly. The birth took place after more than 250 unsuccessful attempts, but it proved to the world that cloning was a scientific reality. Immediately, universities, private research institutions, and more than a few fringe groups started work using the process to repeat the experiment and attempt to clone other species.

Over the next six years there were confirmed, reputable reports of scientists successfully cloning sheep, mules, mice, cows, monkeys, pigs, cats, and horses. There were also a handful of incidents in which disreputable or unlikely groups claimed to have cloned human beings, but these were all eventually proven to be hoaxes.

Cloning is a very difficult process. Although the number of successful experiments has increased, creating and bringing a clone to full term is a high-risk endeavor and scientists generally have to make several attempts before an experiment reaches a satisfactory conclusion. Any single attempt to create a clone has roughly a 90% chance of failure. What's more, clones tend to be prone to a host of developmental problems including accelerated decrepitude, unexplained organ failure, immune system failure, and a generally weak constitution.

Many nations have enacted legislation making it illegal to perform experiments in human cloning, but some nations support the practice either explicitly or illicitly. If a future for human cloning or any of its associated disciplines exists, it will probably be realized by a small research team in an unlikely location.

MINI-ME

Some time toward the end of PL 5 or the beginning of PL 6, researchers find the solution for the developmental problems to which clones are prone. At this point, it is possible for scientists to successfully clone any living organism with an acceptably low failure ratio. (In most cases, a ratio equal to or lower than the general infant mortality rate is sufficient.)

Each clone, though, must still go through the same gestation period and developmental processes as a child conceived through ordinary procreation. In fact, without a detailed genetic examination, it is difficult (if not impossible) to tell the difference between a naturally conceived baby and a clone.

Provided the clone is given the same nutritional and physical environment the original person had, he develops physically in exactly the same way as the original person. The two may be completely different in terms of personality and temperament, much the same way as any parent and offspring. The clone may be a physical recreation of a person, but it is not an emotional or intellectual duplicate.

THE STEM CELL QUANDARY

Ethical considerations include not just the morality of the act of cloning, but also the fact that the most effective way to produce a clone is to start with embryonic stem cells.

Stem cells are part of the body's self repair system. They have the remarkable ability to develop into many different cell types. When a stem cell divides, it can produce another stem cell or a different type of cell with a specialized function—a muscle cell for example.

The mature human body produces several different types of stem cells, each capable of producing a wide range of cells. However, the most versatile type are the totipotent stem cells created only during the development of a fetus. These cells are able to transform into any kind of cell found in a human being, and thus are the most useful for cloning and other genetic experiments. However, harvesting these totipotent cells destroys the fetus, and so the process has been highly regulated—even outlawed in some countries.

In August of 2001, President Bush signed an order prohibiting the harvesting of new embryonic stem cells in any research funded in part or whole by the U.S. government. Since the vast majority of research laboratories receive at least some government grants, this has effectively stopped the development of this type of research in the U.S.

A good deal of debate centers around potential medical uses for this technology—creating clones but not allowing them to come to full gestation so that research and experimentation can be performed on the fetuses. In most settings, cloning is illegal for any reason other than reproduction.

This fact changes only when scientists discover a way to create viable organs without first creating a viable life form.

REPLACEMENT PARTS

If the scientific community is allowed to work through the technical problems of viability and the moral issues surrounding the creation of living tissues, it eventually (usually late in PL 6) becomes possible for them to use cloning technology to grow specific organs without first creating a viable embryo. They are able to stimulate cells in the lab so that they spontaneously develop into a liver, lung, or kidney. This eliminates the need for organ donation and make possible huge advances in the science of organ transplantation.

In the modern world, people whose major organs are dysfunctional must wait in hopes that an appropriate donor (one with the right blood type and other specific traits) can be found. With advances in science, cloned replacement organs are available whenever they are needed and match the recipient exactly, down to the last chromosome. (This has the added bonus of practically eliminating the chance of the body rejecting the new organ.) Cloning can also replace much of the need for blood banks, since doctors can clone as much replacement blood as necessary. Some stores of donated blood remains necessary, though, for use in times of emergency.

At PL 6, cloning a replacement organ requires a state-of-the-art research laboratory and a successful Wealth check (purchase DC 31). The process takes 2d10+10 days. Cloning blood is a much easier process, requiring only a standard hospital or university laboratory, 1d3 hours, and a Wealth check (purchase DC 10) to create 1d6 pints.

At PL 7, improvements make these processes quicker and cheaper to perform. All experiments can be performed in any hospital or university laboratory, and some may even be successfully accomplished in well-stocked home labs. Cloning a replacement organ takes 1d6+4 days and requires a Wealth check (purchase DC 18). Cloning blood takes 1 hour and a Wealth check (purchase DC 7) to produce 1d6 pints.

At PL 8, cloning a replacement organ takes 1d4+4 hours and a Wealth check (purchase DC 10). Cloning blood can be done in the operating room and does not have a significant cost associated with the process.

MY, HOW YOU'VE GROWN

The advent of cloning allows scientists to create genetically identical embryos that age normally. Unless a clone is created during the first year or two of a person's life, such a significant age difference exists between the original person and the clone that they are more akin to parent and offspring than to identical siblings.

The next quantum leap in cloning technology comes when scientists develop the ability to artificially age the clone. Rather than wait for the embryo to age normally, this advance allows the clone to mature at an accelerated rate until it is an exact replica of the donor (minus scars, tattoos, and other acquired physical modifications).

Artificial aging is an important part of clone fiction, but it is such a hypothetical process that it is difficult to place it at a particular Progress Level. Perhaps this ability would be linked to developments in battling the aging process. Or there might be a relatively simple way to stimulate embryonic clone cells so they continue to grow at the same advanced rate even after the fetus becomes a viable infant. This allows the clone to grow to full maturity in a matter of weeks or perhaps even days.

In a setting where the GM wishes to be as scientifically realistic as possible, artificial aging is not developed until PL 9. However, in campaigns where individuals are able to have a cadre of clones to serve as organ donors, replacement bodies, and heirs, the GM may rule that artificial aging is developed at PL 6, at the same time that cloning technology overcomes the viability problem.

AN ARMY OF ONE

In a setting where cloning and artificial aging are commonplace, it is possible for an individual to have dozens of replicas of herself at any one time. Of course, if a new clone can be grown and artificially aged within a matter of days or hours, the question arises as to why one would need to keep active clones at all.

Body Double: In the modern world, celebrities and VIPs often hire look-alike actors to take their places for brief public appearances, dangerous situations, and other situations where they do not have the inclination or time to appear themselves. The illusion is complete if the look-alike actor is a clone whose purpose in life is to stand in for her genetic original from time to time.

Disposable Workers: In societies where clones are not afforded the rights and protections given those born through procreation, genetic duplicates might be used as a disposable work force. Clones could be sent into the most dangerous situations, used to fill the ranks of the armed forces, and made to perform all manner of unpleasant activities. Depending on the setting, this might be an accepted fact of life or there could be a group or political party that opposes clone repression. (See the Clones' Rights sidebar for further discussion.)

CLONES' RIGHTS

A clone is nothing more than a miniscule portion of a creature replicated over and over until it takes the form of the donor. In a very real sense, it is merely a part of the original, like shed hair or clipped fingernails. On the other hand, despite the details of its germination, a clone is a living, breathing creature. Depending on the available technology, it might step from a laboratory fully grown and ready to take its place in society. Should a clone be afforded the rights and protections given people? Or is a clone merely an object that the owner may do with as he or she pleases?

The questions become even more complicated if you add in the possibility of brain pattern imprinting. If a clone is imprinted with its genetic donor's brain pattern, does it actually become that person? What if the original person is still living?

Any campaign setting that contains cloning has to address these concerns. A set of laws and standards must be drawn up defining when a clone ceases to be an object and starts to be a person (if indeed it ever does). Regulations need to be established regarding the disposition of a clone when the original person is alive.

As with so many quandaries posed by future technology, there are no easy answers to these problems. GMs should be sure to consider them carefully, though, since these issues have repercussions throughout their campaigns.

Workload Efficiency: In a society that places a higher value on clone life, the world's rich and powerful might still create cadres of clones. In this case, though, they would clone those people who are especially good at a particular job or activity. They could fill entire companies with people ideally suited for their jobs and who work well together.

This scenario, however, requires the addition of one more advance in clone technology—identity transfer.

A QUESTION OF IDENTITY

If a person is the sum of all his experiences, a clone is no more the person whose genetic structure he shares than he is a photograph or sculpture of that person. To transform a clone into that person, a way needs to be found to make the clone's mind identical to the person's mind.

In many campaign worlds, the person involved makes a recording of his brain pattern and transfers the pattern to the clone while it is still in a formative stage. (Exactly how this is accomplished varies widely from setting to setting.) The clone awakens with all the memories and experiences of the person up to the point of the recording—anything that happens to the person after the recording is not part of the pattern.

In settings where clones are kept as organic life insurance, people periodically record their brain patterns so their clone has the most up to date memory possible. In settings such as this, it is possible to use technology in unusual ways. One could imprint the mind of a clone with the brain pattern of another person (putting the brain of Albert Einstein in the body of Marilyn Monroe, for example). Alternatively, an elderly person on his deathbed could have his brain pattern recorded and, after he passes away, implanted on a clone of himself as a young man.

NANOTECHNOLOGY

Nanotechnology is a broad, new, mostly hypothetical area of research. It is, practically speaking, the ultimate step in miniaturization. Nanotechnology involves manipulating objects that are as small as a nanometer (one billionth of a meter) to create materials and products that are only the size of a dozen atoms.

Of course, nanotechnology is not merely futuristic speculation. It is used in its most rudimentary form in many products and materials today. For example, clothing manufacturers use nanotechnology to create stain-resistant cloth, auto manufacturers use it to make scratch- and dent-proof parts, and environmental researchers use it to develop substances to remove toxic metals from water.

Current uses, though, only scratch the surface of nanotechnology's potential. The possibilities are practically limitless. Imagine a computer processor with all the capabilities of today's top-of-the-line desktop models, but that is the size of a single bacterium—or a super-computer the size of a sugar cube. These are considered reasonable expectations for the future of nanotechnology.

Experts in the field suggest nanotechnology will change human culture in ways that can scarcely be imagined. Indeed, some believe it will directly result in a "postmonetary economy" where money becomes meaningless, industrial manufacturing is unnecessary, and nanoassemblers instantly create any item a person desires.

The term nanotechnology refers to many different potential disciplines—nanomedicine, nanobiotechnology, nanolithography, nanoelectronics, artificial intelligence, and microencapsulation, just to name a few. But when the term is used in futuristic fiction, it almost always is in regard to nanorobotics.

THE LITTLEST ROBOT

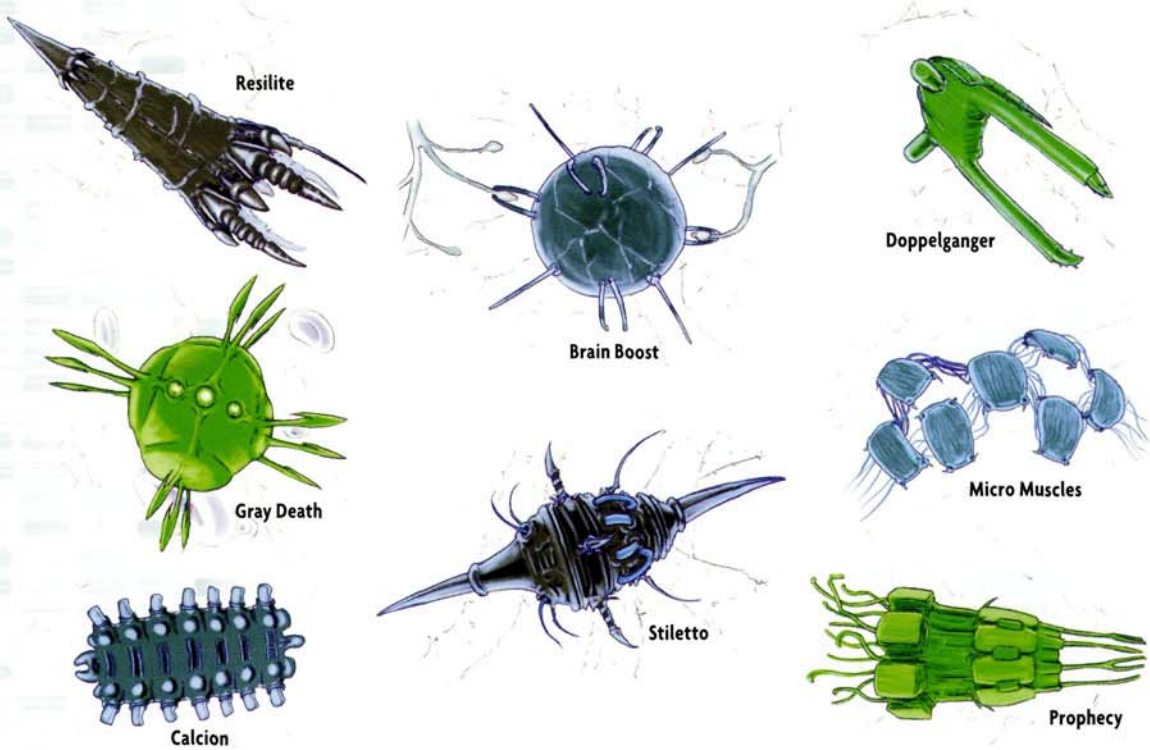
The basic working unit of nanotechnology is a nanite—a single robot that can be as small as a dozen atoms in length. Nanite is a generic term: Any robot built using this technology, no matter what its purpose, is a nanite. Each one must be constructed and programmed for a specific purpose, and a nanite's true power lies not in what it can do individually, but what it can be programmed to do in complete synchronization with millions of other nanites that make up a nanocolony.

It is possible for a single item or piece of material to be composed of hundreds or thousands of different types of nanites, just as a human body is composed of a multitude of different types of cells.

AMBIENT NANOCOLONIES

In addition to the independent and internal nanocolonies, a third type of nanocolony exists. The ambient nanocolony floats in the air with no fixed location or purpose. Most ambient nanocolonies exist in areas where nanotech has either grown out of control or where civilization has declined, leaving behind only microscopic remnants of its technology.

Often referred to as "zombie nanites," these nanocolonies float around aimlessly until some outside stimulus reactivates them. In some cases, ambient nanocolonies even try to continue to fill their intended purpose long after the conditions necessary to do so have passed; ambient utility fog (described below) might continue to try and build roads where no roads have been needed for years, while an inert ambient nanocolony of gray goo (also described below) might suddenly reactivate, essentially becoming a nanite minefield. Only in rare cases are internal nanocolonies found in ambient situations, usually having been removed from (or drained from the decaying body of) a character or creature that once made use of them.



Nanites

ACQUIRING NANOTECHNOLOGY

In most settings, nanotechnology is not some cheap technology that can be picked up off the street. While it is feasible that some campaign settings could have nanotechnology so common that any character could go to the local nanotech clinic and receive the latest nanite injection, it is more likely that obtaining nanotechnology for personal use is more difficult than simply dropping down the cash. Gamemasters might limit the availability of nanotechnology by not only making nanocolonies expensive to purchase, but also requiring the character to obtain permission or a permit.

Conversely, the Gamemaster may wish to dole out nanocolonies as a reward for completing a task, or might determine that a nanite injection would be standard procedure for a particular organization. Regardless, the powerful nature of nanocolonies means Gamemasters should keep a watchful eye on how much nanotech falls into the hands of player characters.

PROGRAMMING NANITES

Since nanites are small machines controlled by small computers, they can be programmed and reprogrammed accordingly. Reprogramming a nanocolony requires a special computer that can broadcast signals on a frequency the nanocolony recognizes; such computers require a Wealth check (purchase DC 30) to purchase and, depending on the setting, are frequently restricted by the government. Nanocolonies are programmed using the Computer Use skill as normal.

Typical commands given to a nanocolony include activation and deactivation, movement (both internal and external), as well as instructions to follow orders only from particular computers or individuals. Though hacking a nanocolony is possible, changing a nanocolony's purpose can be quite difficult. The hacker must not only overcome the nanocolony's programming, but also must find a way to use the nanite's hardware to serve a new function.

INDEPENDENT NANOCOLONIES

An independent nanocolony is one that is capable of functioning and surviving outside of a contained environment. Independent nanocolonies can take many forms and can be either airborne or part of another piece of technology. These nanocolonies usually perform independent tasks, creating or building or destroying, without having to enhance or alter an existing object. In fact, most independent nanocolonies are designed to function as autonomous units once released into the air, only altering their objectives when given new commands or new programming.

Independent nanocolonies are among the most dangerous because they can move about freely and cannot be reclaimed easily (if at all) should a malfunction occur. In some settings, independent nanocolonies are the direct cause of the fall of entire civilizations, thanks to nanites that consumed natural resources or destroyed infrastructure. Some independent nanocolonies are capable of wiping out entire planets, moving from one object to the next devouring and destroying all that stands in their paths.

Gray Goo: Gray goo is the ultimate destructive application of nanotechnology. This colony of nanites exists for the sole purpose of destroying all other types of matter. The nanites within gray goo attack any material they come in contact with and convert it into additional gray goo nanites. In other words, any object or person that touches this material is subsumed by it.

Anyone touching gray goo must attempt a Fortitude saving throw (DC 35). If the save is successful, the character has severed contact before any damage was done. If the save fails, the nanites have gotten into the character's system. In 3d10 hours, the character is irretrievably killed and completely transformed into gray goo. The only way to prevent this is to amputate any portion of the body that has come in contact with even a single gray goo nanite.

Unfortunately, gray goo is generally one of the first nanocolonies that scientists learn to create (sometime toward the end of PL 6). The material must be contained in a magnetic storage field so that no physical object ever touches it.

Unseen Bodyguard: Unseen bodyguard usually does not appear until PL 7 or PL 8, due to the complex nature of its programming. Essentially, unseen bodyguard nanites form a completely invisible nanocolony that can rearrange itself to provide a character protection from incoming attacks. Unseen bodyguard works on many of the same principles that create force fields, and in essence is made up of thousands of tiny nanites that project a webbing of deflective force between one another until a nearly solid shield springs up to protect the character.

When a character utilizes unseen bodyguard, the nanocolony creates a force shield in a single direction that hovers in place and protects against all incoming attacks. The user of the nanocolony directs the nanites to either its front, right, left, or rear facing where it stays until redirected. The nanocolony provides a +4 equipment bonus to Defense against all attacks coming from the specified direction. Unseen bodyguard has a purchase DC of 22 and can be activated (and left running permanently) by a simple voice command.

Utility Fog: This collection of intelligent nanites looks like a formless, colorless substance. However, when fed instructions through a computer, it can reorganize its size and physical properties to become more or less any object. As long as the computer can pass along the structural and functional parameters, utility fog (or UFog) can become anything—from a clear protective coating, to a wall of steel, to a piece of furniture, and more. All that is required is the software to implement the transformation.

UFog is not generally discovered until late in PL 7. It has a purchase DC of 20 for a liter of the material (since its density and weight can vary widely depending on what material it becomes, the most accurate way to measure UFog is by liquid volume). This price includes a terminal for communicating with the material, but not the software necessary to program it into various forms and functions.

INTERNAL NANOCOLONIES

Internal nanocolonies operate within a living host. These nanocolonies interact fluidly with the body's natural biological functions and blend seamlessly with the other cells in the body. Most internal nanocolonies are coated with the same chemical compounds that coat the outer portion of blood or skin cells (depending on the nanocolony's function) so that the body they inhabit sees each nanite as just another natural system at work.

After injection into a creature or character, it takes 10 minutes for the nanites to spread to their desired positions in the body. Once in place, the nanites are immediately functional and begin work as soon as they are given commands. Each host can typically only support two internal nanocolonies; more than that causes conflict between the nanites, since some might try and overtake others. Any nanocolony injected into the bloodstream after the second immediately attacks (and usually destroys) one of the colonies already in the character or creature's body.

NANOVIRUSES

Nanoviruses are nanocolonies that act like viruses. They move throughout the body, typically with a single function in mind, and alter cells they are programmed to affect. Nanoviruses can lay dormant within a body for long periods and are only destroyed by the body's natural recycling systems; a nanovirus can stay dormant for up to one year before it washes out of the body completely. Nanoviruses typically serve a single purpose, then deactivate and are absorbed by the body.

Calcion: A beneficial nanovirus, calcion is one of the most commonly used nanocolonies in the field of medicine. Calcion is a bone-knitting nanite that repairs fractures and breaks in bones with advanced calcium-grafting technology. Additionally, calcion repairs joints and aids with skin regeneration. A character injected with calcion heals from damage at twice the normal rate until she reaches full hit points. After her health is fully restored, the calcion nanites deactivate and cease to function.

Gray Death: A derivative compound based on gray goo, gray death is a horrible weapon that kills in a slow and painful manner. Gray death nanites are gray goo nanites held within a special containment field. When the command is given, the nanocolony dissipates the containment field and the gray goo is released into the bloodstream of the character. The character must make a Fortitude save (DC 35). If the save is successful, the character's immune system flushes the nanites out of the body before they do any harm. If the save fails, the character is irrevocably killed in 3d10 hours and transforms into gray goo.

Gray death is a horrible biological weapon. It is outlawed by almost all civilizations that have discovered it.

Onco-Guard: One of the most beneficial discoveries to come out of nanotechnology, onco-guard nanoviruses treat and stave off the effects of cancer. Though not the "cure for cancer" that 20th century scientists so voraciously sought, onco-guard attacks and contains cancerous cells. Additionally, onco-guard prevents a character from developing cancer while the nanites remain in the bloodstream, either in their active or inert states. A character injected with onco-guard recovers from any negative effects of cancer almost immediately and is immune to further developments of the disease for 2d6 months.

Resilite: Another incredibly dangerous nanovirus, resilite is used in both torture and espionage. Resilite has a single purpose—to deal severe amounts of damage to a creature upon activation. Resilite floats inert in the bloodstream until activated, at which point the nanites burrow outward in random directions. In addition to causing internal bleeding, resilite tears through vital organs and damages bones and nerves as well. Whenever resilite is activated, the creature or character immediately suffers 6d10 points of damage. This damage is physical and internal and may not be prevented by any form of shielding or damage reduction.

Stiletto: A particularly vicious nanovirus, stiletto causes damage directly to a creature's brain and can render the creature brain dead if successful in its attack. Unlike most other nanoviruses, stiletto does not linger in the bloodstream but instead flows directly to the brain. The nanites burrow directly into the brain and shoot out harmful jolts of energy until their supply is depleted and they deactivate. Any creature or character targeted by stiletto immediately suffers 2d6 points of ability damage to Intelligence, Wisdom, and Charisma.

NANOHUNTERS

Nanohunters are nanoviruses with one specific purpose: to search and destroy other nanites. A nanohunter colony can be injected into a living creature to destroy some or all nanites already in the creature.

Each nanohunter colony combats a single type of nanocolony. For example, a nanohunter designed to eliminate gray death nanites seeks out and removes all traces of inactivated gray death in a creature's system, but completely ignores all other nanites. Nanohunters are often the only means of removing a nanocolony from a creature or character and are highly sought-after in societies where nano-warfare is common.

In addition to nanohunters that destroy internal nanocolonies, some nanohunter colonies target ambient and independent nanocolonies. These nanocolonies function in the same way as their internal nanite-hunting counterparts, but must be released in the vicinity of the target nanites. These nanohunters are often used to eradicate dangerous nanites and are one of the few reliable means of disposing of overactive nanocolonies like gray goo.

NANOAUGMENTERS

Unlike nanoviruses, nanoaugmenters latch onto a specific biological system and provide consistent bonuses for as long as the nanites remain active. Most nanoaugmenters are injected into a character or creature to permanently enhance performance and continue to function indefinitely. Nanoaugmenters are only removed by other nanites or by commanding the nanocolony to cease all activity. When this occurs, nanoaugmenters are absorbed and recycled by the host body in the same manner as inert nanoviruses.

Most nanoaugmenters simply provide energy or transmit signals between the nanocolony and the host body, but some actually alter the host's genetic structure or change the host's chemical balances.

Brain Boost: *Frequently used by scientists, researchers, and* mathematicians, brain boost is a nanoaugmenter that gives the brain increased memory capacity. The nanites in brain boost latch onto the memory and thought centers of the brain and transmit data back and forth between these centers at an incredible rate. Each nanite can store large amounts of data and acts as a temporary memory storage center. Brain boost nanites also move back and forth between various memory centers, copying and moving information in the most efficient manner possible.

The thought and memory abilities of the creature or character are increased greatly. Any creature injected with brain boost immediately gains a +4 bonus to Intelligence. This bonus remains in effect for as long as the nanoaugmenters remain attached to the brain.

Chatter: A useful nanoaugmentor frequently injected into soldiers on covert missions, chatter allows communication without speech. In many ways, chatter resembles the technology of the micro-aural communicator (see Chapter Three: Gear). However, unlike the microcom, the nanites in a chatter nanocolony attach directly to the speech and language centers of the brain. When a character wishes to communicate via his chatter nanites, he needs only to think of what he would say and the nanocolony transmits those thoughts over a communications channel. When other nanites receive the communication, they transmit the information directly into the brain of their host.

Each set of chatter nanites is keyed to only communicate with certain other chatter colonies, or with other computer systems. Those without the chatter nanoaugmentation can communicate and receive communications from those with the chatter nanoaugmentation through the computer system.

When a character is injected with the chatter nanoaugmentation, he must spend 30 minutes practicing so that ambient thoughts do not interfere with the communications.

Doppelganger: A devious nanoaugmentation popular with criminals, the doppelganger nanoaugmentation acts as a dynamic plastic surgery system that alters the physical appearance of its host. The nanoaugmentation can change the hair and eye color of a character instantly and, if desired, can reconfigure the bone structure and actual facial appearance of a character in thirty minutes.

Reconfiguring the bone structure and facial features of a character are excruciatingly painful. Most doppelganger colonies release anesthetics before and during the process to eliminate or reduce some of the pain. A doppelganger colony can change the character's features any number of times, though each time requires 30 minutes of transformation time and another 30 minutes of recovery time. A character that has a doppelganger nanocolony transform his physical features suffers a –2 penalty on all Intelligence, Wisdom, and Charisma based skill checks for the 1 hour of transformation and recovery time while the anesthetic is functioning.

Micro Muscles: Often used to enhance soldiers and those involved in athletics, micro muscles are nanoaugmentations that attach themselves to muscles and enable them to perform beyond their normal limitations. Micro muscles not only enhance the strength of a creature injected with the nanites, but also allow the creature to push its muscles beyond their normal capacity.

Only one micro muscle colony may function in a host at a time. Any creature or character injected with micro muscles gains a +4 bonus to Strength while the nanites are functioning. Additionally, the creature gains an additional +4 bonus on all Strength-based skill checks that involve endurance or long-term activity.

Prophecy: Another of the brain-altering nanoaugmentations, prophecy allows the character to receive visual and audio data from a remote source. Prophecy nanocolonies link to a computer system that receives images and video from multiple sources and funnels the information directly to the nanocolony. A character can be fed images from other locations, giving her access to everything from security camera locations to computer representations of terrain. Like chatter, prophecy is often used on soldiers in the field to transmit dynamic battlefield representations directly into a soldier's mind. Additionally, prophecy is used to give mission briefings on the fly. Prophecy nanites cannot record or transmit data, however, and only act as receivers of information from the remote computer system.

Soullink: Pilots and drivers that want greater interaction with their vehicles frequently seek out soullink injections. The soullink nanites connect the mind of a character directly to the vehicle, starship, or mecha the character is currently piloting. The mind of the pilot directly links to the vessel, melding his consciousness with it. The pilot maneuvers the vessel as though it were an extension of his body. In combat, this nanoaugmentation allows the pilot to know when and where the vessel sustains damage; he also knows the severity of the damage.

An unfortunate drawback to this link between pilot and machine is that if the vessel's onboard computer system suffers trauma, such as when it takes damage, the pilot's mind often suffers damage as well. Whenever a soullinked vessel suffers damage that affects the computer systems, the soullinked pilot must make a Will save (DC 17) or suffer an immediate 1d4 points of ability damage to his Wisdom score.

A character with this nanoaugmentation gains a +6 bonus on Pilot or Drive checks while piloting a soullinked vessel. This nanoaugmentation works with only those vessels that support soullink technology, as determined by the GM.

20/20: One nanoaugmentation that can be incredibly useful for scouts and investigators is the 20/20 nanocolony. By attaching to and enhancing sensitivity of a creature's optic nerves, the 20/20 nanites improve the creature's vision. One of the most common consumer nanotech injections, 20/20 corrects eye problems such as nearsightedness and astigmatism. A creature injected with 20/20 nanites immediately gains a +6 bonus on all Spot and Search checks involving vision.

Watchdog: Often used in medical situations as well as in space exploration, the watchdog nanoaugmentation is a catchall phrase used to describe nanocolonies that monitor the health condition of a creature. Watchdog nanites monitor everything from heart rate and blood pressure to brain activity and the purity of air being taken into a host's lungs. Hospitals and other medical facilities often inject their patients with watchdog nanocolonies to monitor vital signs and watch for early warning signs of illness relapses or other medical problems. Additionally, organizations involved in space exploration often use the nanoaugmentation to monitor the vital signs of their explorers in remote regions of space. Watchdog nanocolonies can be linked to computer systems to monitor and report data automatically; however, a watchdog nanocolony cannot take action to heal or prevent damage to a host in the event of a problem with the host body's physiology.

NANOLIFE

After a society creates artificial intelligence, nanomachines become far more than simply computer-controlled microscopic machines. Many argue that nanites become microscopic life forms, and that nanocolonies are hive minds, with the nanites behaving in much the same way as insects. This raises the issue of whether or not nanites can be controlled, especially if their programming can be overcome by their artificial intelligence. In some cases, nanolife takes on an agenda of its own, and it is often in these circumstances that catastrophic turns of events bring entire civilizations down. Additionally, moral questions are raised when the creation of new nanotechnology mirrors the creation of new life, and doubly so for the termination or destruction of nanocolonies.

MATTER REPLICATION

The ability to create any object from seeming nothingness is a common theme in science fiction. Known as matter replication, the process is the computerized creation of an object where no such object existed before. Essentially, matter replication allows for an object to be willed into existence through the application of technology. Matter replication is not discovered until PL 7 and typically is not perfected until PL 8, when manipulation on the atomic level becomes truly practical. Matter replication is an incredibly precise process that requires not only detailed blueprints for an object (down to the molecular level) but also the ability to recreate that object in some fashion.

Matter replication is usually accomplished by machines known simply as replicators. A replicator device combines powerful computers that store massive amounts of blueprints for various objects. These computers have a catalogue of millions of objects

THE ONE AND ONLY

In the case of matter duplication, there are very few minute differences between the original and the duplicated object. However, to help prevent counterfeiting and other deception, some replicators have built-in mechanisms for marking objects they create. One such mechanism is the replication tag; usually only visible at the molecular level, this tag does not alter the form of the replicated object, but marks the object as replicated and not created through conventional craftsmanship.

After only a short time, the marks that merely signify replication give way to marks that designate individual ownership. These "anti-theft" tags lead to criminals seeking to master the secrets of the molecular marks. Using techniques such as kidnapping, blackmail, or extortion, devious amoral masterminds circumvent the anti-counterfeiting and anti-theft mechanisms. Of course, the time and resources required mean that such circumvention is used only for the most important or expensive of items.

The next step in matter duplication advances the identity mark to a tracking mark that sends out specially coded transmissions indicating the item's location. Once again, this "foolproof" system enjoys only a brief sojourn of primacy before it, too, is foiled by the determined villain.

and a detailed plan for replicating each one. Specialized replicators only replicate certain objects within a category, such as food or weapons, eliminating the need for too diverse a catalogue (which takes up massive amounts of memory storage).

Once the blueprint for the desired object is located, the replicator triggers whatever recreation mechanism is in place (see below) and produces it within a matter of minutes.

Matter replication usually raises issues that fundamentally change a society. With matter replication, hunger is almost instantaneously eliminated since foods can be reproduced instantaneously without the time and effort of planting, tending, and harvesting. The laws of supply and demand sometimes cease to apply since any object in a replicator's catalogue can be duplicated as many times over as desired. Occasionally, all concepts of personal wealth vanish because anyone can have any object he or she desires simply by replicating it. Some governments restrict the use of replicators to prevent malcontents and rebels from arming themselves with replicated weapons, and some societies keep a tight rein on all replicators to prevent abuse. These are a few of the issues raised by the advent of matter replication, but are among the most significant.

Obtaining a replicator is easy in some civilizations and difficult in others. Societies that have abandoned the concept of wealth accumulation might make replicators easily available, while societies that tightly monitor replicator technology may not make them available to the public at all. Depending on the setting, replicators may be either abundant and cheap or rare and expensive. The GM determines what role matter replication takes in a society and how readily replicators can be found.

MODERN ALCHEMY

One source of matter replication is reminiscent of the ancient technique known as alchemy. Replicators that rely on alchemy as their primary means of producing new objects transform one element into another to create the final object. These replicators require a basic object to transform; in most cases, the object to transform must have the same mass as the desired object. This type of replication relies heavily on the science of cold fusion and the ability to alter the most basic building blocks of matter. This form of replication is one of the earliest discovered and requires the most effort to function.

FROM A LUMP OF CLAY . . .

Another type of matter replication transforms a substance known as protomatter into the desired object. In many respects, protomatter resembles the basic shapechanging nanocolony known as UFog (see above) because it can be transformed into almost any object. Protomatter is a generic base from which all other matter is replicated; it can be transformed and molded as the replicator's computer system sees fit with no need to transform one element into another. The use of protomatter is one of the most efficient forms of matter replication and has the beneficial side effect of being environmentally safe.

I'LL TAKE TWO

One of the simplest processes using matter replication is the duplication of an existing object. In fact, duplication machines are far more common in most settings than full-fledged replicators because they don't require the storage of massive amounts of blueprints. Replacing the databank of blueprints are advanced sensors that analyze the construction of an object and transform the collected data into a blueprint of the object. Once the scanning process is complete, the replicator produces a copy of the desired object just as quickly as creating it from a stored blueprint. The duplication machine does not store blueprints, and so each object must be scanned before duplication can occur.

THE BREATH OF LIFE

While matter replication can duplicate inanimate objects from the proper blueprint, creating a living being is another issue altogether. The complexity of a living being is far beyond that of even the most complicated machine and computer; attempting to recreate a living being using a replicator almost always meets with failure. Moral and ethical concerns about creating new life aside, only the most advanced societies have developed technology capable of mapping out something so complex as the mind of an animal. Plant life duplication is somewhat simpler, but still complex, and duplicating animal life is a task that can result in horrible deformities if not perfected.

SOMETHING FROM NOTHING

Almost incomprehensible to modern science, one final means of replication should also be considered. Creating an object literally from nothing is a concept that cannot fit into modern scientific understanding. The laws of conservation of energy and the idea that there is a finite amount of matter in the universe dictate that creating an object without a basic set of materials is impossible. However, some incredibly advanced societies may be able to do just that, and matter replication without a basic material like protomatter might be entirely feasibly and evidence of how far that society's technology is beyond all others.

CHAPTER SIX:
TRAVELER SCIENCE



Jump Gate

This chapter presents both realistic and fantastic options for traveling and living in space. You can use whichever suits you and your campaign best. Perhaps you like the drama of the journey from the Earth to the Moon; perhaps all you really care about is how long it takes to get there. This chapter can help you with both.

REALISTIC SPACE TRAVEL

When speaking of space travel, it is important to distinguish interplanetary travel from interstellar travel. Travel between planets is within the grasp of modern technology and is likely to become easier as science develops new fuel sources or new ways to maximize existing fuel sources. Travel between stars, on the other hand, calls for some truly radical leaps in a number of different fields.

HAZARDS OF SPACE TRAVEL

Space travel is nowhere near as easy as books and movies make it seem. Foreign objects are a constant danger; even a micrometeoroid traveling at a high enough velocity can punch a hole through a starship's hull and expose the entire crew to the vacuum of space. Ionizing radiation also poses a serious threat. Finally, characters must adapt to the weightlessness of space or suffer the effects of space adaptation syndrome (SAS), referred to colloquially as "space sickness."

METEOROIDS

Meteoroids are small rocks that travel through space at a speed of 7 miles per second. They can be as small as a grain of sand or as big as a mountain. Although they generally burn up in a planet's atmosphere before reaching the ground, meteoroids in space aren't likely to suffer such a fate. Instead, they slam into other objects, including starships and space stations, like volleys of rifle or artillery fire.

Unarmored starships and space stations can easily survive impacts from the smaller meteoroids, but larger ones can punch lethal holes in such fragile vessels. Fortunately, large meteoroids are rare and easier to detect before they can get too close to cause any real damage.

The GM can roll on Table 6–1: Meteoroid Encounters to determine whether a meteoroid threatens a given starship or space station. Each roll represents one 24-hour period. If the result indicates a meteoroid encounter, the GM should set the encounter at some *random point in the day.*

Meteoroid Size: The size of the meteoroid.

Collision Damage: When a meteoroid collides with a starship, space station, or other object, both the meteoroid and the object it strikes take damage.

Computer Use Check DC: A starship or space station equipped with a sensor system can detect an incoming meteoroid; doing so requires a successful Computer Use check. A starship or space station cannot attempt to avoid or destroy a meteoroid it fails to detect.

Pilot Check DC: Avoiding a meteoroid requires a successful Pilot check. Only starships or space stations that move are capable of avoiding meteoroids.

Defense: The meteoroid's Defense.

Hardness: The meteoroid's hardness.

Hit Points: The meteoroid's total hit points.

VACUUM EXPOSURE

Beings exposed to the airless cold of space are not immediately doomed. Contrary to popular belief, characters exposed to vacuum do not immediately freeze or explode, and their blood does not boil in their veins. While space is very cold, heat does not transfer away from a body that quickly. The real danger comes from suffocation and ionizing radiation.

For rules on vacuum exposure and the effects of weightlessness, see Atmospheric Conditions and Gravity in Chapter 4: Environments.

RADIATION

Ionizing radiation is common in space. For the effects, see Radiation Sickness in Chapter 4: Environments.

REENTRY

Anything that travels too fast in an atmosphere generates an enormous amount of friction, which produces tremendous heat. (Temperatures of 2,280 degrees Fahrenheit have been recorded.) Objects trying to enter a planetary atmosphere safely must shed velocity. However, decelerating consumes large amounts of fuel, and many ships (especially at Progress Level 5) simply don't have enough. As an alternative, scientists have developed ways to slow ships in reentry by using the atmospheric friction itself. Ablative shielding or ceramic tiles take care of any excess heat. Even so, entering a planet's atmosphere is a tricky business; the angle of entry is precise, and deviation either way causes the heat to build up too quickly for the heat shields to reflect away from the ship. Worse yet, during the most intense heating, the ship is surrounded by a thin layer of plasma that blocks radio signals, and the crew have no contact with ground control.

Entering planetary atmosphere safely requires a Pilot check (DC 20) each round for the 1d10+20 rounds it takes to slow the ship using friction alone. Success means that the ship takes only 3d6 points of fire damage each round. Failure means that the ship's angle is too low, and that it is not shedding velocity fast enough; the ship takes 6d6 points of fire damage each round until the pilot succeeds at the Pilot check to correct the angle of descent. If the check fails by 5 or more, the angle is too steep, and the ship takes 10d6 points of fire damage each round until the pilot succeeds at the Pilot check to correct the angle. Each round spent at too low an angle does not count toward the number of rounds required to land the ship; the ship isn't making any downward progress. Conversely, each round spent at too steep an angle counts as 2 rounds, indicating that the ship is descending much faster than it should.

INTERPLANETARY TRAVEL

In Progress Level 5, humanity has the technology to send unmanned probes to the edge of the solar system. However, human sojourns into space are limited to orbital missions and trips to the Moon, as longer journeys would take decades and consume ridiculous amounts of fuel and oxygen.

Interplanetary travel becomes possible at Progress Level 6. Ships fitted with magnetic ram scoops allow the crew to manufacture fuel from particles of hydrogen gas floating loose in space (though at only a few atoms per cubic inch). Such a ship could even incorporate a particle accelerator that converts matter into antimatter—with far more efficient thrust-to-payload ratios than solid fuel. With a sufficient supply of food, water, and oxygen, a ship so equipped could travel to the edges of the solar system and perhaps to another solar system entirely.

INTERSTELLAR TRAVEL

Realistically, the starships presented in Chapter 7: Starships are capable only of interplanetary travel, not interstellar travel. The reason for this is simple: Even the best engine can't accelerate a ship to light speed, and without light speed, interstellar journeys take tens of thousands of years.

The speed of light is 186,000 miles per second. That's 1,116,000 miles per round, or 66,960,000 miles per hour. Maneuvering a ship at this speed is a tricky proposition; by the time you notice an object in your path, it's probably too late to avoid it. One must also consider relativity: The closer the ship's velocity comes to the speed of light, the greater its mass. A starship cannot achieve light speed via simple acceleration, no matter how powerful the ship's engine, as increasing the power only increases the mass.

TABLE 6–1: METEOROID ENCOUNTERS

d% Roll	Meteoroid Size	Collision Damage[1]	Computer Use Check DC	Pilot Check DC	Defense	Hardness	Hit Points
01–75	No meteoroid	—	—	—	—	—	—
76–80	Diminutive	1d6	35	5	9	8	15
81–85	Tiny	2d6	30	10	7	8	30
86–88	Small	3d6	25	15	6	8	90
89–91	Medium-size	4d6	20	20	5	8	225
92–94	Large	1d65	15	25	4	8	1,125
95–97	Huge	3d65	10	30	3	8	4,500
98–99	Gargantuan	6d65	5	35	1	8	9,000
100	Colossal	12d65	0	40	–3	8	36,000

1 Both the meteoroid and the object it strikes take damage from the collision.

TABLE 6–2: REALISTIC TRAVEL TIMES

	Time to Destination					
Distance	PL 5 Engine	PL 6 Engine	PL 7 Engine	PL 8 Engine [1]	PL 9 Engine [2]	Light Speed
Earth to the Moon (240,000 mi.)	40 hrs.	8 hrs.	2 hrs.	1.96 min.	9.2 sec.	1.29 sec.
Earth to the Sun (1 AU) (93,000,000 mi.)	645.8 days	129.2 days	32.3 days	12.6 hrs.	59.3 min.	8.3 min.
Earth to Mercury (56,950,000 mi.)	395.5 days	79.1 days	19.8 days	7.7 hrs.	36.4 min.	5.1 min.
Earth to Venus (26,040,000 mi.)	180.8 days	36.2 days	9.04 days	3.5 hrs.	16.6 min.	2.33 min.
Earth to Mars (48,360,000 mi.)	335.8 days	67.2 days	16.8 days	6.6 hrs.	30.7 min.	4.3 min.
Earth to Jupiter (390,600,000 mi.)	7.43 years	1.49 years	135.6 days	2.2 days	4.2 hrs.	35 min.
Earth to Saturn (704,940,000 mi.)	13.4 years	2.68 years	244.8 days	4 days	7.5 hrs.	63.2 min.
Earth to Uranus (1,687,020,000 mi.)	32.1 years	6.42 years	1.6 years	9.5 days	18 hrs.	2.52 hrs.
Earth to Neptune (2,715,600,000 mi.)	51.67 years	10.33 years	2.58 years	15.4 days	1.2 days	4.1 min.
Earth to Pluto (3,574,920,000 mi.)	68.02 years	13.6 years	3.4 years	20.2 days	1.6 days	5.33 min.
1 light year (5,865,696,000,000 mi.)	111,600 years	22,320 years	5,580 years	91 years	7.14 years	1 year
Sun to Alpha Centauri (4.4 light years)	491,040 years	98,208 years	24,552 years	400 years	31.4 years	4.4 years

1 A PL 8 engine can achieve a speed of 2,046 miles per second (1.1% of the speed of light).

2 A PL 9 engine can achieve a speed of 26,040 miles per second (14% of the speed of light).

The greatest impediment to traveling between the stars is time: What would be the point of sending astronauts to Alpha Centauri, for example, if, by the time they arrived, no one on Earth could remember why they'd gone in the first place? Time dilation—the slowing of the passage of time in relation to an object traveling at close to the speed of light—becomes a factor. A few years might pass on board the ship, while a few hundred years might have passed both at the ship's point of origin and its point of arrival.

REALISTIC TRAVEL TIMES

Table 6–2: Realistic Travel Times provides various "realistic" interplanetary and interstellar travel times. These times assume that starships cannot achieve velocities anywhere near the speed of light, for reasons discussed under Interstellar Travel (see above). Using the table, a starship equipped with a PL 6 ion engine would take 67.2 days to travel from Earth to Mars, while the same ship equipped with a PL 7 induction engine would take 16.8 days.

The travel times listed in Table 6–2 are based on average distance. Planets move closer together and farther apart based on their relative orbits around the sun, and the travel time between worlds may increase or decrease accordingly.

TIME DILATION

When a ship approaches to within 90% of the speed of light, time slows down. Characters on board the ship would not notice, but if they were to make hourly reports back to their point of origin, those reports might arrive only once every hundred hours.

This creates an interesting paradox, in that if a character managed to travel at the speed of light to another star and back again, a newborn child he left behind would now be older than him—if the child hadn't died of old age some time ago.

The actual amount of time dilation observed aboard a ship traveling near light speed increases in proportion to just how close it is to light speed. Technically, time dilation occurs at any speed, but it only becomes noticeable at relativistic speeds. The dilation is a ratio that determines how much time passes aboard the ship; it is a multiplier when determining how much time passes outside the ship.

For example, a ship moving at 70% the speed of light has a time dilation of 1.4. Ten hours of travel aboard the ship at this speed means that 14 hours (10 × 1.4) have passed outside the ship. However, if ten hours pass for those left behind, only 7.1 hours have passed aboard the ship (10 divided by 1.4).

TABLE 6–3: TIME DILATION

Starship Speed (miles/second)	AU per hour	% Speed of Light	Time Dilation
2,046	0.18	1.1%	1.0003
26,040	1.0	14%	1.01
52,080	2.0	28%	1.04
78,120	3.0	42%	1.1
104,160	4.0	56%	1.2
130,200	5.0	70%	1.4
154,380	6.0	83%	1.8
167,400	6.5	90%	2.3
180,420	7.0	97%	3.9
182,466	7.1	98.1%	5.1
185,981	7.239	99.99%	60.2

Starship Speed: The vessel's speed in miles per second.

AU per Hour: How many Astronomical Units (AU) a vessel traveling at this speed can cross in 1 hour. One AU equals 93,000,000 miles (the distance between the Sun and the Earth).

% Speed of Light: The percentage of the speed of light (186,000 miles per second).

Time Dilation: Divide the time traveled by this number to arrive at the amount of time that passes on board the starship.

JUMP GATE TECHNOLOGY

If a starship cannot reach the speed of light through sheer thrust, perhaps the answer lies in bending the laws of time and space so that the distance itself is shorter. A ship could then get around the need to travel at relativistic speeds, leaving behind the problem of increased mass and negating—if not actually reversing—the effects of time dilation. In other words, if one could find a shortcut through the galaxy, it might be possible for spacecraft to travel quickly between star systems, and perhaps even travel backward in time.

Shortcuts through space and time are called wormholes. Wormholes are created naturally when black holes collapse, though they tend to close so rapidly that a ship attempting to pass through would instead encounter a singularity—a point with infinite density and a radius of zero—and be instantly crushed. But, if the technology were developed to enable a wormhole to remain open, it might become possible for spaceships to enter wormholes, travel for a few million miles, and emerge several light years away—perhaps at the point of a white hole.

White holes are theoretical objects that spew energy into the universe from unknown sources. One theory suggests that quasi-stellar objects (also known as quasars) are actually white holes, at the far end of which might be wormholes. Thus, it is theoretically possible to enter a wormhole in one location in the universe, and emerge from a white hole in another. Such a stable conduit could be called a jump gate.

At Progress Level 5, the technology does not exist to stabilize wormholes in order to create jump gates, though by PL 6 scientists might have developed the technology to map the exit points of wormholes. With a theoretical advance in astrophysics, humanity might be ready to make the first safe jump by Progress Level 7.

JUMP HOLES

In theory, a collapsing wormhole in a strong enough gravitational field could remain open of its own accord, creating a kind of natural jump gate, or "jump hole." The jump hole would function the same way as a jump gate but could close while travelers are en route to the exit point.

A jump hole might collapse while there are ships still traveling through its jump space. Roll d% each hour; on a result of 100, the hole collapses. If this happens, any ships in its jump space immediately drop back into "real" space—most likely in the middle of nowhere. Determine what percentage of the journey the ship had completed, then compare that percentage to the real distance; this is how far from its destination the ship is.

JUMP GATE (PL 7)

Jump gates consist of gigantic rings in space that use fusion reactors to generate a magnetic field capable of holding open a collapsing wormhole. This allows starships to enter the wormhole, engage their engines, and reduce the effective travel distance to the wormhole's exit point by a factor of 1,000. For example, the 48,360,000-mile trip

TABLE 6–4: FANTASTIC TRAVEL TIMES

	Light Speed Factor						
Distance	**0.5**	**0.75**	**1**	**5**	**10**	**15**	**25**
Earth to the Moon (240,000 mi.)	2.58 sec.	1.72 sec.	1.29 sec.	0.26 sec.	0.13 sec.	0.09 sec.	0.05 sec.
Earth to the Sun (1 AU) (93,000,000 mi.)	16.6 min.	11.07 min.	8.3 min.	1.66 min.	49.8 sec.	33.2 sec.	19.9 sec.
Earth to Mercury (56,950,000 mi.)	10.2 min.	6.8 min.	5.1 min.	1.02 min.	30.6 sec.	20.4 sec.	12.2 sec.
Earth to Venus (26,040,000 mi.)	4.66 min.	3.11 min.	2.33 min.	28.2 sec.	14.1 sec.	9.4 sec.	5.6 sec.
Earth to Mars (48,360,000 mi.)	8.6 min.	5.7 min.	4.3 min.	51.6 sec.	25.8 sec.	17.2 sec.	10.3 sec.
Earth to Jupiter (390,600,000 mi.)	70.0 min.	46.7 min.	35 min.	7.0 min.	3.5 min.	2.3 min.	1.4 min.
Earth to Saturn (704,940,000 mi.)	126.4 min.	84.3 min.	63.2 min.	12.6 min.	6.3 min.	4.2 min.	2.5 min.
Earth to Uranus (1,687,020,000 mi.)	302.4 min.	201.6 min.	151.2 min.	30.2 min.	15.1 min.	10.1 min.	6.05 min.
Earth to Neptune (2,715,600,000 mi.)	486.6 min.	324.4 min.	243.3 min.	48.7 min.	24.4 min.	16.2 min.	9.7 min.
Earth to Pluto (3,574,920,000 mi.)	640 min.	426.67 min.	320 min.	64 min.	32 min.	21.3 min.	12.8 min.
1 light year (5,865,696,000,000 mi.)	2.0 years	1.33 years	1.0 year	2.4 mo.	1.2 mo.	0.8 mo.	0.48 mo.
Sun to Alpha Centauri (4.4 light years)	8.8 years	5.87 years	4.4 years	10.56 mo.	5.28 mo.	3.53 mo.	2.1 mo.

from the Earth to Mars would be reduced to 48,360 miles via a jump gate (assuming a wormhole had appeared near the Earth and that its exit point was near Mars). Thus, a starship with PL 6 ion engines traveling through "jump space" could reach Mars in approximately 1.6 hours (instead of 67.2 days) and completely avoid the effects of time dilation.

Jump gates have a few limitations:

- Jump gates have only one exit point. Therefore, a jump gate from Pluto to Alpha Centauri is useless to characters who don't want to go to Alpha Centauri.
- Jump gates are one-way. The journey to the exit point might be comparatively short, but the journey back could take just as long as it always did—or require a circuitous route from jump gate to jump gate, some of which could be dozens of light years out of the way.
- Jump gates are rarely located near one another. A starship might have to cross an entire system to get from one exit point to the next jump gate.
- Maneuvering a jump gate into position requires a successful Navigate check (DC 35). If this check fails by 5 or more, the jump gate collides with the closing wormhole and is crushed against the forming singularity.

In PL 7, jump gates are most likely owned by megacorporations that charge for their use. The toll varies according to the real distance between the jump gate and the exit point: Divide the real distance by 1,000,000 miles to determine the purchase DC for passage through the jump gate.

Purchase DC: 75 (per jump gate).
Restriction: Licensed (+1).

JUMP NETWORK (PL 8)

As science develops ways to harness the power of singularities, astrophysicists apply the technology to wormholes. A jump network is a series of jump gates that can each serve as an entry or exit point. Thus, jump gates are no longer one-way: A jump gate can take a ship from the Earth to Mars and back. Further, the network could also include jump gates leading to and from Jupiter, Saturn, and Pluto.

Jump gates in the network are still expensive, but the risk of placing one has completely vanished; the jump gate merely has to be moved into the desired position—usually a Lagrange point—and switched on.

Many gates in the jump network are owned by megacorporations, who charge for their use. Some gates are operated by the military and have restricted access. However, the gates between common locations like planets and stars are government owned and designated for public use.

Purchase DC: 75 (per jump gate).
Restriction: Licensed (+1).

JUMP DRIVE (PL 9)

The jump drive is a portable version of a jump gate. Ships carrying a jump drive can create a stable, though temporary, wormhole. The artificial wormhole lasts until the ship that created it emerges from the exit point.

The jump drive suffers from one major limitation. Once a ship has entered jump space, it has only two real options: continue to the exit point or deactivate the jump drive. The ship cannot change course while in jump space; it must drop out of jump space, set a new course, and re-engage the jump drive. The drawback to this is that jump drives require a lot of energy; recharging the drive takes hours, as shown on Table 6–5: Jump Drive Recharge Time.

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

TABLE 6–5: JUMP DRIVE RECHARGE TIME

Starship Size	Jump Drive Recharge Time
Huge	8 hours
Gargantuan	2 hours
Colossal	1 hour

FANTASTIC SPACE TRAVEL

A *d20 Future* campaign needn't limit itself to relativistic speeds and time dilation. You can jump right into the "high adventure" side of space travel.

FASTER-THAN-LIGHT (FTL) DRIVES

Early in Progress Level 7, the development of artificial gravity technology spawns the induction engine, and scientists quickly learn to apply the technology to faster-than-light travel. The early "stardrives" are not truly capable of reaching light speed but offer a vast improvement over conventional engines. Humanity can finally reach distant stars in mere weeks, advancing space exploration and colonization, as well as reaching out to contact and trade with intelligent alien life.

Chapter 7: Starships includes descriptions for various types of FTL engines. Table 6–6: Faster-Than-Light (FTL) Drives shows the relativistic cruising speeds of these engines.

TABLE 6–6: FASTER-THAN-LIGHT (FTL) ENGINES

Engine	Minimum Ship Size	Starship's Cruising Speed
Progress Level 6: Fusion Age		
Fusion torch	Gargantuan	Light speed × 0.5
Ion engine	Huge	Light speed × 0.75
Photon sails	Gargantuan	Light speed × 1
Progress Level 7: Gravity Age		
Induction engine	Huge	Light speed × 5
Particle impulse engine	Gargantuan	Light speed × 10
Progress Level 8: Energy Age		
Gravitic redirector	Colossal	Light speed × 25
Inertial flux engine	Gargantuan	Light speed × 15
Progress Level 9: Matter Age		
Spatial compressor	Colossal	Special [1]

1 A spatial compressor allows a ship to travel from one star system to another instantaneously.

FANTASTIC TRAVEL TIMES

Travel times at relativistic speeds are generally easy to calculate. Simply determine how long it takes to arrive at the destination while traveling at the speed of light, then divide the result by the light speed multiplier of the drive being used. Some sample travel times appear in Table 6–4: Fantastic Travel Times.

TELEPORTATION

The earliest teleportation devices move only simple substances, with uniform molecular structures. As the technology improves, teleporting more complex matter becomes possible. At Progress

TABLE 6–7:
TRANSPORT BOOTH PURCHASE DC MODIFIERS

Transport Booth's Communication System	Purchase DC Modifier
Progress Level 5: Information Age	
Radio Transceiver	+0
Progress Level 6: Fusion Age	
Laser Transceiver	+3
Progress Level 7: Gravity Age	
Mass Transceiver	+5
Progress Level 8: Energy Age	
Drive Transceiver	+8
Progress Level 9: Matter Age	
Ansible	+13

Level 8, living organic matter can pass more or less safely through teleporters. At Progress Level 9, the range of matter transference increases to cover galactic distances.

TELEPORTERS

As with stardrives, multiple types of teleporters can exist, depending on the technology used to develop them.

TRANSPORT BOOTH (PL 8)

Based on original teleportation technology, a transport booth is simply a booth large enough to accommodate a single Medium-size creature or Huge object, with controls on the outside. An operator selects the destination booth (which is any other transport booth), waits for a clear signal from the destination, then transmits. Anything inside the booth is disassembled at the molecular level, translated into electronic data, and transmitted. The speed of the transmission depends on the communication technology used, but even with the least effective communications, any distance of less than 1,000 miles is virtually instantaneous.

Radio Transceiver (PL 5): A transport booth equipped with a radio transceiver can teleport its contents to a receiving booth positioned within 240,000 miles (roughly the distance between Earth and the Moon). Since light travels at a speed of 186,000 miles per second, the transport is nearly instantaneous.

Laser Transceiver (PL 6): A transport booth equipped with a laser transceiver can teleport its contents to a receiving booth at any distance. However, the transmission travels at a speed of 8 AU/hour (or 744,000,000 miles/hour), making it practical only for interplanetary transport.

Mass Transceiver (PL 7): A transport booth equipped with a mass transceiver can teleport its contents to a receiving booth instantaneously. The maximum range of the transmission is 1,000 AU (roughly 93,000,000,000 miles).

Drive Transceiver (PL 8): A transport booth equipped with a drive transceiver can teleport its contents to a receiving booth within 1,000 AU (roughly 93,000,000,000 miles). The transport is virtually instantaneous.

Ansible (PL 9): A transport booth equipped with an ansible can teleport its contents to a receiving booth across interstellar space. The teleport occurs instantaneously, and the range of the transport booth is effectively unlimited.

If the transport booth operator attempts to transmit before he gets a clear signal from the receiving booth, any living creature involved in the teleport must make a Fortitude save (DC 20). If the save fails, the living being immediately drops to –1 hit points and begins to die. Even if the save succeeds, the creature takes 2d4 points of Constitution damage. In either case, the teleported creature reaches the intended destination.

The purchase DC of a transport booth does not include the cost of the communication technology used to transmit the matter (see Table 6–7: Transport Booth Purchase DC Modifiers).

Purchase DC: 31 (per transport booth) + the communication system's purchase DC modifier (see Table 6–6).

Restriction: Licensed (+1).

TRANSPORTAL (PL 8)

The transportal is a contained teleportation field. Creatures step into it, and moments later they step out on the far side in a different location. The technology only allows transport from one transportal to another, though it is stable enough to remain open for several minutes with each activation and only requires about 30 minutes to recharge between activations. The only major drawback of the transportal is that it tends to disorient travelers. Any creature using a transportal must succeed on a Fortitude save (DC 15) or be shaken for 1d6 rounds upon arrival.

Purchase DC: 58 per transportal.

Restriction: Licensed (+1).

TRANSPORT DISK (PL 9)

The general technology of teleportation advances at Progress Level 9, to the point where a receiving station is no longer necessary. The traveler stands upon a disk on the floor, and the operator uses sensor technology to pinpoint the traveler's target destination. Pinpointing the target destination requires a successful Navigate check, and the DC depends on the distance traveled (see Table 6–8: Check DCs for Transport Disks). Attempting to pinpoint the location without the aid of sensor technology imposes a –20 penalty on the Navigate check.

When the operator transmits, any creature or object standing on the transport disk is instantly sent to the location the operator has selected. If the operator's Navigate check fails by 10 or less, the teleported creature or object appears in a location 1d100 miles from the intended destination (determined randomly by the GM). If the check fails by 11 or more, the teleported creature or object materializes inside solid matter at some location 1d100 miles from the intended destination. Any living creature teleported into solid matter takes 20d6 points of damage, or half damage if a Fortitude save (DC 20) succeeds. It must also be freed from whatever she has materialized inside of.

Although the chance of a botched transmission is daunting to some, transport disks offer a tremendous advantage. With a successful Computer Use check (see Table 6–8: Check DCs for Transport Disks), a transport disk operator can locate a particular creature or object with computer sensors and teleport it from its present location to the transport disk. The range is limited only by the range of the sensors.

Purchase DC: 52.

Restriction: Restricted (+2).

TABLE 6–8: CHECK DCS FOR TRANSPORT DISKS

Distance	Navigate Check DC	Computer Use DC
Planetary	15	20
Interplanetary	20	25
Interstellar	25	30

DIMENSIONAL TRAVEL

Humankind has long been fascinated with the idea of parallel dimensions, the theory being that alongside our own universe lie virtually identical universes in which people just like us live out their lives (and perhaps fantasize about parallel dimensions). The popular notion is that in a parallel dimension, some different decision was made, some random event occurred differently, or that some element in the composition of the Earth is more common—and, as a result, the universe is different to some degree or another. What if Wellington lost the Battle of Waterloo? What if the cataclysm that wiped out the dinosaurs never happened? What if Hitler conquered the world?

Of course, it could all be considerably more subtle than all that; perhaps all humans have gray eyes, and that's the only difference. The point is that in alternate realities, life could be different. Without ever leaving their home world, dimensional explorers could face challenges every bit as daunting as the challenges faced by space explorers.

HAZARDS OF DIMENSIONAL TRAVEL

Any initial exploration of parallel dimensions must logically proceed from a fixed location, because the amount of energy required would not allow for a portable power source. Thus, as with interstellar travel, early interdimensional trips are likely to be one-way. Fortunately, if a beachhead can be established in another dimension, it should be a simple matter for subsequent expeditions to transport the materials necessary for the construction of another power source. It is in establishing that beachhead that the real risk lies.

Initial dimensional journeys are unlikely to be carried out by humans, but rather by probes designed to test the gravity, radiation levels, atmosphere, pressure, and temperature—and to bring back samples of microorganisms—to ensure that humans can survive, and that they are properly equipped. Such probes must be tethered to the original dimension to send back information (since there is no indication that communication signals would travel back any more easily than objects could).

The use of probes, however, should allow dimensional physicists to develop a kind of "matrix map." Not only can they note which dimensions are hostile to human life, but, with sufficient data points, they can extrapolate which dimension "frequencies" are likely to prove conducive to human life. The first human dimensional travelers are likely to be extremely well prepared for the environmental conditions they encounter.

Other factors may prove more hazardous, however. In addition to the perils of first contact with a xenophobic populace, dimension travelers must contend with the possibility of equipment failure, dimensional static, scale variance, and encounters with other travelers who might not be friendly.

EQUIPMENT FAILURE

As the science of dimensional travel advances, explorers carry portable dimension gate generators, enabling them to come and go through dimensions as they please. If that equipment fails for some reason, the expedition might be trapped, possibly without the means to repair the damaged generator.

Dimension gate generators—whether stationary or portable—should not break down at random any more than a starship does (unless, of course, the campaign revolves around that very problem). The equipment failure should be a plot element introduced by the GM:

Complete Shutdown: The generator simply stops working, either because its components are damaged or because it has run out of power. Fixing damage components usually requires 10 hours and a successful Repair check (DC 25), while constructing a new power source (a complex device) requires 60 hours and a successful Craft (electronic) check (DC 25). Locating a replacement power source in a civilized area may require a successful Gather Information check, and negotiating for it may require a Diplomacy check.

Miscalibration: A miscalibrated dimension gate generator doesn't take the characters where they planned to go. Correctly recalibrating the generator involves either downloading the data from another functional generator (a full-round action followed by a successful DC 10 Computer Use check) or returning to the last "accurate coordinates" and resetting the matrix (12 hours of work followed by a successful DC 25 Computer Use check).

Communication Failure: There is no guarantee that standard communications work across dimensions; even communications designed to work across interstellar distances are useless when the party for whom the message is intended is not in the same dimension. A d-com (see Dimensional Communicators, below) or similar device enables communication across dimensions.

DIMENSIONAL STATIC

Dimensions are constantly splitting into new dimensions as events create alternate realities. These divergences release tremendous amounts of energy, which manifests as a kind of "static" during dimension gate operations. Generators are designed to filter out this noise and lock onto the specific "signal" of the intended destination. However, if the generator isn't getting enough power, or if the static level is extremely high, the gateway between dimensions is less stable.

Traveling through an unstable gate is potentially fatal. The traveler must make a Fortitude save (DC 15). If the check succeeds, the character arrives at the intended destination but is stunned for 1d4 rounds. If the check fails, the character arrives on target but is nauseated for 1d4 hours. If the save fails by 5 or more, the character arrives on target, takes 2d6 points of Constitution damage, and is nauseated for 1d4 hours.

SCALE VARIANCE

A potential risk in traveling to other dimensions is a matter of size: Is everything in the other dimension on the same scale as the travelers who visit it? GMs can simulate a scale variance by changing a character's effective size. For example, a Medium-size character might be considered Fine in the new dimension. Such a variance, of course, changes the character's size modifier to attack rolls and Defense. Speed also changes, multiplied by a factor based on the change in size: Fine ×0.16, Diminutive ×0.33, Tiny ×0.5, Small ×0.66, Medium-size ×1, Large ×1.33, Huge ×2, Gargantuan ×2.66, Colossal ×3.33.

The damage a character deals with natural and artificial weapons also scales with size. For every step by which a character's size category increases or decreases, increase or decrease the damage by one step: 1, 1d2, 1d3, 1d4, 1d6, 1d8, 2d6, 3d6, 4d6, 6d6, 8d6, 12d6. Attacks that deal 2d4 points of damage scale down to 1d6 or up to 2d6. Attacks that deal 1d10 points of damage scale down to 1d8 and

up to 2d6. Attacks that deal 1d12 points of damage scale down to 1d8 and up to 3d6.

DIMENSIONAL OPPONENTS

If humans are capable of traveling through dimensions, it is reasonable to believe that intelligent beings, either from other worlds or other dimensions, also have this capability. Other dimensional travelers might not be friendly. They might be raiders, plundering other dimensions for the resources they lack in their own. They could just as easily be transdimensional traffic police, tasked with detecting and disabling unauthorized dimension gate generators. They could simply be savage monsters, naturally capable of dimensional travel and drawn to unusual interdimensional activity.

DIMENSION GATE GENERATORS

The technology behind dimension gates is highly advanced. The first working gates are treated as late Progress Level 7 technology, and concerted human exploration of alternative dimensions begins at Progress Level 8. The calculations required for dimensional travel are complex, but the calculations for *safe* travel—arriving at the intended destination with no loss of carrier signal—are tens of thousands of times more complex.

Actually traveling through a dimension gate is easy, but changing the setting is more complex. A character must succeed on a Navigate check (DC 30) to reset the gate to a known destination; setting the gate to an unknown (but safe) destination is a DC 40 Navigate check. (The GM should roll these checks secretly.) Performing either check requires 30 minutes of calibration. Of course, if the destinations have been preset, any character can change the settings as a move action without making a check.

Dimension gate generators come in a variety of forms, each operating somewhat differently.

D-GATE GENERATOR (PL 7–9)

The first dimension gate generators—appearing at Progress Level 7—are Gargantuan objects that cannot be transported once assembled. The PL 7 D-gate creates a transdimensional aperture approximately 10 feet in diameter and allows for one-way transport only. Due to the incredible power drain, the gate remains open for only 1 round, after which the generator shuts down and cannot be activated again for 24 hours.

The PL 8 D-gate is a Huge object weighing 200 pounds, but due to its bulk, the generator requires at least two people to lift and haul it. It creates a transdimensional aperture up to 20 feet in diameter, and the generator can keep the gate open for up to 10 rounds, after which the generator shuts down and cannot be activated again for 24 hours. Dimensional mapping makes calculations to reset the gate's destination easier (Navigate check, DC 25), and any given gate can store up to five predetermined destinations. Travel is still one-way, but with the larger aperture and the destination presets, the equipment to construct another D-gate can be transported through, and the travelers' home dimension can be locked into the new gate upon startup.

At PL 9, D-gates large enough to transport starships exist (although they can be almost any size), and they can store up to twenty predetermined destinations. The calculations are even easier (Navigate check, DC 20), and scientists have finally learned how to keep the gate open indefinitely. Best of all, dimensional travel through PL 9 D-gates is two-way, allowing for round trips.

Purchase DC: 54 (PL 7 D-gate generator), 48 (PL 8 D-gate-generator), 46 (PL 9 D-gate generator).

Restriction: Military (+3).

D-DRIVE GENERATOR (PL 8–9)

The D-drive generator can be incorporated into a starship's engine design, allowing the ship to travel between dimensions. Considered the safest form of dimensional travel, D-drive generators allow ships in space to cross dimensions. Due to the enormous power drain, the D-drive generator shuts down for 12 hours after the dimensional jump is completed. In addition, the starship's weapon systems, defense fields, defense screens, and engines shut down for 2 hours. At Progress Level 8, only Colossal starships can be fitted with a D-drive generator.

Progress Level 9 sees many improvements in the D-drive generator. Any size starship can be equipped with one, and the generator can be reactivated after 6 hours; the ship's disabled weapons, defense fields, defense screens, and engines come back online after only 10 minutes.

Purchase DC: 48 (PL 8 D-drive generator), 44 (PL 9 D-drive generator).

Restriction: Military (+3).

DIMENSION WAND (PL 8–9)

The dimension wand is a personal dimension gate generator. It creates a rupture in the fabric of reality just large enough for one character to step through into another dimension. The gate remains open until the wand itself passes through, so multiple characters can step through without using their own wands. The drawback to the dimension wand is that it must be recalibrated after each use (see Equipment Failure, above), or entirely new dimensional coordinates must be entered, as though changing the settings. The PL 8 version of the dimension wand weighs only 1 pound. The PL 9 version has the same purchase DC, with the added benefit that it stores the last five dimensional coordinates automatically, enabling anyone to thumb through settings without recalibrating the wand.

Weight: 1 lb.

Purchase DC: 42.

Restriction: Restricted (+2).

OTHER GEAR

In addition to dimension generators, most dimensional travelers at Progress Level 8 and beyond carry dimensional transceivers, which

DIMENSIONAL TRANSCEIVER (PL 8)

A dimensional transceiver permits two-way communication across dimensions, although dimensional static can sometimes hinder or block communications (at the GM's discretion). The somewhat bulky PL 8 transceiver can be carried like a backpack; a handheld version is available at PL 9.

A dimensional transceiver must be calibrated to transmit signals to a given dimension. Assuming the coordinates have already been plotted using some kind of dimension generator (see above), calibrating the transceiver takes a full-round action and requires a successful Computer Use check (DC 15), The PL 9 version can store the coordinates of up to five different dimensions.

Size: Medium (PL 8), Tiny (PL 9).

Weight: 4 lb. (PL 8), 1 lb. (PL 9)

Purchase DC: 24.

Restriction: Restricted (+2).

TIME TRAVEL

The dream of time travel probably arose out of a desire to go back and correct one's past mistakes—or to visit the future and subsequently return to take advantage of foreknowledge. The concept intrigues historians and archaeologists for obvious reasons. Science fiction has explored the possibility of time travel many times, as well as the pitfalls of visiting the past and impacting the future.

Technically, time travel—of the "into the future" sort—is within the realm of possibility. In fact, it happens all the time—just on such a small scale that no one notices. Given that a starship engine could be developed that accelerates a ship to relativistic speeds at which time dilation occurs, time travel can be achieved simply by achieving 90% of the speed of light for a short time, then returning to one's point of origin. For every minute you spend flying at 90% the speed of light, 2.3 minutes pass everywhere else. Travel at relativistic speeds long enough and you could return to a time predating the rise of human civilization!

Traveling into the future isn't a very useful ability if one has no way back—which is where the concept of traveling into the past breaks down. The principle of causality rather logically argues that an effect cannot occur before its cause—meaning, in this case, that one cannot arrive in the past via the use of a time machine before that time machine is invented.

HAZARDS OF TIME TRAVEL

The time machine is perhaps more dangerous than any other technology that manipulates space and time. Not only can unscrupulous people use it to wreak havoc in the past and take advantage of knowledge from the future, but a single misstep could forever alter the course of history.

TEMPORAL PARADOXES

Trips through time are exercises in causality. Traveling into the past might set in motion a chain of actions culminating in different major historical events. Characters might return to the present to discover that the Roman emperor Caligula used intercontinental ballistic missiles to conquer Europe and the Middle East. Conceivably, history could be altered in a way that prompts the Soviet Union to invade and conquer North America. Perhaps the characters can't even return to their own time because the person who invented the crucial component of the time machine was never born, for some reason. In short, the permutations of cause and effect can be infinitely mind-boggling.

Temporal paradoxes are liable to stall the development of time travel until someone can prove either that (a) actions in the past by people from the present have, in fact, already happened (and that it was those actions that led to the current state of affairs), or (b) actions in the past that affect the present can be detected and averted by sending someone else into the past to prevent those actions from happening.

ALTERNATE REALITIES

Another potential side-effect of time travel popularized in literature is the alternate reality. The timestream in which time travel is invented continues to exist. Situations that create significant changes or temporal paradoxes serves as the locus or intersection point where realities diverge.

The time travelers might encounter worlds very similar to or different from their own. This creates a rich diversity of settings where the established "facts" and "rules" are no longer sure. The nefarious villain recently defeated in a different reality might be a trustworthy ally in this one. A temporal adventurer might encounter



Time Travelers

a dead companion who did not die in this alternate reality. The possible permutations are infinite.

EVER-CHANGING LANDSCAPES

Time machines that do not actually move are at the mercy of topographical changes and other changes in the locations in which they appear. Never mind that one couldn't construct a time machine in New Mexico and use it to visit Jerusalem in the year A.D. 33. Traveling into the past might deposit you in the middle of a rushing river or under thousands of tons of glacial ice. Traveling into the future, you might find that the position occupied by your time machine now resides in the basement of a futuristic skyscraper or in the middle of a radioactive wasteland covered by ice—the result of an extraordinarily heavy and sustained nuclear bombardment.

LANGUAGE

Modern language is loaded with slang, jargon, and colloquialisms that would mean nothing to people who lived in the 19th century. Their slang, jargon, and colloquialisms, by the same token, would mean nothing to those who lived in the 18th century. Go back another thousand years, and the words you are reading right now would be all but incomprehensible to the average English-speaking person—assuming he or she could read. Your speech would be equally incomprehensible. Go forward a thousand years, and the English of the new millennium will barely resemble the English of this millennium. Without a Speak Language or Read/Write Language skill for the appropriate era, communication could more closely resemble a game of charades.

AGE

Those who travel in time age normally within their own localized time. So, while eons may pass in the eye blink it takes to travel through them, the time traveler feels none of the effects of aging. However, this can work against the traveler. If he were to spend twenty years in his own timeframe exploring the centuries, then return to his starting point, he would, in fact, be twenty years older than he was when he left.

TIME MACHINES

Temporal displacement drives—colloquially known as "time machines"—do not exist until Progress Level 8. The first time machines are faintly reminiscent of the brass, ivory, and quartz machine invented by H.G. Wells in his novel *The Time Machine*, though made of lightweight aluminum and resembling something more like bathyspheres. Those that follow are constructed as fixed tunnels leading to nowhere, while those mounted in starships turn the entire ship into the time machine.

TIME SPHERE (PL 8)

Time spheres are small, two-seated modules designed to withstand any reasonable amount of buffeting that might occur when the machine finally comes to rest in a different time period. At the very least, the self-contained atmosphere should give the occupants time to "reverse course" should they discover that conditions outside are too hostile to disembark. The time sphere carries sensors designed to test outside conditions immediately upon arrival.

The temporal displacement mechanism itself is arranged around the inside of the sphere, giving the occupants full access to the electronics in case of emergency. The main computer has all programs necessary to operate the machine and is crammed with historical and linguistic information, electronic encyclopedias, and any other information that might be necessary to survive in a different time. Operation of the time sphere is quite simple for characters familiar with computers. One simply sets the desired date and time and presses the "Go" button.

Time spheres are not sold commercially. In fact, doing so is illegal, but the plans to construct them are quite common. The components have a total purchase DC of 36. Building a time sphere chassis takes 12 hours and requires a successful Craft (mechanical) skill check (DC 25). Building and filling the time sphere's computer (a much more daunting exercise) takes 120 hours and requires a successful Craft (electronic) check (DC 35).

Time spheres have the following statistics:

Crew 2; **Passengers** 0; **Cargo** 120 lb.; **Defense** 6; **Hardness** 5; **Hit Points** 24; **Size** Huge; **Purchase DC:** 65; **Restriction:** Illegal (+4).

TEMPORAL DRIVE GENERATOR (PL 9)

Like the D-drive generator, which is designed to carry starships across dimensional boundaries, the temporal drive generator (or "T-drive generator") carries starships through time. The drive can be mounted in a starship of any size and turns the entire ship into a time machine.

Purchase DC: 60.

Restriction: Military (+3).

TIME BRIDGE (PL 9)

Doing away with the issue of portability, the time bridge opens a portal to both other times *and* other places. The time bridge also has the advantage of not leaving a fragile piece of vital equipment lying about while its operators go exploring. Instead, the travelers use a simple "message-drop" system to communicate with their base of operations: Upon arrival, they conceal a small transmitter somewhere near their point of embarkation. They then have a prearranged amount of time to explore and return to the location to catch the next appearance of the time bridge. If they do not return, an operative from their base emerges to search for the transmitter. Assuming he finds it, the operative records a message on the transmitter, letting the explorers know when the bridge will reappear again, or he collects any recorded message the explorers might have left indicating where and when to pick them up. The process repeats until the explorers are brought back safely.

Travel through the time bridge is comparable to walking through a tunnel. Operators at the base set the temporal and physical coordinates at the other end, and a team of travelers walks into the tunnel and seems to vanish. For the travelers, the point of origin simply becomes less "real" as the destination becomes more real. The bridge is large enough to accommodate vehicles up to Huge size.

Purchase DC: 71.

Restriction: Illegal (+4).

CHAPTER SEVEN:

STARSHIPS

Spacefaring vessels are as much a part of science fiction as exotic aliens, bug-eyed monsters, and laser guns. Starships transport heroes to strange new worlds and carry them into fantastic battles in interstellar space. The starship is part high-tech war chariot, part home away from home.

In addition to providing rules for combat between opposing starships, this chapter allows you to build starships from scratch. What you won't find in this chapter are rules for faster-than-light travel; see Chapter Six: Traveler Science for rules on traveling vast distances in a short amount of time.



Starship Bridge

STARSHIP COMBAT BASICS

The rules for starship combat are based on the rules for character combat, as presented in Chapter Five: Combat of the *d20 Modern Roleplaying Game*. Like character-scale combat, starship battles unfold on a square grid, with each starship occupying one or more squares on the grid. As with character-scale combat, starship battles play out in rounds.

The starship combat system presented in this chapter strikes a balance between realism and ease of play. You can make the system more realistic by adapting bits and pieces of the vehicle movement and combat rules presented in the *d20 Modern Roleplaying Game* to the 500-feet-per-square starship scale.

These basic starship combat rules also assume that all starships involved in the battle are crewed by nonheroic characters. What happens when heroes take the controls is discussed toward the end of the chapter (see Heroes in Starships, page 144).

STARSHIP FIGHTING SPACE

Each square in starship scale measures 500 feet along a side (instead of 5 feet, as in character-scale combat). All starships, regardless of size, have a square fighting space. Some starships occupy a single

500-foot square, while others have a larger fighting space, as noted in the Starship Fighting Space diagram.

An **ultralight starship** can be up to 250 feet long. It occupies a 250-foot-by-250-foot fighting space, and up to four ultralight starships can occupy a single 500-foot square.

A **light starship** measures 251–500 feet in length. It has a 500-foot-by-500-foot fighting space and occupies a single 500-foot square.

A **mediumweight starship** measures 501–1,000 feet in length. It occupies a 1,000-foot-by-1,000-foot fighting space (4 500-foot squares).

A **heavy starship** measures 1,001–1,500 feet long. It has a 1,500-foot-by-1,500-foot fighting space (9 500-foot squares).

A **superheavy starship** is 1,501 feet long or longer. The smallest superheavy starships (measuring 1,501–2,000 feet long) have a 2,000-foot-by-2,000-foot fighting space (16 500-foot squares), although larger fighting spaces are possible.

STARSHIP COMBAT SEQUENCE

Starship combat is played out in rounds. Each round, each starship acts in turn in a regular cycle. Generally, starship combat runs as follows.

Step 1: Every starship starts the battle flat-footed. Once a starship acts, it is no longer flat-footed.

Step 2: The GM determines which starships are aware of each other at the start of the battle. (Cloaking devices and other devices might hide a ship from another ship's sensors.) If some but not all of the starships are aware of their enemies, a surprise round happens before regular rounds begin. Starships that are aware of the enemies can act in the surprise round, so they roll for initiative. In initiative order (highest to lowest), starships that started the battle aware of their enemies each take one move or attack action.

STARSHIP TYPES AND SUBTYPES

Every starship has a type and a subtype.

A starship's type represents its relative mass and determines its fighting space (how many 500-foot squares it occupies) on the battle grid. There are five types of starships: ultralight, light, mediumweight, heavy, and superheavy.

A starship's subtype identifies the ship's basic purpose or configuration. Starship subtypes include the following: fighter, corvette, destroyer, strike cruiser, battleship, and freighter.

Starships that were unaware don't get to act in the surprise round. If no starship or every starship begins the battle aware, there is no surprise round.

Step 3: Starships that have not yet rolled initiative do so. All starships are now ready to begin their first regular round.

Step 4: Starships act in initiative order. All crew aboard a starship act on the starship's turn.

Step 5. When each starship has had a turn, the starship with the highest initiative acts again, and steps 4 and 5 repeat until combat ends.

COMBAT STATISTICS

Several fundamental statistics determine how well a starship performs in combat. This section summarizes these vital statistics, and the following sections detail how to use them.

ATTACK ROLL

An attack roll represents one starship's attempt to strike another on its turn in a round. Most starships are armed with ranged weapons aimed by gunners.

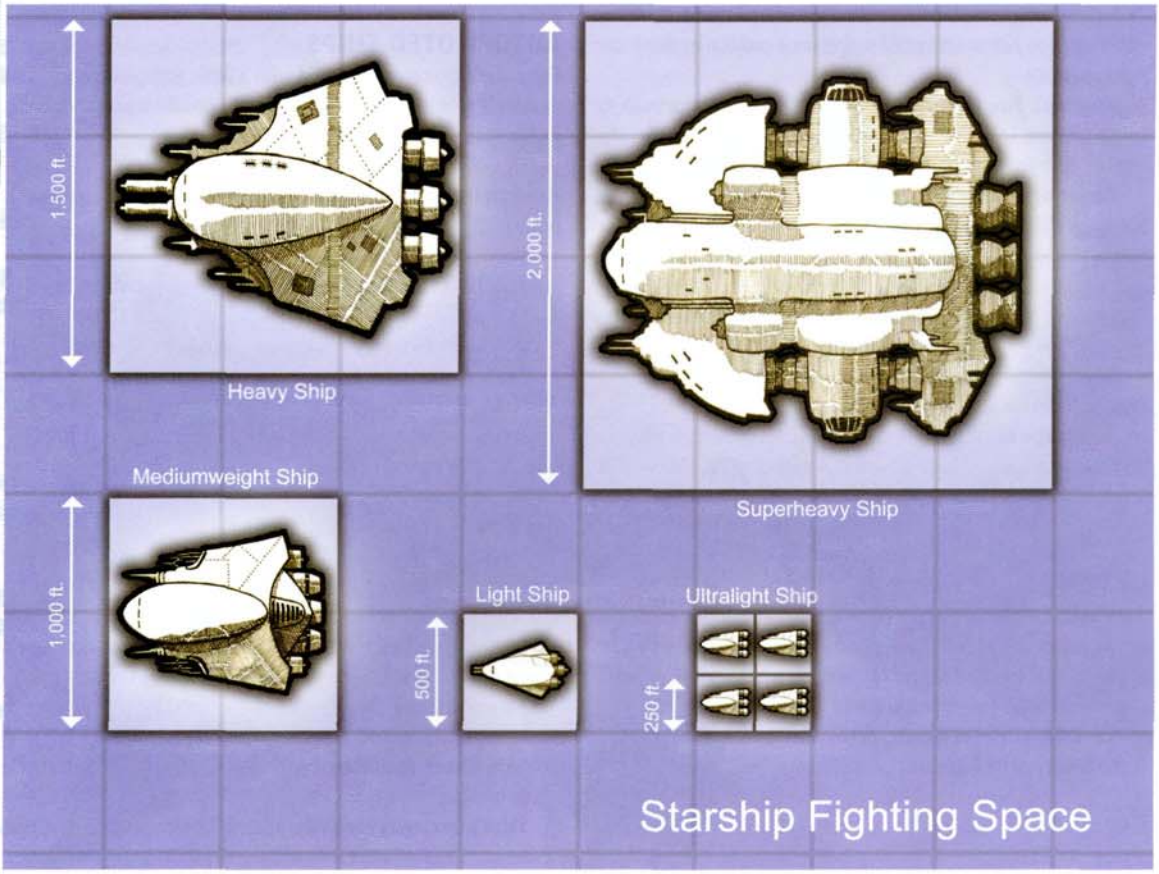


TABLE 7–1: STARSHIP SIZES

Starship Size	Starship's Size Modifier [1]	Targeting System's Equipment Bonus [2]	Autopilot System's Equipment Bonus [3]	Starship's Length	Starship's Weight
Colossal	–8	+3	+3	64 ft. or more	250,000 lb. or more
Gargantuan	–4	+2	+2	32–64 ft.	32,000–250,000 lb.
Huge	–2	+1	+1	Less than 32 ft.	4,000–32,000 lb.

1 A starship applies its size modifier on all attack rolls and to its Defense.
2 A starship applies its targeting system's equipment bonus on all attack rolls.
3 A starship on autopilot applies its autopilot system's equipment bonus to its Defense.

When a starship makes an attack roll, roll 1d20 and add the appropriate modifiers (described below). If the result equals or beats the target's Defense, the attack hits and deals damage. A starship's attack roll is:

1d20 + gunner's ranged attack bonus + range penalty + starship's size modifier + targeting system's equipment bonus

Gunner's Ranged Attack Bonus: Unless noted otherwise, all starship gunners are assumed to have the Starship Gunnery feat. Without this feat, a starship gunner takes a –4 nonproficient penalty on attack rolls with starship weapons.

For simplicity, all gunners aboard a starship have identical ranged attack bonuses.

Range Penalty: The range penalty for a ranged weapon depends on what weapon the starship is using and the distance to the target. All ranged weapons have a range increment, as noted in Table 7–14: Starship Weapons.

As with character weapons, any attack from a distance of less than one range increment is not penalized for range, so a plasma cannon (range increment 3,000 feet) can strike at enemies up to 2,999 feet away with no penalty. However, each full range increment causes a cumulative –2 penalty on the attack roll.

A beam weapon has a maximum range of 10 increments. A projectile weapon has an unlimited range, since projectiles don't lose inertia in space.

Starship's Size Modifier: Starships are Huge, Gargantuan, or Colossal in size. Table 7–1: Starship Sizes notes the size modifiers for ships of different sizes.

Targeting System's Equipment Bonus: Most starships have computerized targeting systems to help gunners train weapons on targets. A standard targeting system provides an equipment bonus on the gunner's attack roll depending on the ship's size: Huge +1, Gargantuan +2, Colossal +3. Improved targeting systems (see Starship Sensors, page 136) grant higher bonuses.

Table 7–1: Starship Sizes summarizes the targeting system equipment bonuses for ships of different sizes.

Automatic Misses and Hits: As in character combat, a natural 1 on the attack roll is always a miss. A natural 20 is always a hit. A natural 20 also always threatens a critical hit (see Critical Hits, page 111).

DEFENSE

A starship's Defense represents how difficult it is to hit in combat. It's the attack roll result that an enemy ship needs to achieve a hit. In general, starships are easy to hit, which is why they rely on armor to absorb damage (see Starship Armor, page 133).

A starship's Defense is partly determined by the skill of the pilot or the quality of its automatic pilot system.

PILOTED SHIPS

A starship with a living pilot has a Defense equal to:

10 + starship's size modifier + pilot's class bonus to Defense + *pilot's Dexterity modifier*

Starship's Size Modifier: The bigger a starship is, the easier it is to hit in combat. The smaller it is, the harder it is to hit. Size modifiers are shown on Table 7–1: Starship Sizes.

Pilot's Class Bonus to Defense: The pilot imparts her class bonus to Defense to the ship's Defense. This bonus applies even if the starship is flat-footed or otherwise denied the pilot's Dexterity bonus to its Defense.

All starship pilots are assumed to have the appropriate Starship Operation feat. Consequently, they apply their full class bonus to Defense (instead of one-half the modifier) to a starship's Defense.

Pilot's Dexterity Modifier: In any given round, a pilot may choose to transfer her full Dexterity bonus to the starship's Defense. However, doing so forces the pilot to focus entirely on flying the ship, and consequently the pilot loses the Dexterity bonus to her own Defense for the round.

A pilot cannot apply her Dexterity bonus to a starship's Defense if she or the starship is flat-footed.

AUTOPILOTED SHIPS

Every starship comes equipped with a basic autopilot system that enables it to dodge enemy fire without need for a pilot. A starship on autopilot has a Defense equal to:

10 + starship's size modifier + autopilot system's equipment bonus

Starship's Size Modifier: Size modifiers are shown on Table 7–1: Starship Sizes.

Autopilot System's Equipment Bonus: An autopilot system provides an equipment bonus to Defense depending on the ship's size: Huge +1, Gargantuan +2, Colossal +3. A ship equipped with an improved autopilot system (see Starship Defense Systems, page 134) gains a higher bonus.

CREW

The quality of the crew determines how well a starship performs in and out of combat. Unless otherwise noted, every starship has a trained crew of nonheroic characters. However, situations could arise where a starship must rely on an untrained crew. Conversely, expert crews and ace crews are also available—for the right price.

Table 7–2: Crew Quality compares four different qualities of crew: untrained, trained, expert, and ace.

Skill Check Modifier: Apply this modifier to all skill checks made by crew.

Pilot's Dexterity Modifier: A pilot's Dexterity modifier applies to the starship's initiative rolls and the starship's Defense.

TABLE 7–2: CREW QUALITY

Crew Quality	Skill Check Modifier[1]	Pilot's Class Bonus to Defense	Pilot's Dexterity Modifier	Gunner's Attack Bonus	Modifier to Starship's 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

1 This includes Pilot checks.

Pilot's Class Bonus to Defense: A pilot's class bonus to Defense applies to the starship's Defense and to opposed grapple checks.

Gunner's Attack Bonus: A gunner's attack bonus applies to all ranged attacks made by the ship.

Modifier to Starship's Base Purchase DC: The amount by which the crew increases the base purchase DC of the ship. (This modifier is already factored in to the base purchase DCs of the ships presented in this chapter.)

CREW IMPROVEMENT

To improve in quality, a starship's crew of nonheroic characters must "put in the hours" and gain combat experience. Table 7–3: Crew Improvement shows the length of the crew's tour of duty and the number of ship-to-ship battles the crew must survive to be considered of a particular quality. A crew cannot be elevated to a higher quality until it meets the minimum required time spent serving aboard the ship and the minimum amount of ship-to-ship combat experience.

DAMAGE

When a starship hits with a weapon, it deals damage according to the type of weapon (see Table 7–14: Starship Weapons). Damage is deducted from the target's current hit points. If a starship's hit points are reduced to 0 or fewer, the ship is in bad shape (see Hit Points, below).

MULTIPLYING DAMAGE

Sometimes a starship weapon multiplies damage by some factor, such as when it scores a critical hit. Just as in character combat, you can either roll the damage (with all modifiers) multiple times and total the results, or roll the damage once and multiply the result by the given multiplier.

Bonus damage represented as extra dice, such as from the Engineer's weapon upgrade class ability (see page 23), is an exception. Do not multiply bonus damage dice when a starship scores a critical hit.

CRITICAL HITS

Critical hits by starships work just like critical hits by characters. When a starship makes an attack roll and gets a natural 20, the starship hits regardless of the target's Defense, and it has scored a threat of a critical hit. To find out whether it is actually a critical

TABLE 7–3: CREW IMPROVEMENT

Crew Quality	Length of Tour of Duty	Starship Battles Survived
Untrained	0–5 months	0
Trained	6–11 months	0–3
Expert	12–35 months	4–11
Ace	3 years or more	12+



OPTIONAL CRITICAL HIT RESULTS

A critical hit with a starship weapon normally multiplies the weapon's damage. The GM may opt to use a randomized critical hit resolution system instead: Whenever a critical hit is scored, the attacker rolls percentile dice and consults Table 7–4: Optional Critical Hit Results to determine the effects of the critical hit on the target.

TABLE 7–4: OPTIONAL CRITICAL HIT RESULTS

d% Roll	Effect(s)
01–35	Normal critical hit
36–50	Normal critical hit, crew casualties
51–55	Severe critical hit, artificial gravity disabled
56–60	Severe critical hit, crew casualties
61–65	Damaged system: comm system
66–70	Damaged system: defense system
71–75	Damaged system: engines
76–80	Damaged system: sensors
81–85	Damaged system: targeting system
86–90	Damaged system: weapon
91–95	Destroyed defensive system
96–100	Destroyed weapon

Normal Critical Hit: Roll critical hit damage normally.

Crew Casualties: A number of crewmembers and passengers are killed (this effect applies only if the ship isn't destroyed). Roll 1d10 to determine the number of crew fatalities and, if the ship carries passengers, 1d10 to determine the number of passenger casualties. Only supporting GM characters are affected.

A starship with less than one-half of its normal crew complement takes a –2 penalty on all attack rolls and checks.

A starship with less than one-quarter of its normal crew complement takes a –4 penalty on all attack rolls and checks.

A starship with no crew flies on autopilot and cannot attack. If a crewless ship doesn't have a functional autopilot system, it is immobile (see the Starship Condition Summary sidebar, page 113). If this result is rolled again and the ship has no living crew or passengers, ignore this result and reroll.

Severe Critical Hit: Roll critical hit damage using a ×10 multiplier instead of the weapon's normal multiplier. In addition, the ship and its crew are shaken for 1 round (see the Starship Condition Summary sidebar, page 113, for details).

Artificial Gravity Disabled: The starship's artificial gravity is disabled for 1d10 rounds. During this time, an untrained crew takes a –4 penalty on all attack rolls and skill checks while coping with the zero-gravity conditions. Trained, expert, or ace crews take no penalties, as they are assumed to have the Zero-G Training feat (see page 15). Ignore this result if it comes up again while the artificial gravity system is disabled.

Damaged System: A damaged system remains inoperable until it is repaired, which requires 10 hours of work and a successful Repair check (DC 30). A starship's engineer (or engineering team) can perform jury-rig repairs on the system as a full-round action with a successful Repair check (DC 25), but the repairs last only until the end of the battle (or until the system is disabled again). During that round of jury-rigged repairs, the starship can continue to take actions.

Comm System: One communications system of the attacker's choice is disabled. If this result is rolled again and the ship has no undamaged comm systems, ignore this result and reroll.

Defense System: One defense system of the attacker's choice is disabled. If this result is rolled again and the ship has no undamaged defense systems, ignore this result and reroll.

Engines: The starship's tactical speed decreases by 1,000 feet until the engines are repaired. If this result is rolled again, the effect is cumulative. If the ship's tactical speed has already been reduced to 0 feet due to engine damage, ignore this result and reroll.

Sensors: The starship is blinded until repaired. All the ship's targets gain the equivalent of total concealment (50% miss chance). If this result is rolled again, ignore the result and reroll.

Targeting System: The starship's targeting system ceases to function. The starship loses the targeting system's equipment bonus on attack rolls until the system is repaired. Reroll if this result comes up again.

Weapon: One of the starship's beam weapons, projectile weapons, or missile launchers (attacker's choice) ceases to function. The weapon remains inoperable until it is repaired. If this result is rolled again and the ship has no functional weapons, ignore this result and reroll.

Destroyed Defensive System: One of the starship's defensive systems (determined by the attacker) is destroyed. It cannot be repaired and must be replaced. If this result is rolled again and the ship has no defensive systems, ignore this result and reroll.

Destroyed Weapon: One of the starship's weapons (determined by the attacker) is destroyed. It cannot be repaired and must be replaced. If this result is rolled again and the ship has no weapons, ignore this result and reroll.

If the destroyed weapon was fire-linked, the other weapons to which it was linked continue to function normally. If the destroyed weapon was part of a weapon battery, the remaining weapons in the battery continue to function normally.

hit, the starship immediately makes another attack roll with all the same modifiers as the attack roll that scored the threat. If the second roll also results in a hit against the target's Defense, the starship's attack is a critical hit.

For a more colorful application of the critical hit system, see the Optional Critical Hit Results sidebar.

STARSHIP ARMOR

Starship armor is designed to absorb damage rather than make a starship harder to hit. Consequently, a starship's armor plating provides hardness instead of an equipment bonus to Defense.

Subtract a starship's hardness from the damage each time it takes a hit. If a ship's hardness is greater than the amount of damage dealt by the attack, the starship takes no damage. For example, if a laser beam deals 12 points of damage to a ship with vanadium armor (hardness 30), the ship takes no damage.

See Starship Armor, page 133, for the various types of armor available at different Progress Levels, as well as the hardness of each type.

DAMAGE CONTROL

A starship equipped with a damage control system can perform damage control as a move action. With a successful Repair check (DC 15), the ship regains a number of hit points depending on its type, as shown on Table 7–11: Damage Control Systems. A ship with an improved or advanced damage control system

regains even more hit points (see Starship Defense Systems, page 134).

Damage control cannot be performed if the ship has been reduced to negative hit points.

HIT POINTS

A starship's hit points represent how much punishment it can take before being disabled or destroyed. A starship's hit points are based on its type and subtype; see Starship Types (page 118) for more information.

A ship's hit points decrease when it takes damage. Damage doesn't have any impact on a ship's combat ability until its current hit points reach 0 or lower.

At 0 hit points, a ship is disabled.

At negative hit points, a ship begins breaking apart.

When its hit points drop to a certain negative hit point total, the ship is destroyed. The point at which a ship is destroyed varies depending on its type, as shown in Table 7–5: Destruction Threshold.

TABLE 7–5: DESTRUCTION THRESHOLD

Ship Type	Destroyed At
Ultralight	–20 hp
Light	–40 hp
Mediumweight	–60 hp
Heavy	–80 hp
Superheavy	–100 hp

DISABLED (0 HIT POINTS)

When a starship's current hit points drop to exactly 0, it's disabled. The ship can only take a single move or attack action each turn (not both); it cannot jump to cruising speed or take any other full-round actions. If it attacks, attempts to escape at cruising speed, or performs any other action that would strain its systems (GM's discretion), it takes 1 point of damage after the completing the act. Unless the activity increases the starship's current hit points, it drops to –1 hit point and begins breaking apart (see Breaking Apart, below).

A disabled starship is considered helpless. It has a Defense of 5 + its size modifier.

Repairs that raise a starship above 0 hit points make it fully functional again, just as if it had never been reduced to 0 or lower.

BREAKING APART (NEGATIVE HIT POINTS)

When a starship's current hit points drop below 0, the starship begins to break apart. At this point, the ship is immobile, helpless, and beyond repair. Any attempt to repair it automatically fails. As a ship breaks apart, its crew can evacuate (see Starship Evacuation, below).

A ship that is breaking apart can take no actions and loses 1 hit point every round. This continues until the ship is destroyed.

DESTROYED

When a starship's current hit points reaches its destruction threshold (as shown on Table 7–5), it explodes. Any crewmembers still aboard the ship at this time take 20d6 points of damage (no save) and are jettisoned into the void of space.

STARSHIP EVACUATION

Most ultralight starships are equipped with evacuation pods or fully enclosed, detachable cockpits that jettison the crew to safety in the event of a shipwide catastrophe. In fact, unless noted otherwise, every starship has sufficient evacuation pods or launches to accommodate its normal crew complement and passenger manifest.

STARSHIP CONDITION SUMMARY

A number of adverse conditions can affect the way a starship or its crew operates, as defined here. If more than one condition affects a starship, apply both if possible. If not possible, apply only the most severe condition.

Blinded: The starship's sensors are inoperable. All targets have the equivalent of total concealment (50% miss chance).

Breaking Apart: The starship is at negative hit points. It can take no actions, cannot be repaired, and loses 1 hit point each round until it is destroyed.

Dazed: The starship, its crew, and its passengers can take no actions, but they take no penalty to Defense. A dazed condition usually lasts 1 round.

Destroyed: *The ship is destroyed and cannot be repaired.* Crewmembers aboard the destroyed ship take 20d6 points of damage and are ejected into space.

Entangled: An entangled starship takes a –2 penalty on attack rolls in addition to a –2 penalty to Defense. If the ship is physically anchored to a larger object (such as an asteroid), the entangled ship can't move. Otherwise, it can move at half tactical speed, but can't surge forward.

Flat-Footed: A starship that has not yet acted during a combat is flat-footed. A flat-footed starship cannot apply its pilot's Dexterity bonus to its Defense.

Grappled: When grappled, a starship can't move. It can attack, attempt to break free from its opponent, or perform other actions. It can't apply the pilot's Dexterity bonus to its Defense.

Helpless: A starship that is reduced to negative hit points is helpless. A helpless starship has an effective Defense of 5 + its size modifier.

Immobilized: An immobilized starship is held immobile (but is not helpless), usually in a grapple. It takes a –4 penalty to its Defense and can't apply the pilot's Dexterity bonus to its Defense.

Shaken: All passengers and crewmembers (pilots and gunners included) take a –2 penalty on attack rolls, saving throws, and skill checks.

Stunned: All passengers and crewmembers lose their Dexterity bonus, drop what they are holding, and can take no attack or move actions. In addition, they take a –2 penalty to Defense. The starship's autopilot system kicks in until the pilot regains her senses.

TABLE 7–6: EVACUATION TIMES

Ship Type	Untrained Crew Evacuation Time	Trained Crew Evacuation Time [1]
Ultralight	1d3 rounds	Move action
Light	1d6 rounds	Full-round action
Mediumweight	2d6 rounds	1d4 rounds
Heavy	3d6 rounds	2d4 rounds
Superheavy	4d6 rounds	3d4 rounds

1 Includes expert and ace crews.

A ship's crew and passengers can evacuate any time before the ship is destroyed (see above). Table 7–6: Evacuation Times shows the time required for crews to evacuate, based on the ship's type. While the crew is evacuating, the starship either flies on autopilot (if it has 1 hp or more remaining) or is stopped dead in space (if it has been disabled or is breaking apart).

Use the statistics for a launch (see page 121) to represent a typical evacuation pod.

SPEED

Starships have two basic speeds: tactical speed and cruising speed.

TACTICAL SPEED

Tactical speed only comes into play when two or more starships engage in battle or otherwise interact with each other. A ship's tactical speed is measured in 500-foot squares and tells how far a starship can move in a move action. A starship's tactical speed depends on the type of ship and the type of engines (see Starship Engines, page 131). Certain types of armor can reduce a starship's tactical speed (see Starship Armor, page 133).

A starship normally moves as a move action, leaving an attack action to attack. It can, however, use its attack action as a second move action (see Starship Actions, below). This could let the ship move again, for a total movement of up to double its normal tactical speed. Another option is to surge forward (a full-round action). This lets the ship move up to four times its normal speed, but it can only surge forward in a straight line, and doing so affects its Defense (see Surge Forward, page 117).

CRUISING SPEED

Cruising speed determines how quickly a ship moves across vast distances, such as between planets or star systems. A ship's cruising speed depends on the type of ship and its engines (see Starship Engines, page 131).

A ship can enter or leave a battle at cruising speed, but once it enters battle, it automatically drops to tactical speed. Cruising speed does not come into play during starship battles or in any other situation where two or more starships interact.

INITIATIVE

Every round, each starship gets to do something. The starships' initiative checks, from highest to lowest, determine the order in which they act.

INITIATIVE CHECKS

At the start of a battle, each starship makes a single initiative check. An initiative check is a Dexterity check that uses the starship pilot's Dexterity modifier. (A ship without a pilot has an initiative check modifier of +0.) A pilot with the Improved Initiative feat gets a +4 bonus on the check.

The GM determines what order starships are acting in, counting down from highest initiative result to lowest, and each starship acts in turn. On all following rounds, the starships act in the same order (unless a starship takes an action that changes its initiative; see Special Initiative Actions, page 117). If two or more starships have the same initiative check result, the starships that are tied go in order of total initiative modifier (including Dexterity modifier and Improved Initiative feat bonus, if applicable). If there is still a tie, roll a die.

Flat-Footed Starships: At the start of a battle, before a starship has had a chance to act (specifically, before its first turn in the initiative order), it is flat-footed. It can't apply the pilot's Dexterity bonus to Defense while flat-footed.

JOINING A BATTLE

If starships enter a battle after it has begun, they roll initiative at that time and act whenever their turn comes up in the existing order.

SURPRISE

At the start of combat, a starship is surprised if it was not aware of its enemies and they were aware of it. Likewise, a starship can surprise its enemies if it knows about them before they're aware of it.

DETERMINING AWARENESS

The GM determines which starships are aware of which others at the start of any battle. The GM may call for Computer Use checks to operate shipboard sensors (see the expanded Computer Use skill description on page 10), Spot checks, or other checks to determine whether one ship detects another.

A starship makes only one roll or check against surprise, regardless of its crew complement.

THE SURPRISE ROUND

If some but not all of the starships are aware of their enemies, a surprise round happens before regular rounds begin. Starships that are aware of their enemies can act in the surprise round, so they roll for initiative. In initiative order (highest to lowest), starships that started the battle aware of their opponents each take either an attack action or move action during the surprise round (see Action Types, below). If no starship or all starships are surprised, a surprise round does not occur.

UNAWARE STARSHIPS

Starships that are unaware at the start of battle do not get to act in the surprise round. Unaware combatants are flat-footed because they have not acted yet. A flat-footed starship loses its pilot's Dexterity bonus to Defense.

STARSHIP ACTIONS

The fundamental actions of moving and attacking cover most of what a starship wants to do in a battle. They're described here. Other, more specialized options are touched on in Table 7–7: Starship Actions, and covered later in Special Initiative Actions, page 117.

A starship gets two move actions and one attack action each round. It can take two move actions followed by an attack action, an attack action followed by two move actions, or an attack action sandwiched between two move actions. A ship may choose to *not* take an attack action on its turn, but it gets only two move actions regardless. It can also forgo all of the above combinations and take a single full-round action. All of these options are discussed below, under Action Types.

A starship's choices of actions can be summarized as follows.

Attack action → move action → move action, or
Move action → attack action → move action, or
Move action → move action → attack action, or
Full-round action

THE COMBAT ROUND

As with character-scale combat, each round of starship combat represents about 6 seconds in the game world.

Each round's activity begins with the starship with the highest initiative result and then proceeds, in order, from there. Each round of a combat uses the same initiative order. When a starship's turn comes up in the initiative sequence, that ship performs its entire round's worth of actions. (For exceptions, see Attacks of Opportunity, page 118, and Special Initiative Actions, page 117.)

TABLE 7–7: STARSHIP ACTIONS

Attack Actions	Attack of Opportunity? [2]
Aid another	No
Attack (ranged)	No
Attack an object	No
Escape a grappling ship	No
Feint (see Bluff skill, page 10)	No
Grapple another ship [1]	Yes
Total defense	No

Move Actions	Attack of Opportunity? [2]
Damage control	No
Move at tactical speed	No
Operate sensors	No
Ram [3]	Yes
Sending/jamming a transmission	No
Start/complete a full-round action	Varies

Full-Round Actions	Attack of Opportunity? [2]
Jump to cruising speed	Yes
Surge forward	Yes
Withdraw	No

Free Actions	Attack of Opportunity? [2]
Communicate via comm system	No
Turn	No

Special Initiative Actions	Attack of Opportunity? [2]
Delay (see page 117)	No
Ready (see page 117)	No

No Action	Attack of Opportunity? [2]
500-foot shift	No
Avoid hazard	No

1 Technically, a grapple constitutes a single melee attack, not an action. A grapple can be made once in an attack action or as an attack of opportunity.

2 Only starships armed with point-defense systems can make attacks of opportunity.

3 Ramming is considered part of a move action.

ACTION TYPES

As in character combat, starships may make attack actions, full-round actions, move actions, and free actions. In a normal round, a starship can perform an attack action and two move actions (in any order), two move actions, or a single full-round action. It can also perform as many free actions as the GM allows.

In some situations (such as in the surprise round), a starship may be limited to taking only a single attack or move action.

ATTACK ACTION

An attack action allows a starship to make an attack or perform other similar actions.

MOVE ACTION

A move action allows a starship to move its tactical speed or perform some other action that takes a similar amount of time.

If a starship moves no actual distance in a round, it can take one 500-foot shift before, during, or after the action. For example, a starship can perform damage control (a move action) twice on its turn. Assuming it doesn't move, it can also take one 500-foot shift.

COVER AND CONCEALMENT

Starships use the *d20 Modern* rules for cover and concealment, as presented in Chapter Five: Combat of the *d20 Modern Roleplaying Game* (pages 144–146).

The ship cannot take a 500-foot shift if it used one or both of its move actions to move.

FULL-ROUND ACTION

A full-round action consumes all of a starship's time during a round. The only movement it can take during a full-round action is a 500-foot shift before, during, or after the action. Some full-round actions do not allow you to take a 500-foot shift. A starship can also perform free actions (see below) as the GM allows.

FREE ACTION

Free actions consume a very small amount of time and effort, and over the span of the round, their impact is so minor that they are considered free. However, the GM puts reasonable limits on what a ship can really do for free.

ATTACK ACTIONS

Most common attack actions are described below.

ATTACK (RANGED)

As a single attack action, a starship can fire one or more of its ranged weapons at any target or targets within range and within line of sight. A target is in line of sight if there are no solid obstructions between the attacking starship and the target. The maximum range for a beam weapon is 10 range increments. Weapons that fire projectiles have an unlimited range in space.

If firing several weapons, a starship does not need to specify the targets of all of its attacks ahead of time. It can see how the earlier attacks turn out before assigning the later ones.

If a starship fires a ranged weapon at a target that occupies a square adjacent to an ally, it takes a –4 penalty on its attack roll because the gunner must aim carefully to avoid hitting the ally.

Attacks of Opportunity: A starship can fire its ranged weapons without provoking attacks of opportunity from enemy ships.

ATTACK AN OBJECT

Chapter Five: Combat of the *d20 Modern Roleplaying Game* provides rules for attacking objects, as well as hardness values and

TABLE 7–8: SPACE OBJECTS

Object	Defense	Hardness	Hit Points
Asteroid, Colossal	–3	8	36,000
Asteroid, Gargantuan	1	8	9,000
Asteroid, Huge	3	8	4,500
Asteroid, Large	4	8	1,125
Debris cloud, Colossal	–3	0	1,600
Debris cloud, Garganttuan	1	0	400
Iceball, Colossal	–3	0	7,200
Iceball, Gargantuan	1	0	1,800
Iceball, Huge	3	0	900
Iceball, Large	4	0	225
Mine (Medium-size)	5	10	50
Space hulk, Colossal	–3	10	3,600
Space hulk, Gargantuan	1	10	900
Space hulk, Huge	3	10	450

hit points for different sizes and types of objects. Table 7–8: Space Objects lists the Defense, hardness, and hit points of objects commonly encountered in space and on the cosmic battlefield.

Colossal objects occupy four 500-foot squares (a 1,000-foot-by-1,000-foot fighting space). All other objects occupy a single 500-foot square.

GRAPPLE ANOTHER SHIP

For rules on using grapplers and tractor beams to hold and immobilize starships, see Grappling Systems (page 143).

ESCAPE A GRAPPLING SHIP

Grappler arms and tractor beams allow starships to hold and immobilize one other. See Grappling Systems (page 143) for rules on escaping grapplers and tractor beams.

AID ANOTHER

A starship can help an ally attack or defend by distracting or interfering with an enemy in weapon range. The aiding starship makes an attack roll against Defense 10. If the attack roll succeeds, the starship doesn't actually damage the enemy ship—but its ally gains either a +2 circumstance bonus on attack rolls against that opponent or a +2 circumstance bonus to Defense against that opponent (your choice) on its next turn.

FEINT

See the expanded Bluff skill description on page 10 for details.

TOTAL DEFENSE

Instead of attacking, a ship can use its attack action to defend itself by performing complex evasive maneuvers. This is called a total defense action. A ship that uses the total defense action doesn't get to attack, but it gains a +4 dodge bonus to its Defense for 1 round. The ship's Defense improves at the start of this action, so it helps against any attacks of opportunity the ship is subject to during its move action.

Fighting Defensively: Instead of diverting all of its attention to defending itself, a starship can choose to fight defensively while taking a regular attack action. If it does so, it takes a –4 penalty on its attacks in a round to gain a +2 dodge bonus to Defense during the same round.

MOVE ACTIONS

Unless otherwise noted, move actions don't require a Pilot check to perform.

MOVE AT TACTICAL SPEED

A starship can move its tactical speed as a move action. If it takes this kind of move action during its turn, it cannot also take a 500-foot shift.

Attacks of Opportunity: Moving through a threatened square provokes an attack of opportunity if the enemy ship has a point-defense system (see Starship Defense Systems, page 134).

DAMAGE CONTROL

A starship equipped with a damage control system can perform damage control as a move action (see Starship Defense Systems, page 134).

Damage control cannot be performed if the ship has been reduced to negative hit points.

OPERATE SENSORS

See the expanded Computer Use skill description (page 10) and Starship Sensors (page 136) for details.

RAM

Ramming is considered part of a move action.

A pilot can use her starship to ram an object, including another starship. First, the pilot must enter the target's square or fighting space and declare her attempt to ram the target. If the target has point-defense systems, it can make an attack of opportunity against the ramming starship. Second, the pilot must make a Pilot check (DC = 5 + the target's Defense). If the Pilot check fails, the ship misses the target and may finish its move. If the check succeeds, the starship collides with the intended target, dealing damage both to itself and the target (reduced by hardness, if applicable).

A pilot cannot ram the same ship or object more than once during a given round. However, a pilot that fails to ram a target may attempt to ram a different target if her starship has sufficient movement left to reach the new target.

Table 7–9: Collision Damage shows the amount of damage dealt to both colliding forces, based on the size of the smaller of the two colliding objects. For example, if a Huge fighter rams a Gargantuan destroyer (or vice versa), both ships take 3d6×10 points of damage, reduced by each ship's hardness.

TABLE 7–9: COLLISION DAMAGE

Size of Smaller Ship or Object	Collision Damage [1]
Colossal	12d6×10
Gargantuan	6d6×10
Huge	3d6×10
Large	1d6×10
Medium-size or smaller	—

1 Damage is applied to the ramming starship and its target.

SENDING/JAMMING A TRANSMISSION

See the expanded Computer Use skill description on page 10 for details.

START/COMPLETE FULL-ROUND ACTION

The "start/complete full-round action" move action lets a starship begin undertaking a full-round action (such as those listed on Table 7–7: Starship Actions) at the end of its turn, or complete a full-round action by using a move action at the beginning of its turn in the round following the round when it started the full-round action.

If a starship starts a full-round action at the end of its turn, the next action it takes must be to complete the full-round action—it can't take another type of action before finishing what it started.

FULL-ROUND ACTIONS

A full-round action requires an entire round to complete. If it doesn't involve moving any distance, a starship can combine it with a 500-foot shift.

JUMP TO CRUISING SPEED

As a full-round action, a starship can leave the battlefield by jumping to cruising speed. Doing so effectively takes the ship out of the fight, although enemy ships can pursue the fleeing ship if they wish.

A starship cannot jump to cruising speed if it has 0 or fewer hit points.

Attacks of Opportunity: A starship that jumps to cruising speed provokes attacks of opportunity from threatening enemy

ships armed with point-defense systems (see Starship Defense Systems, page 134).

SURGE FORWARD

A starship can use its afterburners to surge forward as a full-round action. When a starship surges forward, it can move up to four times its tactical speed in a straight line. (It does not get a 500-foot shift.) It loses its pilot's Dexterity bonus to Defense and any dodge bonuses to Defense since it can't avoid attacks.

A starship can surge forward for as many rounds as the pilot likes.

Attacks of Opportunity: A starship that surges forward provokes attacks of opportunity from threatening enemy ships armed with point-defense systems (see Starship Defense Systems, page 135).

WITHDRAW

Withdrawing from combat is a full-round action. When a starship withdraws, it can move up to twice its tactical speed. (It doesn't also get a 500-foot shift.) The square it starts from is not considered threatened for purposes of withdrawing, and therefore enemies with point-defense systems do not get attacks of opportunity against it when it moves from that square.

If, during the process of withdrawing, the starship moves through another threatened square (other than the one it started in) without stopping, enemies get attacks of opportunity as normal.

FREE ACTIONS

A starship can perform multiple free actions during its turn, subject to the GM's approval. In general, if one or more free actions take longer than 6 seconds to complete, they are not free actions.

Free actions include communicating via a comm system and turning.

COMMUNICATE VIA COMM SYSTEM

Starships (and their crews) can communicate and coordinate with each other as a free action. A GM may rule that a particularly long or complex message cannot be communicated as a free action.

TURN

Starships—even immensely large ones—are highly maneuverable in space. As a free action, a ship can adjust its orientation on the battle grid by pivoting or turning. The direction a starship is facing has no bearing on combat, since its weapons can be trained to fire in any direction.

SPECIAL INITIATIVE ACTIONS

Usually a starship acts as soon as it can in combat, but sometimes it may want to act later, at a better time, or in response to the actions of another ship. Starships can delay or ready actions in the same manner as characters.

AVOIDING HAZARDS

A hazard is any unmanned obstacle of Large size or bigger that a starship might hit, either because the starship has entered the hazard's square or because the hazard has entered the starship's fighting space. Sample hazards include asteroids, clouds of space debris, and electromagnetic storms (which deal electricity damage).

When a starship enters a square occupied by a hazard, or vice versa, the pilot of the starship must make a Pilot check. (Making this check does not count as an action.) The DC of the check depends on the size of the obstacle, as shown in Table 7–10: Avoid Hazard DCs.

MOVING ON A GRID

Movement and position are most easily handled by using miniatures, toys, tokens, or paper cut-outs to represent starships on a battlefield composed of 1-inch squares. The standard scale equates each 1-inch square to 500 feet in the game world.

Throughout this chapter, we talk about starships moving in 500-foot squares on a grid. Moving on a 500-foot grid works just like the 5-foot grid characters move on in combat.

MOVEMENT IN COMBAT

A starship can move up to its tactical speed as a move action, and it gets two move actions per turn (for a total movement of up to twice its tactical speed). If a starship spends the entire round surging forward, it can move up to four times its normal speed (see Surge Forward). If a starship uses both of its move actions to perform other tasks (such as damage repair), it can make a 500-foot shift into an adjacent square as a free action. However, it cannot take a 500-foot shift it moves any other distance.

MOVING THROUGH OCCUPIED SQUARES

A starship can pass through a square occupied by another starship or object.

Ally or Nonopposing Starship: You can safely move through a square occupied by an ally or nonopposing starship.

Enemy Starship: Moving through a square occupied by an enemy provokes an attack of opportunity if the enemy has a point-defense system (see Starship Defense Systems, page 134). You can move safely through a square occupied by an enemy that doesn't resist—such as one that is disabled—as if the enemy was nonopposing.

Hazard: Safely moving through a square occupied by a hazard—such as a cloud of space debris or an asteroid—requires a successful Pilot check (see Avoiding Hazards, below).

CROSSFIRE

If two allied starships are on opposite sides of an enemy and each within 1,000 feet (2 squares) of that opponent, they can catch the enemy ship in their crossfire. Because the enemy is forced to defend itself on two fronts, the allied starships gain a +2 bonus on attack rolls made against the ship caught in their crossfire. The enemy ship must be directly between the two allied ships, however.

If the Pilot check succeeds, the starship avoids the hazard. If the check fails, a collision occurs (use Table 7–9: Collision Damage to determine collision damage to both the starship and the hazard). A new check must be made each round the starship and the hazard occupy the same square.

TABLE 7–10: AVOID HAZARD DCS

Hazard Size	Pilot Check DC
Colossal	25
Gargantuan	20
Huge	15
Large	10

ATTACKS OF OPPORTUNITY

Attacks of opportunity work differently with starships than with characters.

A starship can only make an attack of opportunity if it is equipped with a point-defense system (see Starship Defense Systems, page 135). A starship can use its point-defense system to make an attack of opportunity against an enemy ship that enters or passes through its fighting space (any square it occupies on the battle grid) or any adjacent square.

THREATENED SQUARES

A starship equipped with a point-defense system threatens the squares it occupies (its fighting space) and all adjacent 500-foot squares. It can therefore make attacks of opportunity against enemy ships that enter or pass through its fighting space or any adjacent square.

A starship without a point-defense system does not threaten ships that enter or pass through its fighting space or adjacent squares.

PROVOKING AN ATTACK OF OPPORTUNITY

Two actions can provoke attacks of opportunity: moving out of a threatened square, and performing an action within a threatened square that distracts the pilot and forces her to do something other than evade incoming fire.

Moving Out of a Threatened Square: When a starship moves out of a threatened square, it generally provokes an attack of opportunity. There are two important exceptions, however. A starship doesn't provoke an attack of opportunity if it limits its movement to a single 500-foot shift or if it withdraws (see Withdraw, page 117).

Thus, if the square a starship occupies at the beginning of its turn is a threatened square, any movement it makes provokes an attack of opportunity (unless it withdraws or limits it move to a single 500-foot shift). If it doesn't start in a threatened square but moves into one, it must stop there, or else it provokes an attack of opportunity as it leaves that square.

Performing an Action that Distracts the Pilot: Some actions, when performed in a threatened square, provoke attacks of opportunity because they make the pilot divert her attention from the battle at hand. Firing a starship weapon in a threatened square does not provoke attacks of opportunity, but Table 7–7: Starship Actions notes actions that do.

MAKING AN ATTACK OF OPPORTUNITY

An attack of opportunity is a single attack made with a ranged starship weapon. A starship can only make one attack of opportunity per round. It doesn't have to make an attack of opportunity if it doesn't want to.

An attack of opportunity is made using the starship's normal attack bonus—even if it's already attacked in this round.

STARSHIP TYPES

A starship can be one of the following five types: ultralight, light, mediumweight, heavy, or superheavy. A starship's type determines how much space it occupies on the battle grid, as well as its game statistics.

To build a starship hull from scratch, a character must succeed at a Craft (structural) check (DC 30) after investing the requisite amount of assembly time, based on the ship's type: ultralight 600 hours, light 1,200 hours, mediumweight 2,400 hours, heavy 4,800 hours, superheavy 9,600 hours. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the ship's base purchase DC.

STARSHIP STATISTICS

This chapter includes ready-to-use statistics for various starship subtypes. These statistics represent baseline models only. A starship's statistics and performance can be improved by upgrading its weapons, armor, shields, defensive systems, and engines, as described later in the chapter.

Each starship description includes the following statistics.

Type: The starship's type (ultralight, light, mediumweight, heavy, or superheavy) determines its fighting space on the battle grid.

Subtype: The starship's subtype describes the ship's primary function (for example, fighter or strike cruiser).

Defense: A starship's Defense determines how hard the ship is to hit. A starship's flat-footed Defense does not include the pilot's Dexterity modifier. A starship's autopilot Defense is used when the ship's autopilot system is engaged.

Hardness: A ship's hardness is determined by its armor. Hardness reduces the amount of damage the ship takes from weapon attacks. Better armor can improve a ship's hardness.

Hit Dice: A ship's Hit Dice (HD) determines how many hit points it has. Hit Dice are never rolled to determine a ship's hit points; the ship always gets maximum hit points for each Hit Die.

Initiative Modifier: A starship's initiative modifier is equal to the pilot's Dexterity modifier, with a +4 bonus if the pilot has the Improved Initiative feat.

Pilot's Class Bonus: The pilot's class bonus to Defense applies to the starship's normal and flat-footed Defense.

Pilot's Dex Modifier: The pilot's Dexterity modifier applies to the starship's Defense, except when the ship is flat-footed or grappled.

Gunner's Attack Bonus: The gunner's attack bonus applies to ranged weapon attacks.

Size: The ship's size affects its Defense, weapon attack rolls, and grapple modifier.

Tactical Speed: Tactical speed represents how far the starship can move as a move action using its thrusters. Speed is listed in feet and squares. Most starships have a base tactical speed of 3,000 feet. Better engines can improve a starship's tactical speed (see Starship Engines, page 131), while heavier armor can reduce a ship's tactical speed (see Starship Armor, page 133).

Length: The ship's length in feet.

Weight: The ship's weight in pounds or tons.

Targeting System Bonus: The ship's computerized targeting system provides an equipment bonus on a gunner's attack rolls and a similar equipment bonus on attack rolls made by the ship's point-defense system (see Attack of Opportunity, below). This equipment bonus is already factored in to the ship's attack statistics.

Crew: The ship's standard crew complement is given here. A ship cannot operate with less than one-quarter of its standard crew complement. The crew's quality is given in parentheses, along with the crew's modifier to skill checks (including Pilot checks made to avoid hazards). The quality of the crew determines the pilot's class bonus to Defense, the pilot's Dexterity modifier, and the gunner's attack bonus (see Table 7–2: Crew Quality for details).

Passenger Capacity: The maximum number of passengers that can be safely lodged aboard the ship.

Cargo Capacity: The maximum tonnage of cargo that the ship can store in its holds.

Grapple Modifier: The ship's grapple check modifier is based on its size (Huge +8, Gargantuan +12, Colossal +16). Grapple checks come into play whenever grapplers and tractor beams are used (see Grappling Systems, page 143).

Base Purchase DC: The base purchase DC includes the ship's hull and a trained crew, but not its engines, armor, shields, defensive systems, sensor systems, comm systems, weapons, or grappling systems (which must be purchased separately).

Restriction: The ship's restriction rating. See Restricted Objects in Chapter Four: Equipment of the *d20 Modern Roleplaying Game* for details.

Attack: This line shows the ranged weapon attacks a starship typically makes when it uses an attack action.

Attack of Opportunity: If the ship has a point-defense system installed, it threatens ships passing through its fighting space or adjacent squares. Use the line to resolve attacks of opportunity made by the ship.

Standard Design Specs: The ship's engines, armor, defensive systems, sensors, communications, weapons, and grappling systems are listed here.

IMPROVING A STARSHIP'S STATISTICS

The starship statistics presented in this chapter use standard design specs appropriate for the lowest Progress Level at which these ships can be played (PL 6 or PL 7 for most ships). Improving a starship's statistics requires upgrades to its crew, armor, defensive systems, sensor systems, and/or weapons, as discussed throughout this chapter. Rules for selling obsolete starship systems and equipment can be found in the *d20 Modern Roleplaying Game* (see Selling Stuff, page 94).

A player or GM can also modify the starships presented in this chapter by applying a starship class template (see Starship Class Templates, page 130).

ULTRALIGHT STARSHIP SUBTYPES

Ultralight ships cover most small spacecraft, including fighters, cutters, launches, and couriers.

An ultralight starship can be up to 250 feet long. It occupies a 250-foot-by-250-foot fighting space, and up to four ultralight starships can occupy a single 500-foot square. Due to their relatively small size, ultralight starships can form into wings (see the Ultralight Starship Wings sidebar, page 121).

In addition, all ultralight starships share the following design specs.

Engines: All ultralight starships have thrusters. In addition, ships of PL 6 or higher have one other type of engine (see Starship Engines, page 131).

Armor: An ultralight ship has one type of armor (see Starship Armor, page 133).

Defensive Systems: An ultralight starship has a maximum of one defensive system per 3 Hit Dice (see Starship Defense Systems, page 134).

Sensors: An ultralight starship has a maximum of two sensor systems (see Starship Sensors, page 136).

Communications: An ultralight starship has a maximum of two external communication systems (see Starship Comm Systems, page 138).

Weapons: An ultralight starship has one beam, projectile, or missile weapon per 3 Hit Dice (see Starship Weapons, page 139). These weapons are often fire-linked. An ultralight ship cannot be armed with mines.

Grappling Systems: An ultralight starship may have up to two grappling systems (see Grappling Systems, page 143). Each grappling system takes away one of the ship's weapon slots (see above).

ULTRALIGHT SHIP DESCRIPTIONS

Specific subtypes of ultralight starships are given here.

ORBITAL SHUTTLE (PL 5)

An orbital shuttle can haul people and light equipment into orbit and return safely to the planet below, but it is not suitable for long-range space travel to other planets or star systems.



Orbital Shuttle

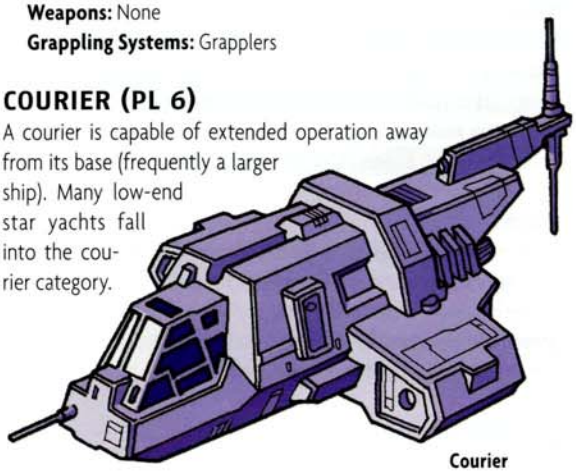
Type: Ultralight	**Size:** Gargantuan (–4 size)
Subtype: Orbital shuttle	**Tactical Speed:** 2,500 ft. (5 sq.)
Defense: 11	**Length:** 60 feet
Flat-footed Defense: 9	**Weight:** 220,000 lb.
Autopilot Defense: 8	**Targeting System Bonus:** —
Hardness: 20	**Crew:** 4 (trained +4)
Hit Dice: 6d20 (120 hp)	**Passenger Capacity:** 12
Initiative Modifier: +2	**Cargo Capacity:** 22,000 lb.
Pilot's Class Bonus: +3	**Grapple Modifier:** +12
Pilot's Dex Modifier: +2	**Base Purchase DC:** 52
Gunner's Attack Bonus: —	**Restriction:** Restricted (+2)

Attack: None
Attack of Opportunity: None

Standard PL 5 Design Specs:
Engines: Thrusters
Armor: Alloy plating
Defense Systems: Autopilot system, damage control system (1d10)
Sensors: Class I sensor array
Communications: Radio transceiver
Weapons: None
Grappling Systems: Grapplers

COURIER (PL 6)

A courier is capable of extended operation away from its base (frequently a larger ship). Many low-end star yachts fall into the courier category.



Courier

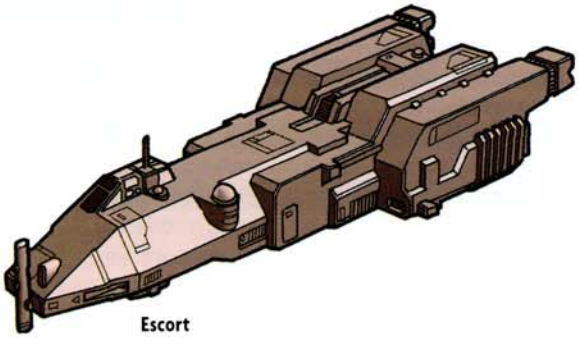
Type: Ultralight	**Size:** Gargantuan (–4 size)
Subtype: Courier	**Tactical Speed:** 3,000 ft. (6 sq.)
Defense: 11	**Length:** 45 feet
Flat-footed Defense: 9	**Weight:** 90,000 lb.
Autopilot Defense: 8	**Targeting System Bonus:** +2
Hardness: 20	**Crew:** 4 (trained +4)
Hit Dice: 8d20 (160 hp)	**Passenger Capacity:** 12
Initiative Modifier: +2	**Cargo Capacity:** 9,000 lb.
Pilot's Class Bonus: +3	**Grapple Modifier:** +12
Pilot's Dex Modifier: +2	**Base Purchase DC:** 48
Gunner's Attack Bonus: +2	**Restriction:** Licensed (+1)

Attack:
Laser +0 ranged (6d8)
Attack of Opportunity: None

Standard PL 6 Design Specs:
Engines: Ion engine, thrusters
Armor: Polymeric
Defense Systems: Autopilot system, damage control system (1d10)
Sensors: Class II sensor array, targeting system
Communications: Laser transceiver, radio transceiver
Weapons: 1 laser (range incr. 3,000 ft.)
Grappling Systems: Grapplers

ESCORT (PL 6)

Escorts are a long-range patrol craft employed for various duties, including the protection of merchant ships and remote bases. Gunships or missile boats could qualify as escorts.



Escort

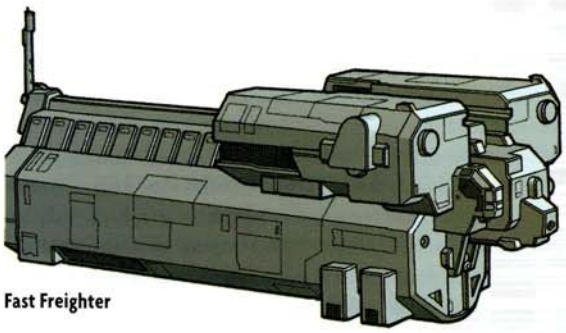
Type: Ultralight	**Size:** Colossal (–8 size)
Subtype: Escort	**Tactical Speed:** 3,000 ft. (6 sq.)
Defense: 7	**Length:** 180 feet
Flat-footed Defense: 5	**Weight:** 900 tons
Autopilot Defense: 5	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 8 (trained +4)
Hit Dice: 20d20 (400 hp)	**Passenger Capacity:** 24
Initiative Modifier: +4	**Cargo Capacity:** 30 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 52
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

Attack:
2 fire-linked heavy neutron guns –3 ranged (15d8) and
2 fire-linked rail cannons –8 ranged (9d12) and
CHE missile –8 ranged (6d12/19–20)
Attack of Opportunity:
Point-defense system +3 ranged (1d12×10)

Standard PL 6 Design Specs:
Engines: Ion engine, thrusters
Armor: Vanadium
Defense Systems: Damage control system (1d10), magnetic field, point-defense system, radiation shielding, sensor jammer
Sensors: Class III sensor array, targeting system
Communications: Laser transceiver, radio transceiver
Weapons: 2 fire-linked heavy neutron guns (range incr. 6,000 ft.), 2 fire-linked rail cannons (range incr. 3,000 ft.), 1 CHE missile launcher (8 missiles)
Grappling Systems: Grapplers

FAST FREIGHTER (PL 6)

Fast freighters are commercial starships generally employed in frequent runs, such as delivering supplies to small outposts and bases, or occasional runs of high-bulk cargo, such as heavy machinery or vehicles. Fast freighters often carry some minor defensive armament.



Fast Freighter

Type: Ultralight	**Size:** Colossal (–8 size)
Subtype: Fast freighter	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 7	**Length:** 110 feet
Flat-footed Defense: 5	**Weight:** 450 tons
Autopilot Defense: 5	**Targeting System Bonus:** +3
Hardness: 20	**Crew:** 4 (trained +4)
Hit Dice: 16d20 (320 hp)	**Passenger Capacity:** 4
Initiative Modifier: +2	**Cargo Capacity:** 300 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 52
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

Attack:
2 fire-linked heavy lasers –3 ranged (12d8) and
2 fire-linked rail cannons –8 ranged (9d12)
Attack of Opportunity: None

Standard PL 6 Design Specs:
Engines: Ion engine, thrusters
Armor: Polymeric
Defense Systems: Autopilot system, damage control system (1d10), magnetic field, radiation shielding, sensor jammer
Sensors: Class II sensor array, targeting system
Communications: Laser transceiver, radio transceiver
Weapons: 2 fire-linked heavy lasers (range incr. 4,000 ft.), 2 fire-linked rail cannons (range incr. 3,000 ft.)
Grappling Systems: Grapplers

FIGHTER (PL 6)

Designed for action against other small craft, fighters lack the punch to be effective against large targets unless they've been modified to carry warheads.



Fighter

Type: Ultralight	**Size:** Gargantuan (–4 size)
Subtype: Fighter	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 19	**Length:** 36 feet
Flat-footed Defense: 13	**Weight:** 39,000 lb.
Autopilot Defense: 6	**Targeting System Bonus:** +2
Hardness: 20	**Crew:** 1 (ace +12)
Hit Dice: 8d20 (160 hp)	**Passenger Capacity:** 1
Initiative Modifier: +8	**Cargo Capacity:** 1,700 lb.
Pilot's Class Bonus: +7	**Grapple Modifier:** +8
Pilot's Dex Modifier: +6	**Base Purchase DC:** 48
Gunner's Attack Bonus: +8/+3	**Restriction:** Military (+3)

Attack:
2 fire-linked fusion beams +6/+1 ranged (15d8)
Attack of Opportunity: None

Standard PL 6 Design Specs:
Engines: Ion engine, thrusters
Armor: Polymeric
Defense Systems: Damage control system (1d10), sensor jammer
Sensors: Class III sensor array, targeting system
Communications: *Laser transceiver, radio transceiver*
Weapons: 2 fire-linked fusion beams (range incr. 3,000 ft.)
Grappling Systems: None

LAUNCH (PL 6)

A launch is a shuttle designed simply to move small amounts of people from one point to another. Launches are rarely armed or armored. Evacuation pods and lunar landers fit into this category.

Type: Ultralight	**Size:** Huge (–2 size)
Subtype: Launch	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 13	**Length:** 24 feet
Flat-footed Defense: 11	**Weight:** 24,000 lb.
Autopilot Defense: 9	**Targeting System Bonus:** +1
Hardness: 20	**Crew:** 1 (trained +4)
Hit Dice: 4d20 (80 hp)	**Passenger Capacity:** 4
Initiative Modifier: +2	**Cargo Capacity:** 2,400 lb.
Pilot's Class Bonus: +3	**Grapple Modifier:** +8
Pilot's Dex Modifier: +2	**Base Purchase DC:** 40
Gunner's Attack Bonus: +2	**Restriction:** Licensed (+1)

Attack:
Laser +1 ranged (6d8)
Attack of Opportunity: None

Standard PL 6 Design Specs:
Engines: Ion engine, thrusters
Armor: Polymeric

ULTRALIGHT STARSHIP WINGS

Two to four ultralight starships can unite to form a wing. All ships forming the wing must have the same subtype (fighter, for instance) and identical design specs (engines, weapons, and so on). In addition, all starships in the wing formation must be occupying the same 500-foot square to be counted as part of the wing.

In starship combat, a wing is treated as a single vessel, much like a battery of weapons is treated as a single weapon. (See Grapplers and Tractor Beams, below, for the one exception to this rule.) One of the ships forming the wing is declared the wing's commander. The wing commander decides all of the wing's actions and resolves all of the wing's attacks; the other ships forming the wing provide support and follow the commander's lead.

If the wing commander's ship is destroyed or grappled, another ship in the wing may assume the role of wing commander on the wing's next turn.

Movement: All ships in the wing move together, as one ship. The wing commander determines the wing's movement. The wing's tactical speed equals the tactical speed of the slowest ship in the wing.

Attacks: Only the wing commander makes attacks. However, every other ship in the wing can aid the wing commander's attack rolls or Pilot checks using the aid another action; this is the only type of attack action wingmen can take.

Defense: Each wingman provides a +1 cover bonus to the wing commander's Defense. The wing commander, preoccupied with moving and attacking, does not modify the Defense of any ships in the wing.

Attacks of Opportunity: *A wing provokes attacks of opportunity from enemy ships as though it was a single ship. However, damage from a point-defense system is distributed among the ships in the wing as the wing commander sees fit. For example, if a point-defense system deals 180 points of damage to the wing, the wing commander could split the damage evenly among three ships in the wing (each ship would take 60 points of damage), or choose to have one ship take all the damage. A ship's armor reduces the amount of damage it takes normally; conceivably, the damage could be split into small enough fractions that the wing, as a whole, suffers very little damage.*

Grapplers and Tractor Beams: Ships in a wing may be targeted separately by grapplers and tractor beams. (See Grappling Systems, page 143, for more information on these grappling devices.) A grappled ship immediately drops out of formation and is no longer considered part of the wing.

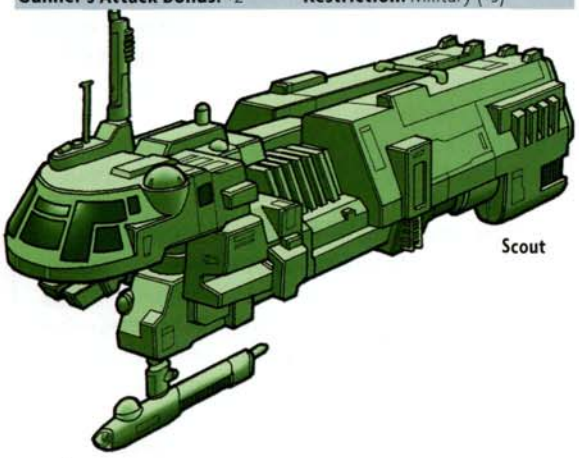
Defense Systems: Autopilot system
Sensors: Class II sensor array, targeting system
Communications: Laser transceiver, radio transceiver
Weapons: 1 laser
Grappling Systems: None

SCOUT (PL 6)

Scouts are designed to cross great distances and locate enemies quickly without engaging in serious combat.

Type: Ultralight	**Size:** Colossal (–8 size)
Subtype: Scout	**Tactical Speed:** 3,500 ft. (7 sq.)

Defense: 7	**Length:** 150 feet
Flat-footed Defense: 5	**Weight:** 600 tons
Autopilot Defense: 5	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 8 (trained +4)
Hit Dice: 15d20 (300 hp)	**Passenger Capacity:** 8
Initiative Modifier: +2	**Cargo Capacity:** 30 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 52
Gunner's Attack Bonus: +2	**Restriction:** Military (+3)



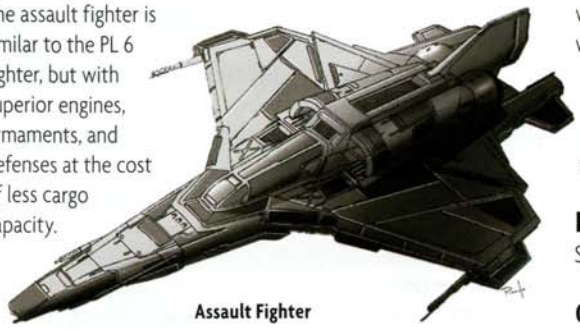
Scout

Attack:
2 fire-linked heavy neutron guns –3 ranged (15d8) and
2 CHE missiles –8 ranged (6d12/19–20)
Attack of Opportunity: None

Standard PL 6 Design Specs:
Engines: Ion engine, thrusters
Armor: Vanadium
Defense Systems: Autopilot system, damage control system (1d10), radiation shielding, self-destruct system, sensor jammer
Sensors: Class II sensor array, targeting system
Communications: Laser transceiver, radio transceiver
Weapons: 2 fire-linked heavy neutron guns (range incr. 6,000 ft.), 2 CHE missile launchers (8 missiles each)
Grappling Systems: Grapplers

ASSAULT FIGHTER (PL 7)

The assault fighter is similar to the PL 6 fighter, but with superior engines, armaments, and defenses at the cost of less cargo capacity.



Assault Fighter

Type: Ultralight	**Size:** Gargantuan (–4 size)
Subtype: Assault fighter	**Tactical Speed:** 4,000 ft. (8 sq.)
Defense: 19	**Length:** 32 feet
Flat-footed Defense: 13	**Weight:** 36,000 lb.
Autopilot Defense: 6	**Targeting System Bonus:** +4
Hardness: 20 (ballistic) or 40 (other damage forms)	**Crew:** 1 (ace +12)
Hit Dice: 9d20 (180 hp)	**Passenger Capacity:** 1
Initiative Modifier: +8	**Cargo Capacity:** 1,200 lb.
Pilot's Class Bonus: +7	**Grapple Modifier:** +8
Pilot's Dex Modifier: +6	**Base Purchase DC:** 48
Gunner's Attack Bonus: +8/+3	**Restriction:** Military (+3)

Attack:
2 fire-linked particle beams +8 ranged (18d8) and
plasma missile +3 ranged (18d8/19–20); or
2 fire-linked particle beams +8/+3 ranged (18d8)
Attack of Opportunity: None

Standard PL 7 Design Specs:
Engines: Induction engine, thrusters
Armor: Deflective
Defense Systems: Autopilot system, improved damage control (2d10), stealth screen
Sensors: Class V sensor array, improved targeting system
Communications: Mass transceiver, radio transceiver
Weapons: 2 fire-linked particle beams (range incr. 4,000 ft.), 1 plasma missile launcher (8 missiles; range incr. 5,000 ft.)
Grappling Systems: None

LIGHT STARSHIP SUBTYPES

Light starships include corvettes, frigates, destroyers, haulers, and industrial ships, such as garbage barges and fuel carriers. Light starships are somewhat better armed and armored than ultralight starships, but sacrifice a little in the way of speed.

A light starship measures 251–500 feet long. It has a 500-foot-by-500-foot fighting space and occupies a single 500-foot square.

In addition, all light starships share the following design specs.

Engines: All light starships have thrusters plus one other type of engine (see Starship Engines, page 131).

Armor: A light starship has one type of armor (see Starship Armor, page 133).

Defensive Systems: A light starship has a maximum of one defensive system per 10 Hit Dice (see Starship Defense Systems, page 134).

Sensors: A light starship has a maximum of two sensor systems (see Starship Sensors, page 136).

Communications: A light starship has up to two external communication systems (see Starship Comm Systems, page 138).

Weapons: A light starship has one beam, projectile, or missile weapon per 10 Hit Dice (see Starship Weapons, page 139). These weapons are often fire-linked. A light starship cannot be armed with mines.

Grappling Systems: A light starship may have up to two grappling systems (see Grappling Systems, page 143). Each grappling system takes away one of the ship's weapon slots (see above).

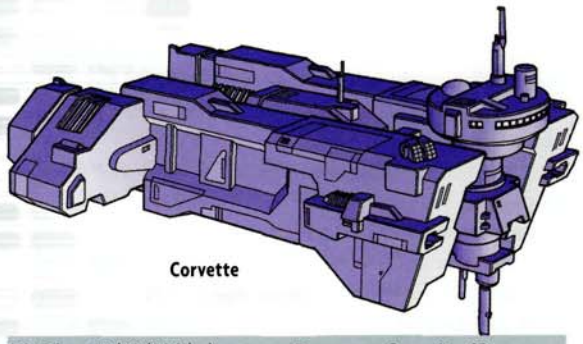
LIGHT SHIP DESCRIPTIONS

Specific subtypes of light starships are given here.

CORVETTE (PL 6)

Essentially a larger version of the escort ship, the corvette serves as both a gunship and fleet escort. Of the military vessels designed to operate independently in wartime, corvettes are the smallest.

Type: Light	**Size:** Colossal (–8 size)
Subtype: Corvette	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 7	**Length:** 320 feet
Flat-footed Defense: 5	**Weight:** 3,200 tons
Autopilot Defense: 5	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 16 (trained +4)



Corvette

Hit Dice: 40d20 (800 hp)	**Passenger Capacity:** 32
Initiative Modifier: +4	**Cargo Capacity:** 150 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 56
Gunner's Attack Bonus: +2	**Restriction:** Military (+3)

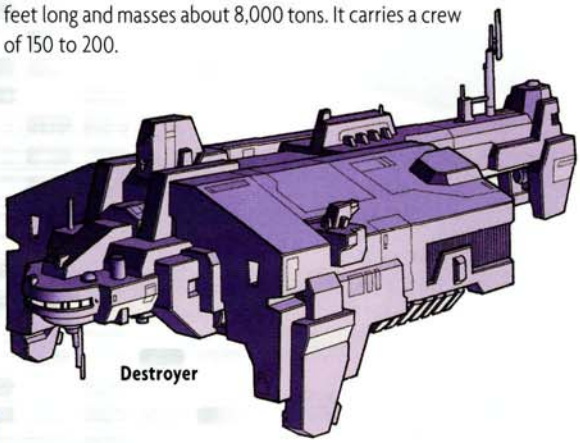
Attack:
2 fire-linked fusion beams –3 ranged (15d8) and
2 fire-linked CHE missiles –8 ranged (9d12/19–20); or
2 fire-linked CHE missiles –3 ranged (9d12/19–20) and
2 fire-linked fusion beams –8 ranged (15d8)

Attack of Opportunity:
Point-defense system +3 ranged (2d12×10)

Standard PL 6 Design Specs:
Engines: Ion engine, thrusters
Armor: Vanadium
Defense Systems: Autopilot system, improved damage control (3d10), magnetic field, point-defense system, radiation shielding
Sensors: Class III sensor array, targeting system
Communications: *Laser transceiver, radio transceiver*
Weapons: 2 fire-linked fusion beams (range incr. 3,000 ft.), 2 fire-linked CHE missile launchers (8 missiles each)
Grappling Systems: Grapplers

DESTROYER (PL 6)

Destroyers take their name from the torpedo-boat destroyers of the late 19th century. They are integral to the defense of a task force, screening it against small craft and attack ships. Destroyers are often armed with one or two bombs or missiles useful against much larger ships. A destroyer is usually about 450 to 600 feet long and masses about 8,000 tons. It carries a crew of 150 to 200.



Destroyer

Type: Light	**Size:** Colossal (–8 size)
Subtype: Destroyer	**Tactical Speed:** 3,000 ft. (6 sq.)
Defense: 11	**Length:** 450 feet
Flat-footed Defense: 7	**Weight:** 8,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 80 (expert +8)
Hit Dice: 80d20 (1,600 hp)	**Passenger Capacity:** 48
Initiative Modifier: +4	**Cargo Capacity:** 400 tons
Pilot's Class Bonus: +5	**Grapple Modifier:** +16
Pilot's Dex Modifier: +4	**Base Purchase DC:** 60
Gunner's Attack Bonus: +4	**Restriction:** Military (+3)

Attack:
4 fire-linked heavy neutron guns –1 ranged (20d8) and
2 fire-linked nuclear missiles –6 melee (24d8/19–20) and needle driver –6 melee (8d12); or
4 fire-linked nuclear missiles –1 ranged (24d8/19–20) and
2 fire-linked heavy neutron guns –6 melee (20d8) and needle driver –6 melee (8d12)

Attack of Opportunity:
Point-defense system +3 ranged (2d12×10)

Standard PL 6 Design Specs:
Engines: Fusion torch, thrusters
Armor: Vanadium
Defense Systems: 1 chaff launcher (16 chaff bundles), 1 decoy drone launcher (4 drones), improved autopilot system, improved damage control (3d10), magnetic field, point-defense system, radiation shielding, self-destruct system
Sensors: Class II sensor array, targeting system
Communications: Laser transceiver, radio transceiver
Weapons: 4 fire-linked heavy neutron guns (range incr. 6,000 ft.), 2 fire-linked nuclear missile launchers (8 missiles each), 1 needle driver (range incr. 4,000 ft.)
Grappling Systems: Grapplers

FRIGATE (PL 6)

A military vessel used for scouting and escort duties, the frigate is primarily intended to act as a screen for larger vessels against attacks by small craft.



Frigate

Type: Light	**Size:** Colossal (–8 size)
Subtype: Frigate	**Tactical Speed:** 3,000 ft. (6 sq.)
Defense: 11	**Length:** 360 feet
Flat-footed Defense: 7	**Weight:** 4,800 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 60 (expert +8)
Hit Dice: 60d20 (1,200 hp)	**Passenger Capacity:** 32
Initiative Modifier: +4	**Cargo Capacity:** 200 tons
Pilot's Class Bonus: +5	**Grapple Modifier:** +16
Pilot's Dex Modifier: +4	**Base Purchase DC:** 60
Gunner's Attack Bonus: +4	**Restriction:** Military (+3)

Attack:
2 fire-linked heavy neutron guns –1 ranged (15d8) and
2 nuclear missiles –6 ranged (16d8/19–20) and needle driver –6 ranged (8d12); or
2 fire-linked nuclear missiles –1 ranged (24d8/19–20) and
2 unlinked heavy neutron guns –6 ranged (10d8) and needle driver –6 ranged (8d12); or

Attack of Opportunity:
Point-defense system +3 ranged (2d12×10)

Standard PL 6 Design Specs:

Engines: Fusion torch, thrusters

Armor: Vanadium

Defense Systems: Improved autopilot, improved damage control (3d10), magnetic field, point-defense system, radiation shielding, self-destruct system

Sensors: Class II sensor array, targeting system

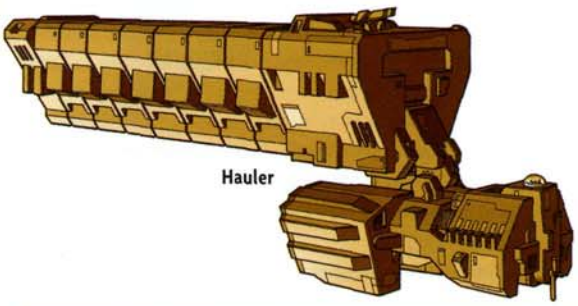
Communications: *Laser transceiver, radio transceiver*

Weapons: 2 fire-linked heavy neutron guns (range incr. 6,000 ft.), 2 fire-linked nuclear missile launchers (8 missiles each), 1 needle driver (range incr. 4,000 ft.)

Grappling Systems: Grapplers

HAULER (PL 6)

The hauler is a space-going tug that drags heavy, nonpowered loads and modular cargo containers, though they have precious little cargo space of their own. Haulers are fitted with big power plants and huge engines, at the expense of crew quarters and armaments.



Hauler

Type: Light	**Size:** Colossal (–8 size)
Subtype: Hauler	**Tactical Speed:** 2,500 ft. (5 sq.)
Defense: 7	**Length:** 450 feet
Flat-footed Defense: 5	**Weight:** 6,000 tons
Autopilot Defense: 5	**Targeting System Bonus:** +3
Hardness: 20	**Crew:** 8 (trained +4)
Hit Dice: 36d20 (720 hp)	**Passenger Capacity:** 8
Initiative Modifier: +2	**Cargo Capacity:** 3,300 tons
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 heavy lasers –3 ranged (12d8)

Attack of Opportunity:

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

Standard PL 6 Design Specs:

Engines: Fusion torch, thrusters

Armor: Alloy plating

Defense Systems: Autopilot system, damage control system (2d10), point-defense system

Sensors: Class II sensor array, targeting system

Communications: Laser transceiver, radio transceiver

Weapons: *2 fire-linked heavy lasers (range incr. 4,000 ft.)*

Grappling Systems: Grapplers

MEDIUMWEIGHT STARSHIP SUBTYPES

Mediumweight starships encompass cruisers, clippers, and most transports. They balance firepower and defense with speed and maneuverability.

A mediumweight starship measures 501–1,000 feet long. It occupies a 1,000-foot-by-1,000-foot fighting space (4 500-foot squares).

In addition, all mediumweight starships share the following design specs.

Engines: All mediumweight starships have thrusters plus one other type of engine (see Starship Engines, page 131).

Armor: A mediumweight starship has one type of armor (see Starship Armor, page 133).

Defensive Systems: A mediumweight starship has a maximum of one defensive system per 25 Hit Dice (see Starship Defense Systems, page 134).

Sensors: A mediumweight starship has a maximum of three sensor systems (see Starship Sensors, page 136).

Communications: A mediumweight starship has up to two external communication systems (see Starship Comm Systems, page 138).

Weapons: A mediumweight starship has one beam, projectile, or missile weapon per 25 Hit Dice (see Starship Weapons, page 139). These weapons are often fire-linked or arrayed in batteries.

A minelayer is considered a single weapon. Although it weighs no more than a few thousand pounds, each mine consumes 100 tons of a ship's cargo capacity (most of it taken up by the launch system and radiation shielding).

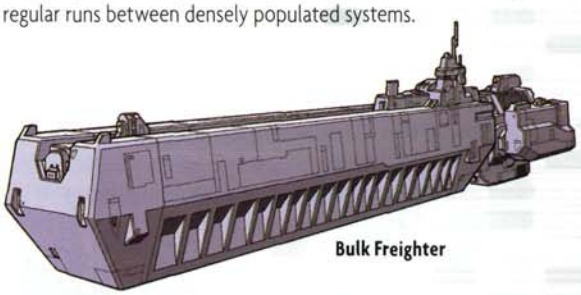
Grappling Systems: A mediumweight starship may have up to two grappling systems (see Grappling Systems, page 143). Each grappling system takes away one of the ship's weapon slots (see above).

MEDIUMWEIGHT SHIP DESCRIPTIONS

Specific subtypes of mediumweight starships are given here.

BULK FREIGHTER (PL 6)

Bulk freighters usually carry cargo in bulk containers, and carry out regular runs between densely populated systems.



Bulk Freighter

Type: Mediumweight	**Size:** Colossal (–8 size)
Subtype: Bulk freighter	**Tactical Speed:** 2,500 ft. (5 sq.)
Defense: 7	**Length:** 800 feet
Flat-footed Defense: 5	**Weight:** 32,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 20	**Crew:** 8 (trained +4)
Hit Dice: 125d20 (2,500 hp)	**Passenger Capacity:** 8
Initiative Modifier: +2	**Cargo Capacity:** 20,000 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 60
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

Attack:

4 fire-linked heavy lasers –3 ranged (16d8)

Attack of Opportunity:

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

Standard PL 6 Design Specs:

Engines: Fusion torch, thrusters

Armor: Alloy plating

Defense Systems: Improved autopilot system, improved damage control (4d10), point-defense system, radiation shielding, sensor jammer

Sensors: Class II sensor array, targeting system

Communications: Laser transceiver, radio transceiver

Weapons: 4 fire-linked heavy lasers (range incr. 4,000 ft.)

Grappling Systems: Grapplers

CLIPPER (PL 6)

This small liner or personnel transport is intended for passenger use, as opposed to heavy cargo. Clippers are frequently fitted with top-of-the-line engines for the best possible speed.

Type: Mediumweight	**Size:** Colossal (–8 size)
Subtype: Clipper	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 7	**Length:** 850 feet
Flat-footed Defense: 5	**Weight:** 27,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 32 (trained +4)
Hit Dice: 150d20 (3,000 hp)	**Passenger Capacity:** 80
Initiative Modifier: +2	**Cargo Capacity:** 10,000 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 60
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

Attack:

Battery of 5 lasers +1 ranged (6d8/19–20)

Attack of Opportunity:

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

Standard PL 6 Design Specs:

Engines: Ion engine, thrusters

Armor: Vanadium

Defense Systems: Damage control (3d10), 1 decoy drone launcher (2 drones), improved autopilot system, magnetic field, point-defense system, radiation shielding

Sensors: Class II sensor array, targeting system

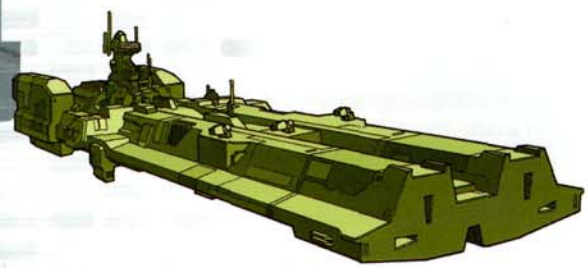
Communications: Laser transceiver, radio transceiver

Weapons: 1 battery of 5 lasers (range incr. 3,000 ft.)

Grappling Systems: Grapplers

CRUISER (PL 6)

The cruiser is a warship that serves several roles. It may be part of a task force, escorting capital ships or laying mines. It may operate independently as a scout and raider. Conversely, it may serve in diplomatic and scientific tasks. Light cruisers frequently have outstanding endurance and can operate with little or no resupply for months on end. A cruiser hull could serve equally well as an escort carrier or assault transport.



Cruiser

Type: Mediumweight	**Size:** Colossal (–8 size)
Subtype: Cruiser	**Tactical Speed:** 3,000 ft. (6 sq.)
Defense: 7	**Length:** 720 feet
Flat-footed Defense: 5	**Weight:** 28,800 tons
Autopilot Defense: 5	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 120 (trained +4)
Hit Dice: 200d20 (4,000 hp)	**Passenger Capacity:** 80
Initiative Modifier: +6	**Cargo Capacity:** 7,200 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 64
Gunner's Attack Bonus: +2	**Restriction:** Military (+3)

Attack:

Battery of 3 fusion beams –1 ranged (10d8/19–20) and battery of 3 CHE missiles –6 ranged (6d12/18–20); or Battery of 3 CHE missiles –1 ranged (6d12/18–20) and battery of 4 fusion beams –6 ranged (10d8/19–20)

Attack of Opportunity:

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

Standard PL 6 Design Specs:

Engines: Fusion torch, thrusters

Armor: Vanadium

Defense Systems: Autopilot system, 1 chaff launcher (8 chaff bundles), 1 decoy drone launcher (8 drones), improved damage control (4d10), magnetic field, point-defense system, radiation shielding, self-destruct system

Sensors: Class III sensor array, targeting system

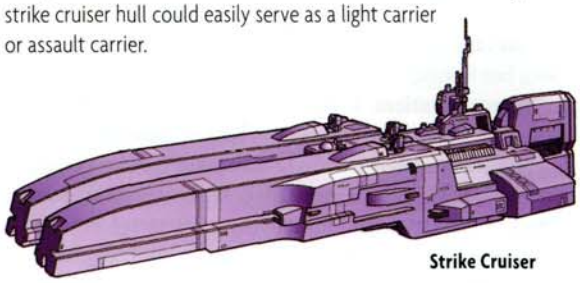
Communications: Laser transceiver, radio transceiver

Weapons: 1 battery of 4 fusion beams (range incr. 3,000 ft.), 1 battery of 3 CHE missile launchers (24 missiles each), 1 minelayer (36 fusion mines with magnetic fields and stealth screens; 5d10×10 damage)

Grappling Systems: Grapplers

STRIKE CRUISER (PL 7)

These armored cruisers often serve as the centerpiece of raiding or patrolling task forces, especially if heavier warships are unavailable. Many strike cruisers are configured for task force command functions; the command cruiser is a common variant of this hull type. A strike cruiser hull could easily serve as a light carrier or assault carrier.



Strike Cruiser

Type: Mediumweight	**Size:** Colossal (–8 size)
Subtype: Strike cruiser	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 11	**Length:** 950 feet
Flat-footed Defense: 7	**Weight:** 38,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +5
Hardness: 40	**Crew:** 160 (expert +8)
Hit Dice: 250d20 (5,000 hp)	**Passenger Capacity:** 40
Initiative Modifier: +8	**Cargo Capacity:** 1,200 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:
Battery of 4 antimatter guns +4 ranged (10d8/19–20) and battery of 3 plasma missiles –2 ranged (18d8/18–20); or
Battery of 3 plasma missiles +3 ranged (18d8/18–20) and battery of 4 antimatter guns –1 ranged (10d8/19–20)

Attack of Opportunity:
Point-defense system +5 ranged (3d12×10)

Standard PL 7 Design Specs:

Engines: Particle impulse engine, thrusters

Armor: Neutronite

Defense Systems: 1 chaff launcher (16 chaff bundles), improved autopilot system, improved damage control (4d10), light fortification, magnetic field, particle 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: 1 battery of 4 antimatter guns (range incr. 5,000 ft.), 1 battery of 3 plasma missile launchers (16 missiles each), 1 minelayer (8 gravitic mines with displacers, magnetic fields, and particle fields; 10d10×10 damage)

Grappling Systems: Grapplers, tractor beam emitter

HEAVY STARSHIP SUBTYPES

Heavy starships are the workhorses of space travel: battle cruisers, battleships, fleet carriers, tankers, liners, and heavy transports. They move relatively quickly—thanks to massive engines—but maneuver very slowly. Their real strength lies in their armor and armaments; even civilian heavy starships are built to take a pounding.

A heavy starship measures 1,001–1,500 feet long. It has a 1,500-foot-by-1,500-foot fighting space (9 500-foot squares).

In addition, all heavy starships share the following design specs.

Engines: All heavy starships have thrusters plus one other type of engine (see Starship Engines, page 131).

Armor: A heavy starship has one type of armor (see Starship Armor, page 133).

Defensive Systems: A heavy starship has a maximum of one defensive system per 50 Hit Dice (see Starship Defense Systems, page 134).

Sensors: A heavy starship has a maximum of three sensor systems (see Starship Sensors, page 136).

Communications: A heavy starship has two external communication systems (see Starship Comm Systems, page 138).

Weapons: A heavy starship has one beam, projectile, or missile weapon per 50 Hit Dice (see Starship Weapons, page 139). These weapons are often arrayed in batteries.

A minelayer is considered a single weapon. Although it weighs no more than a few thousand pounds, each mine consumes 100 tons of a ship's cargo capacity (most of it taken up by the launch system and radiation shielding).

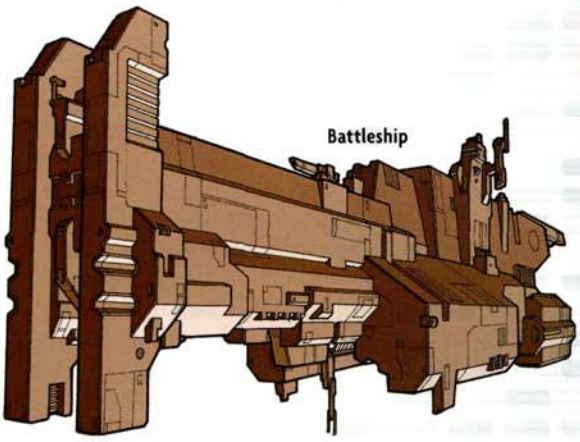
Grappling Systems: A heavy starship may have up to two grappling systems (see Grappling Systems, page 143). Each grappling system takes away one of the ship's weapon slots (see above).

HEAVY SHIP DESCRIPTIONS

Specific subtypes of heavy starships are given here.

BATTLESHIP (PL 6)

The mainstay of many spacefaring navies, the battleship is heavily armed and armored, although not very maneuverable. Battleships serve as the backbone of any battle fleet.



Type: Heavy	**Size:** Colossal (–8 size)
Subtype: Battleship	**Tactical Speed:** 3,000 ft. (6 sq.)
Defense: 11	**Length:** 1,250 feet
Flat-footed Defense: 7	**Weight:** 125,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 400 (expert +8)
Hit Dice: 400d20 (8,000 hp)	**Passenger Capacity:** 200
Initiative Modifier: +4	**Cargo Capacity:** 30,000 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:
Battery of 3 heavy neutron guns +1 ranged (10d8/19–20) and 2 fire-linked nuclear missiles –6 ranged (24d8/19–20) and needle driver –6 ranged (8d12); or
2 fire-linked nuclear missiles –1 ranged (24d8/19–20) and battery of 3 heavy neutron guns –4 ranged (10d8/19–20) and needle driver –6 ranged (8d12)

Attack of Opportunity:
Point-defense system +3 ranged (4d12×10)

Standard PL 6 Design Specs:

Engines: Fusion torch, thrusters

Armor: Vanadium

Defense Systems: 1 chaff launcher (16 chaff bundles), 1 decoy drone launcher (4 drones), improved autopilot system, improved damage control (5d10), magnetic field, point-defense system, radiation shielding, self-destruct system

Sensors: Class II sensor array, targeting system

Communications: Laser transceiver, radio transceiver

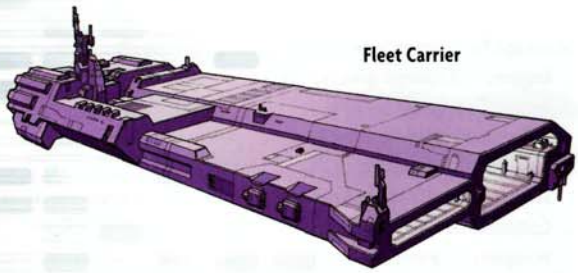
Weapons: 1 battery of 4 heavy neutron guns (range incr. 6,000 ft.), 2 fire-linked nuclear missile launchers (16 missiles each), 1 needle driver (range incr. 4,000 ft.)

Grappling Systems: *Grapplers*

FLEET CARRIER (PL 6)

The fleet carrier has the ability to launch devastating attacks from millions of miles away, in the form of large numbers of fighters or assault fighters. Most fleet carriers are lightly armed, as they rely on their escorting vessels and payload of fighters to defend them against attack.

In addition to its normal cargo capacity, a fleet carrier can hold 16 fighters or assault fighters. Its listed crew complement does not include the ace pilots who fly these fighter craft. (Pilots count against the passenger capacity.) A fleet carrier can deploy up to 4 ultralight craft as a move action.



Fleet Carrier

Type: Heavy	**Size:** Colossal (–8 size)
Subtype: Fleet carrier	**Tactical Speed:** 3,000 ft. (6 sq.)
Defense: 11	**Length:** 1,400 feet
Flat-footed Defense: 7	**Weight:** 140,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 320 (expert +8)
Hit Dice: 500d20 (10,000 hp)	**Passenger Capacity:** 80
Initiative Modifier: +6	**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:
Battery of 5 neutron guns +3 ranged (6d8/19–20) and 2 batteries of 2 CHE missiles –5 ranged (6d12/18–20)

Attack of Opportunity:
Point-defense system +3 ranged (4d12×10)

Standard PL 6 Design Specs:

Engines: Fusion torch, thrusters

Armor: Vanadium

Defense Systems: 2 chaff launchers (8 chaff bundles each), 2 decoy drone launchers (4 drones each), improved autopilot system, improved damage control (5d10), magnetic field, point-defense system, radiation shielding, self-destruct system

Sensors: Class III sensor array, targeting system

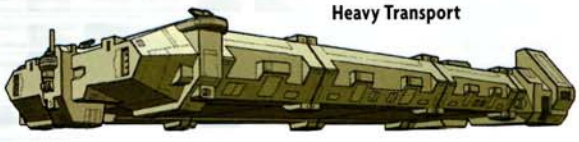
Communications: Laser transceiver, radio transceiver

Weapons: 1 battery of 5 neutron guns (range incr. 5,000 ft.), 2 batteries of 2 CHE missile launchers (4 launchers total, 16 missiles each)

Grappling Systems: Grapplers

HEAVY TRANSPORT (PL 6)

The heavy transport is designed to move great amounts of specialized cargo such as bulk freight, containerized freight, or roll-on/roll-off vehicle storage.



Heavy Transport

Type: Heavy	**Size:** Colossal (–8 size)
Subtype: Heavy transport	**Tactical Speed:** 3,000 ft. (6 sq.)
Defense: 7	**Length:** 1,320 feet
Flat-footed Defense: 5	**Weight:** 120,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 24 (trained +4)
Hit Dice: 350d20 (7,000 hp)	**Passenger Capacity:** 20
Initiative Modifier: +2	**Cargo Capacity:** 60,000 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 68
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

Attack:
Battery of 3 heavy lasers –1 ranged (8d8/19–20) and battery of 3 gauss guns –6 ranged (8d12/19–20); or Battery of 3 gauss guns –1 ranged (8d8/19–20) and battery of 3 heavy lasers –6 ranged (8d12/19–20)

Attack of Opportunity:
Point-defense system +3 ranged (4d12×10)

Standard PL 6 Design Specs:

Engines: Fusion torch, thrusters

Armor: Vanadium

Defense Systems: Damage control system (4d10), decoy drone launcher (2 drones), improved autopilot, magnetic field, point-defense system, radiation shielding, sensor jammer

Sensors: Class II sensor array, targeting system

Communications: Laser transceiver, radio transceiver

Weapons: 1 battery of 3 heavy lasers (range incr. 4,000 ft.), 1 battery of 3 gauss guns (range incr. 4,000 ft.)

Grappling Systems: Grapplers

TANKER (PL 6)

A tanker is a large starship intended for the transport of large quantities of gases or liquids. It can be adapted for other forms of cargo storage, but most ships of this size carry water, hydrogen, petrochemicals, or oxygen.

Type: Heavy	**Size:** Colossal (–8 size)
Subtype: Tanker	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 7	**Length:** 1,200 feet
Flat-footed Defense: 5	**Weight:** 120,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 32 (trained +4)
Hit Dice: 250d20 (5,000 hp)	**Passenger Capacity:** 8
Initiative Modifier: +2	**Cargo Capacity:** 52,000 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 64
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

Attack:
1 battery of 4 heavy lasers +0 ranged (8d8/19–20)

Attack of Opportunity:
Point-defense system +3 ranged (4d12×10)

Standard PL 6 Design Specs:

Engines: Ion engine, thrusters

Armor: Vanadium

Defense Systems: Damage control system (4d10), improved autopilot, point-defense system, radiation shielding, sensor jammer

Sensors: Class II sensor array, targeting system

Communications: Laser transceiver, radio transceiver

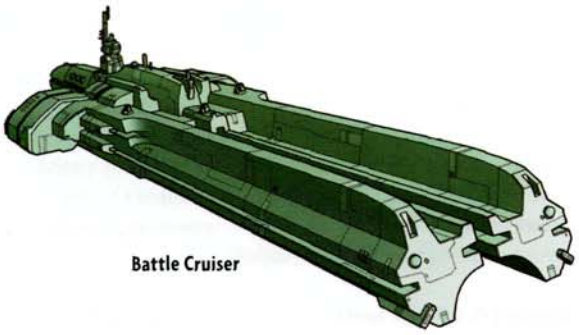
Weapons: 1 battery of 4 heavy lasers (range incr. 4,000 ft)

Grappling Systems: Grapplers

BATTLE CRUISER (PL 7)

The battle cruiser is a formidable warship that sacrifices weight of armor in exchange for speed. Its heavy weapons can make short work of any smaller vessel, and it can usually outrun anything big enough to stand up to it in a fair fight.

Type: Heavy	**Size:** Colossal (–8 size)
Subtype: Battle Cruiser	**Tactical Speed:** 4,000 ft. (8 sq.)
Defense: 11	**Length:** 1,360 feet



Battle Cruiser

Flat-footed Defense: 7	**Weight:** 140,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +5
Hardness: 30	**Crew:** 320 (expert +8)
Hit Dice: 450d20 (9,000 hp)	**Passenger Capacity:** 160
Initiative Modifier: +4	**Cargo Capacity:** 50,000 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:
4 fire-linked heavy particle beams +1 ranged (32d8) and 1 battery of 3 plasma missiles –2 ranged (18d8/18–20)

Attack of Opportunity:
Point-defense +5 ranged (4d12×10)

Standard PL 7 Design Specs:

Engines: Particle impulse engine, thrusters

Armor: Cerametal

Defense Systems: 1 chaff launcher (8 chaff bundles), 1 decoy drone launcher (4 drones), improved autopilot, improved damage control (5d10), magnetic field, particle field, radiation shielding, self-destruct system

Sensors: Class IV sensor array, improved targeting system

Communications: Drivesat comm array, mass transceiver

Weapons: 4 fire-linked heavy particle beams (range incr. 5,000 ft.), 1 battery of 3 plasma missile launchers (16 missiles each), 1 minelayer (50 gravitic mines with displacers, magnetic fields, and particle fields; 10d10×10 damage)

Grappling Systems: Tractor beam emitter

LINER (PL 7)

This is a full-sized passenger ship. Althought any vessel this size can't avoid carrying some cargo, the liner specializes in moving a large number of passengers, usually in varying degrees of luxury.

Type: Heavy	**Size:** Colossal (–8 size)
Subtype: Liner	**Tactical Speed:** 4,000 ft. (8 sq.)
Defense: 7	**Length:** 1,200 feet
Flat-footed Defense: 5	**Weight:** 84,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +5
Hardness: 30	**Crew:** 200 (trained +4)
Hit Dice: 250d20 (5,000 hp)	**Passenger Capacity:** 800
Initiative Modifier: +2	**Cargo Capacity:** 40,000 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 68
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

Attack:
Battery of 4 plasma cannons +2 ranged (14d8/19–20)

Attack of Opportunity:
Point-defense system +5 ranged (4d12×10)

Standard PL 7 Design Specs:

Engines: Induction engine, thrusters

Armor: Cerametal

Defense Systems: Damage control (4d10), improved autopilot system, particle field, point-defense system

Sensors: Class IV sensor array, improved targeting system

Communications: Drivesat comm array, mass transceiver

Weapons: 1 battery of 4 plasma cannons (range incr. 3,000 ft.)

Grappling Systems: Tractor beam emitter

SUPERHEAVY STARSHIP SUBTYPES

Superheavy starships include mammoth, ponderous dreadnoughts, super-carriers, and super-freighters.

A superheavy starship measures 1,501 feet long or longer. The smallest superheavy starships (measuring 1,501–2,000 feet long) have a 2,000-foot-by-2,000-foot fighting space (16 500-foot squares), although larger fighting spaces are possible.

In addition, all superheavy starships share the following design specs.

Engines: All superheavy starships have thrusters plus as many as two other types of engine (see Starship Engines, page 131).

Armor: A superheavy starship has one type of armor (see Starship Armor, page 133).

Defensive Systems: A superheavy starship has a maximum of one defensive system per 150 Hit Dice (see Starship Defense Systems, page 134).

Sensors: A superheavy starship has a maximum of three sensor systems (see Starship Sensors, page 136).

Communications: A superheavy starship has two external communication systems (see Starship Comm Systems, page 138).

Weapons: A superheavy starship has one beam, projectile, or missile weapon per 150 Hit Dice (see Starship Weapons, page 139). These weapons are often arrayed in batteries.

A minelayer is considered a single weapon. Although it weighs no more than a few thousand pounds, each mine consumes 100 tons of a ship's cargo capacity (most of it taken up by the launch system and radiation shielding).

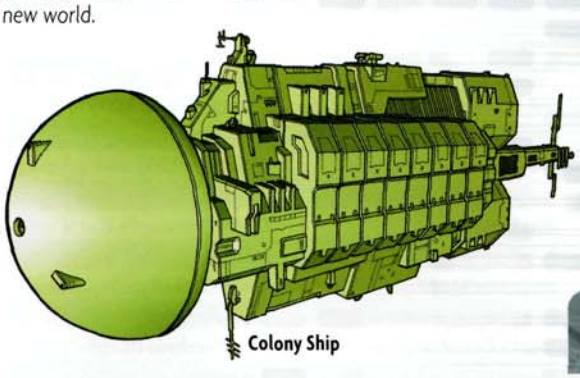
Grappling Systems: A superheavy starship may have up to two grappling systems (see Grappling Systems, page 143). Each grappling system takes away one of the ship's weapon slots (see above).

SUPERHEAVY SHIP DESCRIPTIONS

Specific subtypes of superheavy starships are given here.

COLONY SHIP (PL 7)

This massive vessel is designed to haul everything a new colony needs to get started. Its cavernous storage decks can accommodate thousands of colonists with heavy machinery, prefabricated buildings, equipment, and supplies throughout the long trip to a new world.



Colony Ship

Type: Superheavy	**Size:** Colossal (–8 size)
Subtype: Colony ship	**Tactical Speed:** 4,000 ft. (8 sq.)
Defense: 7	**Length:** 2,000 feet
Flat-footed Defense: 5	**Weight:** 400,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +5
Hardness: 30	**Crew:** 400 (trained +4)
Hit Dice: 800d20 (16,000 hp)	**Passenger Capacity:** 2,000
Initiative Modifier: +2	**Cargo Capacity:** 100,000 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 72
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

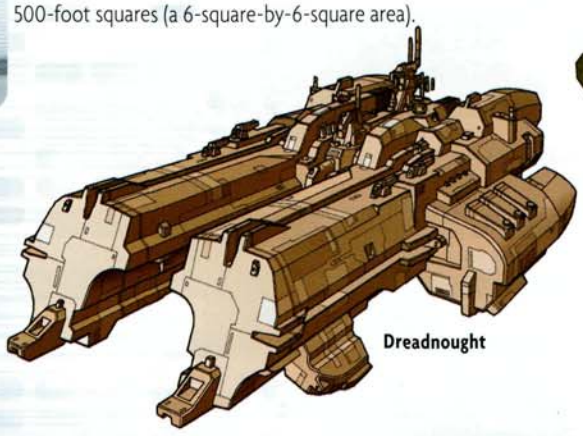
Attack:
Battery of 4 particle beams +2 ranged (12d8/19–20) and battery of 2 plasma missiles –5 ranged (18d8/18–20); or Battery of 2 plasma missiles +0 ranged (18d8/18–20) and battery of 4 particle beams –3 ranged (12d8/19–20)

Attack of Opportunity:
Point-defense system +5 ranged (5d12×10)

Standard PL 7 Design Specs:
Engines: Particle impulse engine, photon sails, thrusters
Armor: Cerametal
Defense Systems: Improved autopilot system, improved damage control (6d10), magnetic field, particle field, point-defense system, radiation shielding, repair drones, self-destruct system
Sensors: Class IV sensor array, improved targeting system
Communications: Drivesat comm array, mass transceiver
Weapons: 1 battery of 4 particle beams (range incr. 4,000 ft.), 1 battery of 2 plasma missile launchers (16 missiles each)
Grappling Systems: Grapplers, tractor beam emitter

DREADNOUGHT (PL 7)

The mightiest ships found in the battle lines of a stellar navy, dreadnoughts are titanic vessels armed with awesome firepower and virtually impregnable defenses. Its fighting space takes up 36 500-foot squares (a 6-square-by-6-square area).


Dreadnought

Type: Superheavy	**Size:** Colossal (–8 size)
Subtype: Dreadnought	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 11	**Length:** 2,750 feet
Flat-footed Defense: 7	**Weight:** 540,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +5
Hardness: 40	**Crew:** 2,000 (expert +8)
Hit Dice: 1,200d20 (24,000 hp)	**Passenger Capacity:** 1,600
Initiative Modifier: +6	**Cargo Capacity:** 120,000 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:
4 fire-linked quantum cannons +1 ranged (32d8) and battery of 4 heavy mass cannons –1 ranged (10d12/19–20) and 2 fire-linked mass reaction missiles –4 ranged (20d8/18–20)

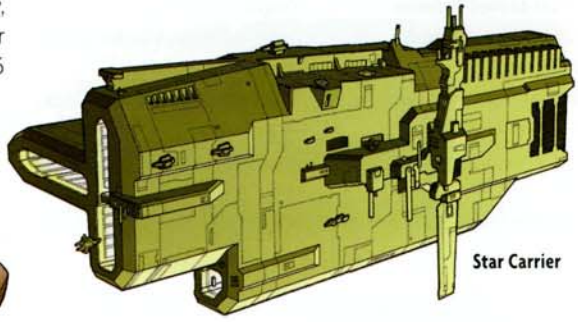
Attack of Opportunity:
Point-defense system +5 ranged (5d12×10)

Standard PL 7 Design Specs:
Engines: Induction engine, thrusters
Armor: Neutronite
Defense Systems: 1 chaff launcher (8 chaff bundles), 1 decoy drone launcher (8 drones), displacer, improved autopilot system, improved damage control (6d10), light fortification, magnetic field, particle field, point-defense system, radiation shielding, repair drones, self-destruct system
Sensors: Class V sensors, improved targeting system
Communications: Drivesat comm array, mass transceiver
Weapons: 1 battery of 4 heavy mass cannons (range incr. 6,000 ft.), 4 fire-linked quantum cannons (range incr. 6,000 ft.), 1 battery of 2 mass reaction missile launchers (60 missiles each), 1 minelayer (100 gravitic mines with displacers, magnetic fields, and particle fields; 10d10×10 damage)
Grappling Systems: Tractor beam emitter

STAR CARRIER (PL 7)

A larger version of the fleet carrier, the star carrier serves as a mobile base for smaller craft. A star carrier's fighting space takes up 36 500-foot squares (a 6-square-by-6-square area).

In addition to its normal cargo capacity, a star carrier can hold 72 fighters or assault fighters. Its listed crew complement does not include the ace pilots who fly these fighter craft. (Pilots count against the passenger capacity.) A star carrier can deploy up to 8 ultralight craft as a move action.


Star Carrier

Type: Superheavy	**Size:** Colossal (–8 size)
Subtype: Star carrier	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 11	**Length:** 3,000 feet
Flat-footed Defense: 7	**Weight:** 600,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +5
Hardness: 40	**Crew:** 2,400 (expert +8)
Hit Dice: 1,000d20 (20,000 hp)	**Passenger Capacity:** 600
Initiative Modifier: +6	**Cargo Capacity:** 200,000 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:
Battery of 5 mass cannons +5 ranged (8d12/19–20) and battery of 4 antimatter guns –1 ranged (10d8/19–20)

Attack of Opportunity:
Point-defense system +5 ranged (5d12×10)

Standard PL 7 Design Specs:

Engines: Induction engine, thrusters

Armor: Neutronite

Defense Systems: 1 decoy drone launcher (4 drones), improved autopilot system, improved damage control (6d10), light fortification, magnetic field, particle field, point-defense system, radiation shielding, repair drones, self-destruct system

Sensors: Class V sensors, improved targeting system

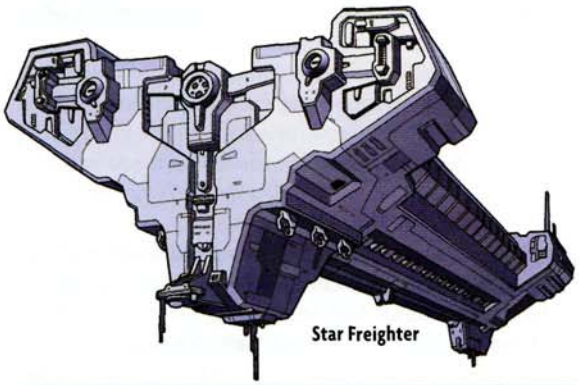
Communications: Drivesat comm array, mass transceiver

Weapons: 1 battery of 5 mass cannons (range incr. 5,000 ft.), 1 battery of 4 antimatter guns (range incr. 5,000 ft.)

Grappling Systems: Tractor beam emitter

STAR FREIGHTER (PL 7)

The largest of the starships built for routine commercial purposes, the star freighter can be modified to serve as a super-tanker or super-transport.



Star Freighter

Type: Superheavy	**Size:** Colossal (–8 size)
Subtype: Freighter	**Tactical Speed:** 4,000 ft. (8 sq.)
Defense: 7	**Length:** 1,800 feet
Flat-footed Defense: 5	**Weight:** 320,000 tons
Autopilot Defense: 7	**Targeting System Bonus:** +3
Hardness: 30	**Crew:** 40 (trained +4)
Hit Dice: 800d20 (16,000 hp)	**Passenger Capacity:** 24
Initiative Modifier: +2	**Cargo Capacity:** 200,000 tons
Pilot's Class Bonus: +3	**Grapple Modifier:** +16
Pilot's Dex Modifier: +2	**Base Purchase DC:** 76
Gunner's Attack Bonus: +2	**Restriction:** Restricted (+2)

Attack:

2 batteries of 3 heavy particle beams –1 ranged (16d8/19–20)

Attack of Opportunity:

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

Standard PL 7 Design Specs:

Engines: Particle impulse engine, thrusters

Armor: Cerametal

Defense Systems: Damage control system (5d10), improved autopilot system, magnetic field, particle field, point-defense system, radiation shielding, repair drones, self-destruct system

Sensors: Class IV sensor array, improved targeting system

Communications: Drivesat comm array, mass transceiver

Weapons: 2 batteries of 3 heavy particle beams (range incr. 5,000 ft.)

Grappling Systems: Grapplers, tractor beam emitter

STARSHIP CLASS TEMPLATES

A starship class template allows players and GMs to create modified or improved versions of the various starship subtypes presented in this chapter. A template usually has an evocative name, giving rise to such ships as the *Lightning*-class frigate or the *Katana*-class assault fighter.

A starship class template is nothing more than an alternative list of design specs that allow players and GMs to increase (or decrease) a ship's Hit Dice and swap out some or all of a starship's systems.

The following starship class templates are presented as examples:

LIGHTNING-CLASS TEMPLATE (PL 7)

The *Lightning*-class template can be applied to any PL 6 light starship. The starship's design specs should be adjusted as follows.

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

Armor Upgrade: Neutronite (hardness 40, tactical speed –500 feet).

Defense System Upgrade: Light fortification (25% chance to ignore a critical hit; replaces a PL 5 or PL 6 defense system).

Sensors Upgrade: Class V sensor array (+2 initiative), improved targeting system (targeting system bonus +5).

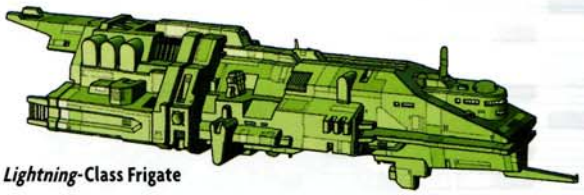
Communications Upgrade: Drivesat comm array, mass transceiver.

Weapons Upgrade: 2 fire-linked quantum cannons (24d8 damage; range incr. 6,000 ft.; replaces PL 5 or PL 6 fire-linked weapon system).

Grappling System Upgrade: Tractor beam emitter (replaces grapplers).

LIGHTNING-CLASS FRIGATE (PL 7)

This frigate is swifter and better equipped than its PL 6 counterpart and can be deployed quickly to the front lines to greet any threat.



***Lightning*-Class Frigate**

Type: Light	**Size:** Colossal (–8 size)
Subtype: Frigate	**Tactical Speed:** 3,500 ft. (7 sq.)
Defense: 11	**Length:** 360 feet
Flat-footed Defense: 7	**Weight:** 4,800 tons
Autopilot Defense: 7	**Targeting System Bonus:** +5
Hardness: 40	**Crew:** 60 (expert +8)
Hit Dice: 60d20 (1,200 hp)	**Passenger Capacity:** 32
Initiative Modifier: +6	**Cargo Capacity:** 200 tons
Pilot's Class Bonus: +5	**Grapple Modifier:** +16
Pilot's Dex Modifier: +4	**Base Purchase DC:** 60
Gunner's Attack Bonus: +4	**Restriction:** Military (+3)

Attack:

2 fire-linked quantum cannons +1 ranged (24d8) and
2 nuclear missiles –4 ranged (16d8/19–20) and
needle driver –4 ranged (8d12); or
2 fire-linked nuclear missiles +1 ranged (24d8/19–20) and
2 unlinked quantum cannons –4 ranged (16d8) and
needle driver –4 ranged (8d12); or

Attack of Opportunity:
Point-defense system +5 ranged (2d12×10)

Design Specs:
Engines: Induction engine, thrusters
Armor: Neutronite
Defense Systems: Improved autopilot, improved damage control (3d10), light fortification, point-defense system, radiation shielding, self-destruct system
Sensors: Class V sensor array, improved targeting system
Communications: Drivesat comm array, mass transceiver
Weapons: 2 fire-linked quantum cannons (range incr. 6,000 ft.), 2 fire-linked nuclear missile launchers (8 missiles each), 1 needle driver (range incr. 4,000 ft.)
Grappling Systems: Tractor beam emitter

KATANA-CLASS TEMPLATE (PL 8)

The *Katana*-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: Inertial flux engine, thrusters (tactical speed +1,500 feet).
Armor Upgrade: Ablative (hardness 40).
Defense System Upgrade: Advanced damage control (3d10), magnetic field, medium fortification (50% chance to ignore a critical hit; replaces a PL 6 or PL 7 defense system).
Sensors Upgrade: Class VII sensor array (+2 initiative), improved targeting system, Achilles targeting software (increases threat range of all weapon systems by 1).
Communications Upgrade: Drive transceiver.
Weapons Upgrade: 2 fire-linked maser cannons (18d8 damage; range incr. 6,000 ft.; replaces PL 6 or PL 7 fire-linked weapon system).

KATANA-CLASS ASSAULT FIGHTER (PL 8)

The *Katana*-class assault fighter's Achilles targeting software increases the deadliness of its attacks. The ship strikes fast and strikes hard—and it can take some punishment.



***Katana*-Class Assault Fighter**

Type: Ultralight	**Size:** Gargantuan (–4 size)
Subtype: Assault fighter	**Tactical Speed:** 4,500 ft. (9 sq.)
Defense: 19	**Length:** 32 feet
Flat-footed Defense: 13	**Weight:** 36,000 lb.
Autopilot Defense: 6	**Targeting System Bonus:** +4
Hardness: 40	**Crew:** 1 (ace +12)
Hit Dice: 10d20 (200 hp)	**Passenger Capacity:** 1
Initiative Modifier: +8	**Cargo Capacity:** 1,200 lb.
Pilot's Class Bonus: +7	**Grapple Modifier:** +8
Pilot's Dex Modifier: +6	**Base Purchase DC:** 48
Gunner's Attack Bonus: +8/+3	**Restriction:** Military (+3)

Attack:
2 fire-linked maser cannons +8 ranged (18d8/19–20) and plasma missile +3 ranged (18d8/18–20); or
2 fire-linked maser cannons +8/+3 ranged (18d8/19–20)
Attack of Opportunity: None

Design Specs:
Engines: Inertial flux engine, thrusters
Armor: Ablative
Defense Systems: Advanced damage control (3d10), magnetic field, medium fortification
Sensors: Achilles targeting system, class VII sensor array, improved targeting system
Communications: Drive transceiver
Weapons: 2 fire-linked maser cannons (range incr. 6,000 ft.), 1 plasma missile launcher (8 missiles)
Grappling Systems: None

STARSHIP ENGINES

A starship's engine determines how fast the ship moves. The more efficient the engine, the faster it can move the ship—and the more expensive it is. In addition, certain low-tech engines burn fuel of some sort, increasing the operational cost. In space, fuel-burning engines rely on vector jets to adjust their course, using fuel only in short, controlled burns to increase momentum.

To build a starship engine from scratch, a character must succeed at a Craft (mechanical) check (DC 30) after investing 120 hours in its assembly. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the engine's purchase DC.

Installing an engine requires a successful Craft (mechanical) check (DC 30) after investing 60 hours in the process. A character without a mechanical tool kit takes a –4 penalty on the skill check.

The various types of engines are listed below.

Minimum Ship Size: The minimum size the starship must be to have this type of engine.

Tactical Speed Bonus: The bonus that the engine provides to the starship's tactical speed, given in feet and squares.

Purchase DC: The engine's purchase DC.

THRUSTERS (PL 5)

Thrusters can propel a ship through a planetary atmosphere and land it safely on a planetary surface. Thrusters also serve as secondary engines when primary engines fail or shut down. Common types of thrusters include the scramjet, chemical rocket, repulsion thrust, or powered airfoil, although the exact form doesn't matter.

A ship with thrusters as its primary source of propulsion must refuel after every battle or every orbital mission. Thruster fuel has a purchase DC of 31.

Minimum Ship Size: Huge.
Tactical Speed Bonus: +0 feet.
Purchase DC: 10 + one-half the base purchase DC of the starship.

FUSION TORCH (PL 6)

This engine consists of a fusion reactor with one wall of the magnetic bottle missing, directing the thrust in the form of super-heated plasma. The fusion torch is intended for space-only applications;

its exhaust stream would melt anything it landed on and incinerate everything within a few hundred yards of ground zero; it also expels a tremendous amount of radiation. Many ships fitted with fusion torch rockets use thrusters for atmospheric travel. Otherwise, they must remain permanently in space, relying on shuttlecraft to reach a planet's surface. The fusion torch uses hydrogen for fuel.

A ship using a fusion torch as its primary source of propulsion must refuel after every three battles or interplanetary trips. Fusion torch fuel has a purchase DC of 23.

Minimum Ship Size: Gargantuan.

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

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

ION ENGINE (PL 6)

The ion engine generates power to break down molecules of a fuel material to create ions, and then expels them by means of a magnetic impeller. It doesn't provide as effective a mass-thrust ratio as the fusion torch, but it's more fuel efficient, and its exhaust is not nearly as dangerous. Ion engines don't function in any kind of atmosphere, so most ships with this kind of power plant also come equipped with thrusters.

A ship using an ion engine as its primary source of propulsion must refuel after every five battles or interplanetary trips. Ion engine fuel has a purchase DC of 29.

Minimum Ship Size: Huge.

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

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

PHOTON SAILS (PL 6)

Photon sails are immense but extremely fragile foil structures only a few molecules thick. Light pressure from a nearby star (or laser drive station, when available) provides motive force. The sails' acceleration rates drop to half if the ship is beyond the edge of a star system and drop to one-quarter if the only available light is starlight. The sails can be wrecked by minor damage, but every ship equipped with photon sails carries at least three spare sets. Unfortunately, it takes 12 hours to replace damaged sails, though deployment or stowage of the sails takes only 1 minute.

In combat, any weapon hit against a sail-driven starship destroys the deployed photon sails and prevents the ship from moving until the sails are replaced. The sail-ship continues on its last course and retains its former speed until the sails are replaced. Accordingly, most sail-ships carry a secondary propulsion system (such as thrusters or an ion engine) for emergency maneuvering and sailing against the sun. Photon sails are completely useless in atmosphere—in fact, they're instantly destroyed by atmospheric entry—making a secondary propulsion system a virtual necessity for most sail-ships.

Minimum Ship Size: Gargantuan.

Tactical Speed Bonus: None.

Purchase DC: 10 + one-quarter the base purchase DC of the starship (per set of photon sails).

INDUCTION ENGINE (PL 7)

Hands-down the best engine available at this or any previous Progress Level, the induction engine uses artificial gravity to provide incredible thrust and maneuverability. The induction engine requires no fuel and produces no exhaust; it's ideal for atmospheric, orbital, or deep-space work.

Minimum Ship Size: Huge.

Tactical Speed Bonus: +1,000 feet (+2 squares).

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

PARTICLE IMPULSE ENGINE (PL 7)

The particle impulse engine is the next evolutionary step of the PL 6 ion engine. It uses magnetic fields to produce a constant stream of high-energy particles, as well as to provide vectored thrust. The major advancement of the particle impulse drive over the ion drive is that the particle impulse engine uses a negligible amount of fuel, which it also manufactures. The drive's reaction is so efficient that the tiny amounts of matter present in interplanetary or interstellar space can be collected through weak magnetic fields and converted into a thrust medium. Better still, the particle impulse engine is capable of atmospheric entry. It causes some damage to any surface close to its exhaust ports, but nowhere near as much damage as PL 6 engines do.

Minimum Ship Size: Gargantuan.

Tactical Speed Bonus: +1,000 feet (+2 squares).

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

GRAVITIC REDIRECTOR (PL 8)

A refinement of the induction engine, the gravitic redirector creates a gravitic singularity—essentially, a sub-microscopic black hole—in the vicinity of the ship, producing a constant pull on the ship. By changing the location of the singularity relative to the ship, the pilot can change the direction of the ship's travel. The gravitic redirector is more powerful and more efficient than the induction engine, and at the height of the technology's heyday, virtually foolproof. A gravitic redirector does not operate within a planetary atmosphere, and most ships fitted with this kind of engine also have secondary thrusters or rely on shuttlecraft.

Minimum Ship Size: Colossal.

Tactical Speed Bonus: +1,500 feet (+3 squares).

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

INERTIAL FLUX ENGINE (PL 8)

By precisely controlling the quantum energy level of every atom on the ship simultaneously, the inertial flux engine assumes the inertial states necessary to produce motion in any direction. In effect, by operating the controls, the pilot chooses from instant to instant what vector the ship's atoms will next possess, and the inertial flux engine alters them simultaneously—along with everything else aboard, including the crew and passengers. An inertial flux engine does not operate within a planetary atmosphere, and most ships fitted with this kind of engine also have secondary thrusters or rely on shuttlecraft.

Minimum Ship Size: Gargantuan.

Tactical Speed Bonus: +1,500 feet (+3 squares).

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

SPATIAL COMPRESSOR (PL 9)

The most advanced engine available, the spatial compressor surrounds the ship in a field that "folds" or "wrinkles" the fabric of space in the direction the pilot wishes to travel. This results in a continuous series of micro-jumps in which the ship flickers into and out of reality, teleporting thousands of times every second. Since the ship has no intrinsic velocity (it's stationary while it teleports), the spatial compressor can instantaneously stop or change direction and thrust vector without any maneuvering whatsoever.

However, the engine still needs to build up cyclic speed to increase the frequency of its microjumps, so it accelerates normally. The spatial compressor requires a lot of power, but no fuel. It is safe for atmospheric flight.

Minimum Ship Size: Colossal.

Tactical Speed Bonus: +2,000 feet (+4 squares).

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

STARSHIP ARMOR

A starship can have only one type of armor installed.

To surround a starship's hull in armor or to upgrade the armor, a character must succeed at a Craft (structural) check (DC 30) after investing 600 hours in its assembly. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the armor's (or upgraded armor's) purchase DC.

Different types of starship armor are presented below.

Hardness: The amount of damage the armor absorbs from a weapon hit or collision.

Tactical Speed Penalty: The amount by which the armor reduces the starship's tactical speed, given in feet and squares.

Weight: The armor's weight.

Purchase DC: The armor's purchase DC.

Restriction: The restriction rating of the armor. For more information on restriction ratings, see Chapter Four: Equipment of the *d20 Modern Roleplaying Game*.

ALLOY PLATING (PL 5)

Alloy plating is made of advanced metal alloys engineered for high resistance to attacks at relatively low weights.

Hardness: 20.

Tactical Speed Penalty: –500 feet (–1 square).

Weight: One-eighth the weight of the starship (rounded down).

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

Restriction: None.

POLYMERIC (PL 6)

Polymeric armor is made up of advanced polymers, such as carbon fiber and high-grade fiberglass. It is relatively cheap and light, but doesn't offer tremendous protection.

Hardness: 20.

Tactical Speed Penalty: None.

Weight: One-tenth the weight of the starship (rounded down).

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

Restriction: Licensed (+1).

VANADIUM (PL 6)

Interlocking plates of light vanadium alloy absorb a respectable amount of damage and are easy to mold to a starship's hull.

Hardness: 30.

Tactical Speed Penalty: None.

Weight: One-eighth the weight of the starship (rounded down).

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

Restriction: Military (+3).

CERAMETAL (PL 7)

Combining the heat-resistant qualities of tough ceramics with the ductile strength of metal, cerametal armor offers a good compromise between protection and economy.

Hardness: 30.

Tactical Speed Penalty: None.

Weight: One-eighth the weight of the starship (rounded down).

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

Restriction: Licensed (+1).

DEFLECTIVE (PL 7)

Deflective armor is composed of a shiny, light, flexible polymer especially good at neutralizing energy damage but less effective against ballistic attacks.

Hardness: 20 against attacks that deal ballistic damage, 40 against all other attacks.

Tactical Speed Penalty: None.

Weight: One-tenth the weight of the starship (rounded down).

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

Restriction: Military (+3).

NEUTRONITE (PL 7)

Neutronite is a tough steel alloy into which a "weave" of free neutrons has been pressed. It is extremely resilient but also incredibly massive, weighing about five times more than a similar volume of lead.

Hardness: 40.

Tactical Speed Penalty: –500 feet (–1 square).

Weight: One-quarter the weight of the starship (rounded down).

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

Restriction: Military (+3).

ABLATIVE (PL 8)

This silvery, reflective armor is amazingly thin, yet has tremendous tensile strength and the ability to absorb damage better than most kinds of armor plating.

Hardness: 40.

Tactical Speed Penalty: None.

Weight: One-tenth the weight of the starship (rounded down).

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

Restriction: Military (+3).

NANOFLUIDIC (PL 8)

Consisting of a thick layer of gel-like fluid sandwiched in a neutronite structure, nanofluidic armor is "smart" armor—it concentrates at the point of impact to blunt physical blows and circulates around heat sources to dissipate energy.

Hardness: 50.

Tactical Speed Penalty: –500 feet (–1 square).

Weight: One-quarter the weight of the starship (rounded down).

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

Restriction: Military (+3).

STARSHIP DEFENSE SYSTEMS

Armor does an admirable job of preventing damage to the superstructure of a starship, but it's really only the last line of defense. Since the late Industrial Age, aircraft have been outfitted with an ever-increasing number of defensive systems designed to avoid or avert damage to a craft's hull—or to repair it before catastrophe occurs.

To build a defense system from scratch, a character must succeed at a Craft (electronic) check (DC 30) and a Craft (mechanical) check after investing 60 hours in its assembly. A character without an electrical or mechanical tool kit takes a –4 penalty on the appropriate skill check. The character must also make a Wealth check against the system's purchase DC.

Installing a defensive system requires a successful Craft (mechanical) check (DC 30) after investing 30 hours. A character without a mechanical tool kit takes a –4 penalty on the skill check.

Different types of defensive systems are detailed below.

Purchase DC: The purchase DC of the system.

Restriction: The level of license required to purchase the system legally. For more information on restriction ratings, see Chapter Four: Equipment of the *d20 Modern Roleplaying Game*.

AUTOPILOT SYSTEM (PL 5)

An autopilot system "kicks in" whenever the pilot is unable to fly the starship. An autopilot system isn't as good at avoiding attacks as a living pilot, but it's better than nothing. Larger vessels have more adaptive autopilot systems than smaller ships (although this increased sophistication doesn't outweigh the penalties associated with the ships' larger sizes).

An autopilot system provides an equipment bonus to the starship's Defense depending on the ship's size: Huge +1, Gargantuan +2, Colossal +4. This bonus applies only when the autopilot system is engaged.

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

Restriction: None.

DAMAGE CONTROL SYSTEM (PL 5)

A starship equipped with a damage control system can perform damage control as a move action. With a successful Repair check (DC 15), the ship regains a number of hit points depending on its type, as shown on Table 7–11: Damage Control Systems.

Damage control cannot be performed if the ship has been reduced to negative hit points.

Purchase DC: Varies by starship type (see Table 7–11: Damage Control Systems).

Restriction: None.

TABLE 7–11: DAMAGE CONTROL SYSTEM

Ship Type	Hit Points Restored	Purchase DC
Ultralight	1d10	18
Light	2d10	22
Mediumweight	3d10	27
Heavy	4d10	33
Superheavy	5d10	40

SENSOR JAMMER (PL 5)

A sensor jammer interferes with radar and enemy sensor scans. It also confounds missile guidance systems.

Sensor checks made against a ship with an active sensor jammer take a –5 penalty. In addition, the ship gains one-half concealment against missile attacks (20% miss chance).

Any ship with a Class III sensor system (or better) is not subject to the effects of the sensor jammer, ignoring the penalty and miss chance.

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

Restriction: Military (+3).

AUTOPILOT SYSTEM, IMPROVED (PL 6)

An improved autopilot system provides an equipment bonus to the starship's Defense depending on the ship's size: Huge +3, Gargantuan +4, Colossal +5. This bonus applies only when the autopilot system is engaged. An improved autopilot system replaces the PL 5 autopilot system.

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

Restriction: None.

CHAFF LAUNCHER (PL 6)

Chaff consists of a cloud of millions of tiny metal strips or particles. This detritus interferes with sensors and missiles. Deploying chaff—usually via a small bundle from the rear or underside of a starship—is a move action. The chaff fills one 500-foot square with these strips or particles. Sensor scans directed at anything within the square take a –10 penalty, and scanning something on the direct opposite side of the chaff field incurs a –5 penalty. Any missile that passes through the chaff field to reach its intended target suffers a 30% miss chance (as though the target has three-quarters concealment).

Purchase DC: 20 for chaff launcher and one chaff bundle, 15 for each additional chaff bundle.

Restriction: Licensed (+1).

DAMAGE CONTROL, IMPROVED (PL 6)

A starship equipped with improved damage control regains an additional +1d10 points of damage each time damage control is performed successfully (see Damage Control System, above).

Purchase DC: 5 + the purchase DC of a standard damage control system.

Restriction: Licensed (+1).

DECOY DRONE LAUNCHER (PL 6)

A decoy drone is a small, self-guided missile that mimics the electromagnetic and infrared signatures of the ship that launched it. Deploying a decoy drone is an attack action, and the drone occupies the same fighting space as the ship it imitates.

The decoy drone negates the equipment bonus on attack rolls granted by an enemy ship's targeting system. Launching multiple *decoy drones grants no cumulative effect.*

A deployed and intact decoy drone can be recovered or captured with a successful grapple. It can also be targeted and destroyed. A decoy drone has a Defense of 12 and 10 hit points, and it rolls 1d20+4 on opposed grapple checks.

Purchase DC: 28 for drone launcher and one drone, 25 for each additional drone.

Restriction: Restricted (+2).

MAGNETIC FIELD (PL 6)

The magnetic field is the first primitive energy shield. It uses vast amounts of power to surround the ship with potent lines of magnetic

force. Missiles and weapons that deal ballistic damage fired at a starship with a magnetic field take a –4 penalty on attack rolls.

A mine can be equipped with a magnetic field.

Purchase DC: 5 + one-half the base purchase DC of the starship or mine.

Restriction: Military (+3).

POINT-DEFENSE SYSTEM (PL 6)

A point-defense system serves two functions: It targets all incoming missiles, and it allows a starship to make attacks of opportunity against enemy ships passing through its threatened area. The point-defense system consists of batteries of automated weapons programmed to fire when either of these two conditions is met.

A point-defense system does not fire upon mines, cannot be controlled manually by the crew, and cannot be used to make normal attacks.

Destroy Missiles: A point-defense system has a 20% chance of destroying any incoming missile. A destroyed missile deals no damage to the ship.

Make Attacks of Opportunity: A starship equipped with a point-defense system threatens the space it occupies as well as all adjacent 500-foot squares. When making an attack of opportunity, the point-defense system rolls 1d20 and adds the ship's targeting system bonus on the roll. If the result equals or exceeds the enemy ship's Defense, the point-defense weapons deal ballistic damage based on the ship's type, as shown in Table 7–12: Point-Defense Systems. Point-defense systems cannot score critical hits.

Purchase DC: Varies by starship type (see Table 7–12: Point-Defense Systems).

Restriction: Licensed (+1).

TABLE 7–12: POINT-DEFENSE SYSTEMS

Starship Type	Point-Defense Damage	Purchase DC
Ultralight	1d12×10	31
Light	2d12×10	34
Mediumweight	3d12×10	36
Heavy	4d12×10	38
Superheavy	5d12×10	40

RADIATION SHIELDING (PL 6)

Radiation shielding protects a ship's crew and passengers against the harmful radiation of neutron stars, solar flares, and other external causes. All personnel aboard the ship gain a +5 circumstance bonus on saves to resist the effects of radiation poisoning.

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

Restriction: None.

SELF-DESTRUCT SYSTEM (PL 6)

A self-destruct system ensures that a starship cannot be captured, dissected for information, or used against its builders. Installing a starship self-destruct system requires a Demolitions check (DC 30) instead of a Craft check and takes an amounts of time as determined by the ship's type: ultralight 1 hour, light 10 hours, mediumweight 30 hours, heavy 60 hours, superheavy 120 hours. If the Demolitions check fails by 10 or more, the system detonates, destroying the ship and possibly harming others nearby.

A self-destruct system can be programmed to activate only under specified conditions—usually the voice authorization of the ship's commander, and usually only after the crew has had sufficient time to evacuate (see Starship Evacuation, page 113).

The self-destruct system obliterates the starship (killing all aboard) regardless of how many hit points it has remaining. A starship destroyed by its own self-destruct system has no salvageable parts.

The starship's self-destruction triggers an explosion of shrapnel that deals collateral slashing damage to all other ships in its fighting space; mediumweight, heavy, and superheavy ships also deal collateral damage to ships in adjacent squares. A successful Pilot check (DC 15) reduces the damage by half. Table 7–13: Starship Self-Destruct Systems shows the amount of collateral damage (and the system's purchase DC) based on the starship's type.

Purchase DC: Varies by starship type (see Table 7–13: Starship Self-Destruct Systems).

Restriction: Restricted (+2).

TABLE 7–13: STARSHIP SELF-DESTRUCT SYSTEMS

Starship Type	Collateral Damage	Purchase DC
Ultralight	1d6×10	26
Light	2d6×10	32
Mediumweight	3d6×10	38
Heavy	4d6×10	44
Superheavy	5d6×10	50

STEALTH SCREEN (PL 6)

An improved version of the sensor jammer (see above), the stealth screen is a sophisticated electromagnetic transceiver capable of detecting incoming electromagnetic energy from radars, ladars, and other sensor devices. When it detects such energy, it responds by generating an electromagnetic interference pattern. In addition, it monitors the ship's own EM emissions and cloaks them in a similar manner. Finally, the stealth shield masks the ship's mass signature.

Sensor checks made against a ship with an active stealth screen take a –10 penalty.

Additionally, a deployed mine has a 50% chance of not detecting the screened ship as it enters or leaves its detonation area.

Finally, a starship with an active stealth screen gains one-half concealment against all attacks (20% miss chance).

A mine can be equipped with a stealth screen.

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

Restriction: Military (+3).

DISPLACER (PL 7)

Using the same technology that will someday drive the PL 9 spatial compression engine, the displacer "shifts" the ship a few hundred yards several times a second in a random series of short-range teleportations. All enemy attacks against the displacing ship have a 30% miss chance, as though it has three-quarters concealment.

A mine can be equipped with a displacer.

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

Restriction: Military (+3).

LIGHT FORTIFICATION (PL 7)

The starship's structural integrity is reinforced so that the ship can shake off attacks that would cripple it otherwise. Light fortification converts 25% of all critical hits into regular hits.

Installing light fortification requires a Craft (structural) check instead of a Craft (mechanical) check.

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

Restriction: Licensed (+1).

PARTICLE FIELD (PL 7)

Generators project a field of alpha particles (helium nuclei that have been stripped of their electrons) around the ship. The field absorbs energy damage; weapons that wholly or partly deal concussion, electricity, fire, or nonspecific energy damage (such as beam weapons) fired at the starship take a –4 penalty on attack rolls.

A mine can be equipped with a particle field.

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

Restriction: Military (+3).

REPAIR DRONES (PL 7)

Repair drones are Small spiderlike robots that rapidly deploy to damaged sections of a ship's outer hull. They are programmed to repair damage quickly and efficiently.

A ship with repair drones can perform damage control as a free action. A ship without a damage control system cannot be fitted with repair drones.

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

Restriction: Military (+3).



Repair Drone

DAMAGE CONTROL, ADVANCED (PL 8)

A starship equipped with advanced damage control regains an additional +2d10 points of damage each time damage control is performed successfully (see Damage Control System, above). Advanced damage control replaces (and does not stack with) improved damage control.

Purchase DC: 10 + the purchase DC of a standard damage control system.

Restriction: Military (+3).

CLOAKING SCREEN (PL 8)

An improvement of the PL 7 stealth screen, the cloaking screen warps light and energy around the ship's hull, rendering the ship invisible to visual and electronic sensors.

A cloaked ship has total concealment. To attack a cloaked ship, an attacker must guess in which square the ship currently is (or determine its position based on where it attacked last), and even if the guess is accurate, there is a 50% chance that the attack misses.

Additionally, a deployed mine cannot detect a cloaked ship and does not detonate when the ship enters or leaves its burst area. The ship's pilot must make a Pilot check (DC 5, +5 per additional mine) to avoid a collision with the mine if the starship enters the mine's square; on a failed check, the mine detonates.

A cloaking screen cannot be used in conjunction with chaff, since the chaff cloud would give away the ship's position. It also cannot operate simultaneously with any sort of field (including magnetic fields and particle fields), as the field gives away the ship's position.

A mine can be equipped with a cloaking screen.

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

Restriction: Military (+3).

MEDIUM FORTIFICATION (PL 8)

As light fortification (see above), except that the medium fortification system converts 75% of all critical hits into regular hits.

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

Restriction: Licensed (+1).

NANITE REPAIR ARRAY (PL 8)

The final refinement of damage control systems, the nanite repair array consists of numerous nodules filled with nanites—microscopic robots—scattered throughout the ship. The nanite repair array can repair a ship with negative hit points; however, not even nanites can repair a destroyed ship.

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

Restriction: Restricted (+2).

HEAVY FORTIFICATION (PL 9)

As light fortification (see above), except that the heavy fortification system converts all critical hits into regular hits.

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

Restriction: Licensed (+1).

STARSHIP SENSORS

A starship would be lost in the blackness of outer space without a sophisticated sensor array enabling it to perceive its surroundings. Sensor arrays allow a starship's crew to plot safe courses through unexplored star systems, avoid comets and electromagnetic storms, navigate asteroid belts, analyze planetary surface conditions, detect other starships nearby, and analyze damage to the ship's outer hull. Without a functional sensor array, a ship and its crew are virtually paralyzed.

This section describes several standard sensor arrays. Each sensor array includes a list of functions; each function requires a move action and a successful Computer Use check (DC 15).

To build a sensor system from scratch, a character must succeed at a Craft (electronic) check (DC 30) after investing 60 hours in its assembly. A character without an electrical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the sensor system's purchase DC.

Installing a sensor system requires a successful Craft (electrical) check (DC 30) after investing 30 hours. A character without an electrical tool kit takes a –4 penalty on the skill check.

Different types of sensor systems are detailed below.

Purchase DC: The purchase DC of the system.

Restriction: The level of license required to purchase the system legally. For more information on restriction ratings, see Chapter Four: Equipment of the *d20 Modern Roleplaying Game*.

CLASS I SENSOR ARRAY (PL 5)

This array includes radar, hi-res video, and infrared heat sensor units. As a move action, a Class I sensor array can perform either of the following functions with a successful Computer Use check (DC 15):

- Ascertain the location and type (ultralight, light, and so on) of all visible ships on the battlefield.
- Identify and ascertain the location of all visible hazards on the battlefield (such as asteroids and mines).
- Analyze the chemical composition of a planet's atmosphere (the ship must be orbiting the planet).

Purchase DC: 21.
Restriction: None.

CLASS II SENSOR ARRAY (PL 6)

This array incorporates hi-res video, infrared and electromagnetic sensors, and ladar detection units. (The ladar uses low-powered laser beams to locate targets.) As a move action, a Class II sensor array can perform any one of the following functions with a successful Computer Use check (DC 15):

- Ascertain the location, type (ultralight, light, and so on), and subtype (fighter, destroyer, and so on) of all visible ships on the battlefield.
- Identify and ascertain the location of all visible hazards on the battlefield (such as asteroids and mines).
- Identify all PL 5 or PL 6 weapons on a specific ship (number and type of weapons present), including their organization into batteries (but not fire links).
- Ascertain the presence of any or all of the following systems on a specific ship: grapplers, magnetic field, point-defense system.
- Identify a specific ship's armor type (PL 5 and PL 6 armor types only).
- Analyze the chemical composition of a planet's atmosphere (the ship must be orbiting the planet).

Purchase DC: 27.
Restriction: None.

CLASS III SENSOR ARRAY (PL 6)

As the Class II sensor array, except that the ship also gains a +2 equipment bonus on all initiative checks. This array is normally installed on ships built for combat.

Purchase DC: 30.
Restriction: None.

TARGETING SYSTEM (PL 6)

A computerized targeting system helps starship gunners aim weapons and track enemy ships. A targeting system provides an equipment bonus on attack rolls depending on the ship's size: Huge +1, Gargantuan +2, Colossal +3.

The purchase DC of the targeting system depends on the size of the ship.

Purchase DC: 18 (Huge), 23 (Gargantuan), or 28 (Colossal).
Restriction: Licensed (+1).

CLASS IV SENSOR ARRAY (PL 7)

This array includes hi-res video, electromagnetic sensors, multiband radar, spectroanalyzers, and mass detectors. (A mass detector locates objects via their gravitational signatures.)

As a move action, a Class IV sensor array can perform any one of the following functions with a successful Computer Use check (DC 15):

- Ascertain the location, type (ultralight, light, and so on), subtype (fighter, destroyer, and so on), and mass of all visible ships on the battlefield.
- Identify and ascertain the location of all visible hazards on the battlefield (such as asteroids and mines).
- Identify all of the PL 5, PL 6, and PL 7 weapons on a specific ship (number and type of weapons present), including their organization as fire-linked weapons and batteries.
- Ascertain the presence of any or all of the following systems on a specific ship: grapplers, magnetic field, particle field, point-defense system, tractor beam.
- Identify a specific ship's armor type (PL 5, PL 6, or PL 7 armor types only).
- Identify the type of engines a ship has.
- Determine the number of life forms aboard a specific ship.
- Analyze the chemical composition of a planet's atmosphere (the ship must be orbiting the planet).
- Analyze and chart the topography of a 1,000-square-mile area on a planet's surface (the ship must be orbiting the planet).
- Determine a planet's prevailing meteorological conditions and weather patterns (the ship must be orbiting the planet).

Purchase DC: 33.
Restriction: None.

CLASS V SENSOR ARRAY (PL 7)

As the Class IV sensor array, except that the ship also gains a +2 equipment bonus on all initiative checks. This array is normally installed on ships built for combat.

Purchase DC: 36.
Restriction: None.

TARGETING SYSTEM, IMPROVED (PL 7)

A starship equipped with an improved targeting system gains an equipment bonus on attack rolls depending on the ship's size: Huge +3, Gargantuan +4, Colossal +5. This system replaces the PL 6 targeting system.

The purchase DC of the improved targeting system depends on the size of the ship.

Purchase DC: 22 (Huge), 27 (Gargantuan), or 32 (Colossal).
Restriction: Licensed (+1).

CLASS VI SENSOR ARRAY (PL 8)

This array includes hi-res video, electromagnetic sensors, spectroanalyzers, multiphase radar, and mass detectors.

As a move action, a Class VI sensor array can perform any one of the following functions with a successful Computer Use check (DC 15):

- Ascertain the location, type (ultralight, light, and so on), subtype (fighter, destroyer, and so on), and mass of all ships on the battlefield.
- Identify and ascertain the location of all hazards on the battlefield (such as asteroids and mines).
- Determine a specific ship's PL 5, PL 6, PL 7, and PL 8 design specs (engines, defensive systems, sensor systems, communication systems, and weapons, including fire-linked weapons and batteries).
- Detect the presence and location of ships and mines using active cloaking screens (targets still gain the benefits of total concealment).
- Determine the number and type of life forms aboard a specific ship ("type" refers to the creature type).

- Analyze the chemical composition of a planet's atmosphere (the ship must be orbiting the planet).
- Determine the number and type of life forms within a 4,000-square mile region on a planet's surface (the ship must be orbiting the planet, and "type" refers to the creature type).
- Analyze and chart the topography of a 4,000-square-mile area on a planet's surface (the ship must be orbiting the planet).
- Determine a planet's prevailing meteorological conditions and weather patterns (the ship must be orbiting the planet).

Purchase DC: 39.
Restriction: None.

CLASS VII SENSOR ARRAY (PL 8)

As the Class VI sensor array, except that the ship also gains a +2 equipment bonus on all initiative checks. This array is normally installed on ships built for combat.

Purchase DC: 42.
Restriction: None.

ACHILLES TARGETING SOFTWARE (PL 8)

Any starship with a targeting system can have Achilles targeting software; the software does not take up one of the starship's sensor system slots.

Achilles targeting software enables the ship to better train its weapons on an enemy's critical systems. Achilles targeting software increases the critical threat ranges of the ship's beam, projectile, and missile weapons by 1. For example, a fusion beam gains a threat range of 19–20 instead of 20. This effect stacks with other systems that expand a weapon's critical threat range, such as weapon batteries (page 140).

The purchase DC of Achilles targeting software depends on the size of the ship.

Purchase DC: 26 (Huge), 31 (Gargantuan), or 36 (Colossal).
Restriction: Restricted (+2).

CLASS VIII SENSOR ARRAY (PL 9)

This array is an amplified version of the Class VI sensor array.

As a move action, a Class VIII sensor array can perform any one of the following functions with a successful Computer Use check (DC 15):

- Ascertain the location, type (ultralight, light, and so on), subtype (fighter, destroyer, and so on), and mass of all ships in the star system.
- Identify and ascertain the location and trajectories of all hazards in the star system (such as asteroids and mines).
- Determine a specific ship's design specs (engines, defensive systems, sensor systems, communication systems, and weapons, including fire-linked weapons and batteries).
- Detect the presence and exact location of ships and mines equipped with cloaking screens, and negate the effects of stealth screens, displacers, and cloaking screens.
- Determine the number, type, and species of life forms aboard a specific ship ("type" refers to the creature type).
- Analyze the chemical composition of a planet's atmosphere (the ship must be in the same system as the planet).
- Determine the number, type, and species of life forms on a planet's surface (the ship must be orbiting the planet, and "type" refers to the creature type).
- Analyze and chart the topography of a planet's surface (the ship must be orbiting the planet).
- Determine a planet's prevailing meteorological conditions and weather patterns (the ship must be in the same system as the planet).

Purchase DC: 45.
Restriction: None.

CLASS IX SENSOR ARRAY (PL 9)

As the Class VIII sensor array, except that the ship also gains a +2 equipment bonus on all initiative checks. This array is normally installed on ships built for combat.

Purchase DC: 48.
Restriction: None.

STARSHIP COMM SYSTEMS

The ability to communicate with other ships and bases is vital to starships. The more advanced a ship's communications capabilities, the better informed its crew is, and the better they can coordinate with other ships in the same fleet.

To build a communication system from scratch, a character must succeed at a Craft (electrical) check (DC 30) after investing a number of hours equal to the ship's Hit Dice. A character without an electrical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the system's purchase DC.

Installing a comm system requires a successful Craft (mechanical) check (DC 30) and a successful Craft (electrical) check (DC 30) after investing 30 hours. A character without a mechanical or electrical tool kit takes a –4 penalty on the appropriate skill check.

The following section describes various ship-to-ship comm systems.

Purchase DC: The cost of the comm system.

RADIO TRANSCEIVER (PL 5)

The radio transceiver can transmit on multiple frequencies in either LOS (line of sight) or omnidirectional mode, sending messages at the speed of light. A radio transceiver can handle up to ten simultaneous two-way conversations.

Purchase DC: 21.

LASER TRANSCEIVER (PL 6)

This system uses a beam of coherent light to transmit messages. The laser is unidirectional; the signal cannot be intercepted or jammed unless it's beamed directly at a hostile ship or station. However, if the comm officer doesn't know exactly where the receiving station

INTERNAL COMM SYSTEMS

Internal comm systems, though as vital as ship-to-ship communications, are not covered in depth here. Obviously, the larger a ship's crew complement, the greater its need for internal communications. The crew must stay in contact to do their jobs properly. Smaller ships can often get by with headsets jacked into the ship's network, or short-range two-way radios, or even just shouting to each other from nearby crew stations. Larger ships require a more sophisticated system.

A standard internal communication system allows two-way audio communication from any comm station to any other comm station on the same ship. An internal comm system has a purchase DC based on the ship's type: ultralight 13, light 16, mediumweight 19, heavy 22, superheavy 25. Increase the purchase DC by +2 if the comm stations include video screen displays as well.

is, the laser transceiver is a waste of effort. This has some hidden drawbacks; a character cannot use the laser transceiver for a general distress call to all stations in the area, for example. A ship can't receive laser communications unless it is equipped with the transceiver. Lasers are limited to the speed of light (8 AU/hour), meaning it can take hours or days to get a response within a system, or even weeks to get a response at interstellar distances.

Purchase DC: 23.

DRIVESAT COMM ARRAY (PL 7)

This massive comm array provides rapid interstellar communications. The array consists of a constellation of dozens of small transmitters that transmit and receive messages through space at faster-than-light speeds, enabling communications with a range of 50 light-years. The signals travel at a rate of 5 light-years per hour. Because of the need for steady signal, the ship must remain stationary to transmit and receive messages. If the ship moves while its drivesat array is transmitting or receiving, the ship's communication officer must make a Computer Use check (DC 30) to avoid losing the signal.

Only mediumweight, heavy, and superheavy ships can be equipped with a drivesat comm array.

Purchase DC: 53.

MASS TRANSCEIVER (PL 7)

This device can transmit instantaneously to any point in the same star system, with no "lag" due to FTL limitations. However, its range is limited to about 1,000 AU, so the signal can't cross interstellar space.

Purchase DC: 25.

DRIVE TRANSCEIVER (PL 8)

The drive transceiver is the first interstellar comm system that's truly practical for small ships or second-rate colonies. It operates like the much larger PL 7 drivesat comm array, sending a signal up to 50 light-years distant. The signal travels at a rate of 5 light-years per hour. The target station must also be equipped with a drive transceiver.

Purchase DC: 28.

ANSIBLE (PL 9)

The ansible is a device that induces precise changes in the energy states of atomic nuclei, without regard to distance or time. In effect, it permits instantaneous interstellar communications—voice, video, or data transfer—to any other ship or station equipped with an ansible. Much like a radio, the receiving station has to be attentive to a particular "frequency," so two ansible-equipped stations must have some prearranged communications protocols; an ansible cannot pick up any transmissions not intended for that specific frequency.

Purchase DC: 33.

STARSHIP WEAPONS

Starship weapons fall into one of four categories: beam weapons, projectile weapons, missiles, and mines. Each category of weapon is described in greater detail below.

Starship weapons require the Starship Gunnery feat to operate proficiently. Without this feat, a gunner takes a –4 penalty on attack rolls made with starship weapons. Trained, expert, and ace crew gunners are assumed to have this feat.

To build a starship weapon system from scratch, a character must succeed at a Craft (mechanical) check (DC 30) after investing 300 hours in its assembly. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the weapon's purchase DC.

AVERAGE WEAPON DAMAGE

Some starship weapons (particularly fire-linked weapons) deal incredible damage. To speed up play, players and GMs can decide to deal average damage with weapon attacks instead of rolling handfuls of dice and adding them up. Table 7–14: Starship Weapons lists average damage in parentheses in the Damage column.

Installing a weapon system requires a successful Craft (mechanical) check (DC 30) after investing 30 hours. A character without a mechanical tool kit takes a –4 penalty on the skill check.

Modifying Weapons: Certain beam and projectile weapons—as noted in Table 7–14: Starship Weapons—can be modified for different rates of fire. With 1 hour of work and a successful Repair check (DC 30), these weapons can be reconfigured for semiautomatic or automatic fire mode. (Resetting a weapon to its original configuration requires another check and 1 hour.) Weapons can be purchased in their modified versions, but the purchase DC of a modified weapon increases by +3.

BEAM WEAPONS

Beam weapons deal energy damage, usually of a nonspecific type. They range from weapons as simple as a high-powered laser to monstrous devices capable of harnessing the fundamental forces of the universe.

Beam weapons draw power from a starship's power plant and are considered to have unlimited ammunition.

Beam Weapon Mounts: Beam weapons are mounted on turrets or in banks that, coupled with the starship's ability to adjust its orientation, allow the weapons to fire in any direction. The cost of a turret mount or bank is included in the purchase DC of the weapon.

PROJECTILE WEAPONS

Projectiles are generally solid slugs delivered to the target, where the velocity and density of the slug hopefully punch through the target's defenses. The most basic projectile weapons launch a small hunk of metal at roughly the speed of sound; the most advanced can push around mountains or molecules at greater than the speed of light. Projectile weapons tend to be slightly more expensive than beam weapons, but the top end damage is considerably higher.

Starships have sufficient storage space to contain a virtually unlimited supply of projectile weapon ammunition.

Projectile Weapon Mounts: Like beam weapons, projectile weapons are mounted on turrets or in banks that, coupled with the starship's ability to adjust its orientation, allow the weapons to fire in any direction. The cost of a turret mount or bank is included in the purchase DC of the weapon.

MISSILES

A missile is an explosive warhead fixed to a guided rocket and fired from a missile launcher. The type of warhead determines both the type and amount of damage.

All missiles are equipped with guidance systems that negate the penalty for range increments.

Missiles are purchased in racks of eight.

Missile Launchers: A starship must be equipped with missile launchers to fire missiles. Each type of missile has its own type of missile launcher; for example, a launcher designed to fire CHE missiles cannot fire KE submunition missiles. Missiles can fire in any direction.

A missile launcher has a purchase DC of 20.

MINES

Mines are immobile explosives that must be deployed to be effective. Mines are equipped with sensors to scan approaching ships and detonate when hostile ships draw near. Some mines also come equipped with cloaking screens and other defensive systems to conceal their presence (see Defensive Systems, page 134).

Mines are sold individually. Although a mine weighs no more than a few thousand pounds, one mine consumes 100 tons of a ship's cargo capacity (most of it taken up by the launch system and radiation shielding).

Minelayers: A starship must be equipped with a minelayer (purchase DC 25) to deploy mines, and only Colossal ships can be fitted with minelayers. A minelayer consists of two or more mine rails—low-powered magnetic accelerators that can deploy one mine per round.

Deploying a Mine: A starship equipped with a minelayer can, as an attack action, deploy a single mine in any 500-foot square it occupies. Only after the starship leaves the mine's detonation area does the mine activate.

A starship that deploys a mine sets the conditions under which the mine detonates. Up to four mines can be deployed in the same 500-foot square and programmed to detonate simultaneously.

A deployed mine is a Medium-size object with Defense 5, hardness 10, and 50 hit points. Damaging or destroying a deployed mine has a 50% chance per hit of detonating it.

Detonating a Mine: When certain predetermined conditions are met (usually when an enemy ship enters the mine's detonation area), the deployed mine explodes. The mine's detonation area includes the square it occupies and all adjacent 500-foot squares (9 squares total). All ships within the mine's detonation area take damage when the mine detonates. A pilot may attempt a Pilot check (DC 25) to reduce the damage by half; making this check does not count as an action.

FIRE-LINKED WEAPONS

Fire-linked weapons are identical beam weapons, projectile weapons, or missile launchers that point and fire in the same direction. In effect, this arrangement creates a single weapon (fired with a single attack roll) that deals greater damage than either weapon alone.

Each full doubling of the number of fire-linked weapons (two weapons, four, eight, and so on) increases the damage by one-half the base damage. For example, a fighter using two fire-linked rail cannons (damage 6d12 each) deals 9d12 points of damage with a successful attack. Fire-linking weapons adds +1 to the purchase DC of each weapon in the link; taking the above example, each fire-linked rail cannon would have a purchase DC of 31 instead of 30.

Variable fire links also exist, allowing the gunner to decide from attack to attack whether to fire the weapons individually (as normal), in a full link (as described above), or in a partial link. A partial link allows the pilot to fire the linked weapons in groups of two. Only starships with four or more fire-linked weapons can be fired in a partial link. The variable version of the fire link adds +3 to the purchase DC of each weapon in the link.

WEAPON BATTERIES

A weapon battery consists of a cluster of up to five identical beam weapons, projectile weapons, or missile launchers that fire as a single weapon (requiring a single attack roll). When using battery fire, every weapon after the first in a battery adds a +1 bonus on the attack roll, to a maximum of +4 for a five-weapon battery. If the attack succeeds, roll damage as if one of the weapons had hit.

In addition, a weapon battery has a greater chance of scoring a critical hit. Regardless of the number of weapons in the battery, the threat range is increased by 1. For example, a battery of plasma cannons (normal threat range of 20) has a threat range of 19–20. This effect stacks with other systems that expand a weapon's critical threat range, such as Achilles targeting software (page 138).

Batteries of weapons cannot be "split" into individual weapons; they either fire all together, or not at all. Installing weapons in a battery increases the purchase DC of each weapon by +1.

Only mediumweight, heavy, and superheavy starships can be equipped with weapon batteries.

WEAPON DESCRIPTIONS

Table 7–14: Starship Weapons provides the following statistics for various ranged weapons:

Damage: The damage the weapon deals.

Critical: The critical threat range of the weapon.

Damage Type: Most beam weapons deal a nonspecific type of energy damage that is not subject to energy resistance. A few weapons deal a specific kind of energy damage; for example, a laser deals fire damage. Projectile weapons deal ballistic damage.

Range Increment: A weapon's range increment is given in feet. An attack at less than this distance is not penalized for range. However, each full range increment causes a cumulative –2 penalty on the attack roll. Beam weapons dissipate and become ineffective past 10 range increments, while projectile weapons have unlimited range.

Rate of Fire: Ranged weapons have three possible rates of fire: single shot, semiautomatic, or automatic.

Single Shot: A weapon with a single shot rate of fire can fire only one shot per attack, even if the gunner has a feat or other ability that normally allows more than one shot per attack.

Semiautomatic (S): A semiautomatic ranged weapon fires one shot per attack (effectively acting as a single shot weapon). However, a gunner who gains multiple attacks per round because of his level or because of certain feats can fire a semiautomatic beam weapon multiple times in rapid succession, getting more than one shot per attack.

Automatic (A): Automatic ranged weapons fire a burst or stream of shots. Only weapons with the automatic rate of fire can be set on autofire or be used with feats that take advantage of automatic fire. See the Starship Weapons on Autofire sidebar (page 141) for more rules and information.

Minimum Ship Size: The minimum size of starship capable of supporting the weapon.

Purchase DC: The purchase DC of the weapon.

Restriction: The level of license required to purchase the weapon legally. For more information on restriction ratings, see Chapter Four: Equipment of the *d20 Modern Roleplaying Game*.

FUSION BEAM (PL 6)

The fusion beam initiates a fusion reaction and then directs the blast at the target.

GAUSS GUN (PL 6)

The gauss gun is an electromagnetic accelerator that fires tiny ball bearings at an extremely high velocity.

LASER (PL 6)

The simplest beam weapon, the laser is used generally for small craft. It consists of a focused beam of white-hot light.

LASER, HEAVY (PL 6)
The heavy laser is simply an oversized laser that pours more energy on the target. It's too big to install on light spacecraft, but is common on destroyers and larger warships.

MINE, FUSION (PL 6)
A fusion mine initiates a fusion reaction that deals damage to all starships in its square and all adjacent squares.

MISSILE, CHE (PL 6)
A CHE (conventional high-explosive) warhead can destroy a small vessel, but it's less effective against larger warships unless launched in numbers. Heavy vessels, such as battleships, can usually ignore the weapon despite its payload of hundreds of kilos of advanced chemical explosives.

MISSILE, KE SUBMUNITION (PL 6)
This warhead consists of a bundle of dozens or even hundreds of tungsten steel darts, each mounted on small rocket motors. As the weapon approaches its target, the warhead splits open, unleashing a lethal hail of high-velocity metal arrows. The impact alone can vaporize several square yards of heavy armor.

MISSILE, NUCLEAR (PL 6)
This 1-megaton warhead is essentially a fusion bomb rigged to a guided rocket.

NEEDLE DRIVER (PL 6)
The needle driver is a larger, heavier version of the rail cannon (see below), with an extremely high rate of fire. It fires small metal flechettes at the rate of thousands of rounds per minute.

NEUTRON GUN (PL 6)
This device directs an intense blast of neutron radiation at the target.

NEUTRON GUN, HEAVY (PL 6)
This weapon is simply a larger version of the neutron gun.

RAIL CANNON (PL 6)
Rail cannons use a series of electromagnets to propel projectiles down a magnetic track. The projectiles are kinetic-energy weapons with no explosive charge, but at close ranges, they can still be quite devastating.

ANTIMATTER GUN (PL 7)
Using the same basic technology as the PL 6 rail cannon, the antimatter gun throws a piece of antimatter at the target. The impact alone is extremely destructive. Following the initial impact damage, the "splatter" of antimatter from the disintegrating warhead creates a cluster-bomb effect around the point of impact, increasing the chance of a critical hit.

MASS CANNON (PL 7)
The mass cannon uses gravitic technology to "charge" a small bit of matter with incredible gravitational energy, then hurls it at the target, where its increased gravitational pull causes it to slam into the target like a wrecking ball.

MASS CANNON, HEAVY (PL 7)
The heavy mass cannon is a larger and more powerful version of the mass cannon.

STARSHIP WEAPONS ON AUTOFIRE
If a starship weapon has an automatic rate of fire, it can be set on autofire. Autofire affects an area and everything in it, not a specific target. The starship using the autofire weapon targets a 1,000-foot-by-1,000-foot area and makes an attack roll; the targeted area has an effective Defense of 10. If the attack succeeds, the pilots of all ships within the affected area must make a Pilot check (DC 15) or take the weapon's damage. Apply a penalty on the check based on the size of the pilot's ship: Huge –2, Gargantuan –4, Colossal –8.

Some starship weapons—such as the needle driver—only have autofire settings and can't normally fire single shots.

MINE, GRAVITIC (PL 7)
When a gravitic mine detonates, it creates a brief artificial gravity well that pulls on ships in its square and in all adjacent squares, tearing their hulls.

MISSILE, MASS REACTION (PL 7)
This warhead uses a dark matter reaction to unleash a powerful wave of energy. The effect is more concentrated than a nuclear blast, but it's less likely to cause unwanted collateral damage.

MISSILE, PLASMA (PL 7)
The plasma warhead improves on the PL 6 chemical explosive. It creates a burst of white-hot plasma that can blast a small ship out of space with one shot.

PARTICLE BEAM (PL 7)
The next phase of the PL 6 neutron gun, the particle beam projects a stream of protons, neutrons, or alpha particles at the target—each particle accelerated to near light-speed.

PARTICLE BEAM, HEAVY (PL 7)
This weapon is simply a larger version of the particle beam.

PLASMA CANNON (PL 7)
Using a powerful electrical charge to convert a mix of chemicals into white-hot plasma, this weapon then accelerates the plasma mass toward the target with a simple rail gun. The result is a bolt of incandescent plasma that can explosively vaporize objects in its path.

PLASMA CANNON, HEAVY (PL 7)
This weapon is simply a larger version of the plasma cannon.

QUANTUM CANNON (PL 7)
The quantum cannon fires a stream of highly charged subatomic particles, destabilizing the atoms of the target and creating localized fission reactions.

AUTOMASER (PL 8)
The automaser uses multiple firing arrays to channel high-energy maser compressions into shorter pulse widths. This weapon fires only in automatic mode.

EMP CANNON (PL 8)
The EMP cannon induces an electromagnetic pulse effect similar to that of a nuclear explosion. This makes the EMP cannon especially effective against electronic equipment. In addition to taking damage,

TABLE 7–14: STARSHIP WEAPONS

Weapon	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Minimum Ship Size	Purchase DC	Restriction
Progress Level 6: Fusion Age								
Fusion beam	10d8 (45)	20	Energy	3,000 ft.	Single	Gargantuan	33	Res (+2)
Gauss gun	8d12 (52)	20	Ballistic	4,000 ft.	Single [1]	Gargantuan	35	Res (+2)
Laser	6d8 (27)	20	Fire	3,000 ft.	Single [1]	Huge	28	Lic (+1)
Laser, heavy	8d8 (36)	20	Fire	4,000 ft.	Single	Colossal	31	Res (+2)
Mine, fusion	5d100 (275)	—	Energy	—	—	Colossal	33	Mil (+3)
Missile, CHE	6d12 (39)	19–20	Ballistic	—	Single	Gargantuan	25 [2]	Mil (+3)
Missile, KE submunition	4d12 (26)	19–20	Ballistic	—	Single	Gargantuan	22 [2]	Lic (+1)
Missile, nuclear	16d8 (72)	19–20	Energy	—	Single	Gargantuan	45 [2]	Mil (+3)
Needle driver	8d12 (52)	20	Ballistic	4,000 ft.	A	Gargantuan	36	Lic (+1)
Neutron gun	6d8 (27)	20	Energy	5,000 ft.	Single	Colossal	31	Mil (+3)
Neutron gun, heavy	10d8 (45)	20	Energy	6,000 ft.	Single	Colossal	35	Mil (+3)
Rail cannon	6d12 (39)	20	Ballistic	3,000 ft.	Single [1]	Gargantuan	30	Lic (+1)
Progress Level 7: Gravity Age								
Antimatter gun	10d8 (45)	20	Energy	5,000 ft.	Single	Colossal	38	Mil (+3)
Mass cannon	8d12 (52)	20	Ballistic	5,000 ft.	Single	Gargantuan	37	Lic (+1)
Mass cannon, heavy	10d12 (65)	20	Ballistic	6,000 ft.	Single	Colossal	40	Res (+2)
Mine, gravitic	10d100 (550)	—	Energy	—	—	Colossal	43	Mil (+3)
Missile, mass reaction	20d8 (90)	19–20	Energy	—	Single	Colossal	50 [2]	Mil (+3)
Missile, plasma	18d8 (81)	19–20	Fire	—	Single	Gargantuan	46 [2]	Res (+2)
Particle beam	12d8 (54)	20	Energy	4,000 ft.	Single	Gargantuan	36	Res (+2)
Particle beam, heavy	16d8 (72)	20	Energy	5,000 ft.	Single	Colossal	39	Res (+2)
Plasma cannon	14d8 (63)	20	Fire	3,000 ft.	Single [1]	Gargantuan	36	Lic (+1)
Plasma cannon, heavy	18d8 (81)	20	Fire	4,000 ft.	Single [1]	Colossal	39	Res (+2)
Quantum cannon	16d8 (72)	20	Energy	6,000 ft.	Single	Gargantuan	41	Res (+2)
Progress Level 8: Energy Age								
Automaser	12d8 (54)	20	Energy	6,000 ft.	A	Colossal	40	Res (+2)
EMP cannon	8d8 (36) [3]	20	Electricity	4,000 ft.	Single	Gargantuan	41	Res (+2)
Kinetic lance	10d12 (65)	20	Concussion	3,000 ft.	Single [1]	Colossal	42	Res (+2)
Maser cannon	12d8 (54)	20	Energy	6,000 ft.	Single [1]	Gargantuan	40	Lic (+1)
Maser cannon, heavy	16d8 (72)	20	Energy	8,000 ft.	Single [1]	Colossal	44	Res (+2)
Mine, zero point	15d100 (825)	—	Energy	—	—	Colossal	48	Mil (+3)
Missile, nova burst	12d8 (54)	19–20	Ballistic/ Energy	—	Single	Gargantuan	45 [2]	Mil (+3)
Missile, starload	20d8 (90)	19–20	Energy	—	Single	Huge	45 [2]	Mil (+3)
Neutronium driver	12d12 (78)	20	Ballistic	5,000 ft.	Single	Colossal	42	Mil (+3)
Sliver gun	8d12 (52)	20	Ballistic	3,000 ft.	S, A	Gargantuan	39	Res (+2)
Zero bore	16d8 (72)	20	Energy	6,000 ft.	Single	Colossal	52	Mil (+3)
Progress Level 9: Matter Age								
Blacklaser	16d8 (72)	20	Energy	8,000 ft.	S, A	Huge	50	Mil (+3)
Mine, null [4]	10d100 (550)	—	Energy	—	—	Colossal	53	Mil (+3)
Singularity cannon	20d8 (90)	20	Energy	5,000 ft.	Single	Colossal	53	Mil (+3)
String projector	12d12 (78)	20	Energy	6,000 ft.	Single	Colossal	54	Mil (+3)
Tachyon gun	14d8 (63)	20	Energy	10,000 ft.	Single	Gargantuan	52	Mil (+3)

1 With a successful Repair check (DC 30) and 1 hour of work, this weapon can be modified for semiautomatic or automatic fire mode. Resetting the weapon to its original configuration requires another check and another hour of labor.

2 *The purchase DC includes a basic launch system (missile rack or missile tube) and eight missiles with warheads. The purchase DC is 2 lower without the launch system.*

3 In addition to taking damage, the ship is dazed for 1 round (see Starship Condition Summary, page 113).

4 This weapon's damage ignores a ship's hardness.

the starship is dazed for 1 round. Neither crew nor passengers are dazed, however.

KINETIC LANCE (PL 8)

The kinetic lance creates a high-velocity stream of virtual particles simulating solid matter. The impact of these particles is quite destructive—rather like a collision with a solid object.

MASER CANNON (PL 8)

Maser cannons channel an enormous amount of power through a linear antenna array, creating a broad-spectrum blast of energy that devastates the target with heat, light, and intense radiation.

MASER CANNON, HEAVY (PL 8)

The heavy maser cannon is a larger version of the maser cannon.

With 1 hour of work and a successful Repair check (DC 30), a heavy maser can be reconfigured for semiautomatic or automatic fire mode. (Resetting the weapon to its original configuration requires another check and another hour of labor.) Increase the purchase DC of the modified pulse maser by +5.

MINE, ZERO POINT (PL 8)

This mine creates a spontaneous quantum fluctuation of energy—the same energy as the Big Bang, though obviously on a smaller scale.

MISSILE, NOVA BURST (PL 8)

The nova burst warhead generates an incredible gravitational force that compresses normal matter into an incredibly dense mass, which then explodes in a colossal detonation.

MISSILE, STARLOAD (PL 8)

The starload warhead is essentially an improved version of the PL 7 mass reaction missile.

NEUTRONIUM DRIVER (PL 8)

This version of the rail gun is configured to fire a projectile of false neutronium—a slug the size of a baseball, but with a temporary mass of thousands of tons. Because neutronium is electrically neutral, the driver mechanism actually encapsulates the projectile in a sleeve or sabot of ordinary matter to fire the slug.

SLIVER GUN (PL 8)

An efficient mass driver loaded with flechettes of tungsten steel, the sliver gun is the PL 8 version of a heavy machine gun. It cycles at a rate of fire of almost 4,000 rounds per minute, and each sliver can tear through a yard or more of heavy armor.

ZERO BORE (PL 8)

The zero bore creates a stream of energy that encourages extraordinary amounts of quantum energy fluctuation—the so-called "zero point" energy. Anything in its path is wrecked by the spontaneous destruction of space itself.

BLACKLASER (PL 9)

Using the fluorescent gaseous form of dark matter, a blacklaser fires a beam of coherent light. To human eyes, it appears to be a beam of purplish light bordering on ultraviolet, but it is composed of radiation much more energetic and dangerous than ordinary photons.

MINE, NULL (PL 8)

This weapon is horrifyingly simple in design. It harnesses nuclear strong force to generate a field in which all atomic bonds cease to exist. Matter in the mine's square and all adjacent squares is pulverized into subatomic dust.

A null mine ignores a ship's hardness.

SINGULARITY CANNON (PL 9)

The singularity cannon creates a quantum black hole and fires it at the enemy. A quantum black hole is no bigger than a single molecule, but it masses hundreds of millions of tons and can rip even the toughest armor to shreds.

STRING PROJECTOR (PL 9)

The string projector creates a super-dense cosmic string that passes through the target. A cosmic string is a short-lived chain of extraordinary mass; the effect on the target is similar to being pierced by the mass of a mountain, but concentrated into a space the size of a strand of hair.

TACHYON GUN (PL 9)

The tachyon gun fires a blast of high-energy, faster-than-light particles at the target.

GRAPPLING SYSTEMS

The following devices are commonly found on starships but don't fit under the headings of armor, engines, sensors, defensive systems, or weapons.

Installing one of these systems requires a successful Craft (mechanical) check (DC 30) after investing 30 hours. A character without a mechanical tool kit takes a –4 penalty on the skill check.

Purchase DC: The purchase DC of the system.

Restriction: The level of license required to purchase the system legally. For more information on restriction ratings, see Chapter Four: Equipment of the *d20 Modern Roleplaying Game*.

GRAPPLERS (PL 5)

Grapplers consist of two or more robotic arms fitted with magnetic grips or pads capable of latching onto a single target, usually another ship. Grapplers can also be used to grab Small or larger objects adrift in space.

Using grapplers against another ship or an unattended object is an attack action. Against another ship, this action provokes an attack of opportunity if the ship being grabbed has a point-defense system (see page 135). To successfully grab the target, the starship must first enter the target's square; then the starship's pilot must succeed at a Pilot check. The Pilot check's DC depends on the size and Defense of the target being grabbed, as shown on Table 7–15: Grappler Pilot Check DCs below. If the check succeeds, the starship successfully latches onto the target, and the two ships continue to occupy the same space until the grapplers release their hold. The grappling ship cannot move as long as it wishes to remain latched and moves in concert with the grappled ship. Neither ship can attack the other as long as the grapplers maintain their hold.

As an attack action, a grabbed starship can free itself from a grabbing ship by succeeding at an opposed Pilot check. Each ship adds a special grapple bonus on its check based on its size: Huge +8, Gargantuan +12, Colossal +16. A ship may only attempt to free itself once per round.

A starship using grapplers to latch onto another ship can release the hold and retract the grapplers as a free action.

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

Restriction: None.

TABLE 7–15: GRAPPLER PILOT CHECK DCS

Size of Target	Pilot Check DC
Colossal	5 + target's Defense
Gargantuan	10 + target's Defense
Huge	15 + target's Defense
Large	20 + target's Defense
Medium-size	25 + target's Defense
Small	30 + target's Defense

TRACTOR BEAM EMITTER (PL 7)

A tractor beam emitter projects a short-range gravitational "tether" that latches onto or immobilizes a single target, usually a ship or

unattended object. The target must be in the same square or in an adjacent square.

Using a tractor beam against a starship or an unattended object is an attack action. Against another ship, this action provokes an attack of opportunity if the ship being grabbed has a point-defense system (see page 135).

To grab a target with its tractor beam, a starship must succeed at a ranged attack roll. If the attack succeeds, the smaller ship is immediately pulled into the larger ship's space (if it isn't in occupying the same space already); if both ships are the same size, the target is pulled into the tractoring ship's space. In any case, being pulled into another ship's space by a tractor beam does not count against a ship's movement. If the tractoring ship is one or more size categories larger than the target, the target is effectively immobilized, and tractoring ship drags the target with it when it moves. If the tractoring ship is the same size category as the target or smaller, both the tractoring ship and the target are effectively immobilized. See the Starship Condition Summary (page 113) for the effects of being immobilized.

As an attack action, a tractored starship can free itself from the tractoring ship by succeeding at an opposed Pilot check. Each ship adds a special grapple bonus on its check based on its size: Huge +8, Gargantuan +12, Colossal +16. A ship may only attempt to free itself from a tractor beam (or any other grappling device) once per round. A ship held by multiple tractor beams may attempt a single grapple check to escape all of the beams, but must beat the grapple check results of all opponents.

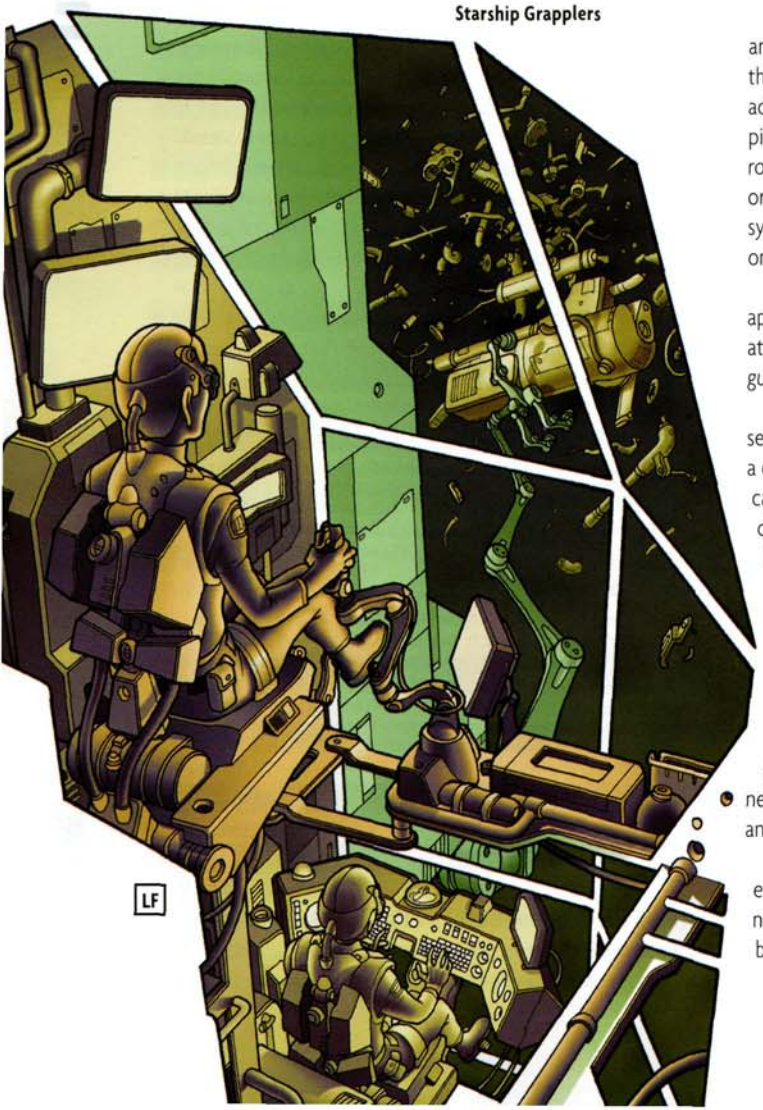
A starship using a tractor beam to grab another ship can terminate the beam (thereby releasing its hold on the other ship) as a free action.

Only Gargantuan and Colossal ships can be equipped with a tractor beam emitter.

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

Restriction: Licensed (+1).

Starship Grapplers



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HEROES IN STARSHIPS

A hero in a starship fills one of several possible roles, which determines what the character can do.

Commander: A ship's commander makes decisions about tactics and issues orders to the crew. The commander can help another crewmember by taking an aid another action (see Chapter Five: Combat in the *d20 Modern Roleplaying Game*). The commander must be located on the starship's command deck to do so. Aiding another crewmember is a move action. A starship can only have one commander, and ships under Colossal size tend not to have a commander at all.

Pilot: The pilot of a starship controls its movement. Most starships have only one position from which the starship can be piloted. Piloting a starship is always at least a move action, which means that the pilot may be able to do something else with her attack action each round. On smaller ships such as fighters, the pilot also serves as the gunner. A starship can have only one pilot at a time.

Copilot: The copilot can help the pilot on Pilot checks by taking an aid another action. The copilot must be located somewhere on the ship from where he can see the starship's surroundings and advise the pilot (usually the command deck or cockpit). Aiding the pilot is a move action, leaving the copilot with an attack action each round to do something else. A copilot may also serve as a gunner or sensor operator if he can access one of the starship's weapon systems or the ship's sensors from his station. A starship can have only one copilot at a time.

Gunner: A gunner controls one of the ship's weapon systems, applying her ranged attack bonus and Dexterity modifier to the attack rolls. A ship with multiple weapon systems can have multiple gunners.

Sensor Operator: Although the copilot usually operates the sensors, some ships (particularly heavy and superheavy ships) have a dedicated crew position for a sensor operator. A sensor operator can take an aid another action either to help the pilot with Pilot checks, or to help a gunner with attack rolls. Either is a move action, leaving the sensor operator with an attack action each round to do something else. A starship can have as many sensor operators as it has different sensor systems (see Starship Sensors, page 136).

Engineer: A starship's engineer keeps the ship in working order. If a system has failed for any reason, it is usually up to the engineer to get that system working again. An engineer can attempt a Repair check to fix minor problems as a full round action. A starship can have one engineer, plus one additional engineer each for the ship's life support, sensors (and communications), and defensive systems.

Passenger: All other personnel aboard the starship are considered passengers for purposes of starship combat. Passengers have no specific role in the starship's operation, but they help repel boarders or take other actions.

A STARSHIP'S PURCHASE DC

The rules in this chapter are written so that a character can buy the necessary systems to build a starship from scratch. A starship's systems (engines, weapons, and so forth) are sold separately and thus have separate purchase DCs.

In most cases, the combined cost of a starship's systems is enough to increase the ship's base purchase DC by 1. To verify the total purchase DC of a starship with preinstalled systems, use Table 7–16: Purchase DCs and follow these three steps:

1. Determine the Item Cost (in dollars) of the starship and each of its systems, based on their respective purchase DCs.

2. Total the various Item Costs to get the total cost of the starship (in dollars).

3. Use Table 7–16: Purchase DCs to convert the total cost of the starship back into a single purchase DC.

For example, the standard PL 6 fast freighter (base purchase DC 52) has the following systems: ion engines (purchase DC 28), thrusters (purchase DC 41), polymeric armor (purchase DC 36), autopilot system (purchase DC 18), damage control system (purchase DC 18), magnetic field (purchase DC 31), radiation shielding (purchase DC 31), sensor jammer (purchase DC 31), Class II sensor array (purchase DC 27), targeting system (purchase DC 28), laser transceiver (purchase DC 23), radio transceiver (purchase DC 21), 2 fire-linked heavy lasers (purchase DC 32 each), 2 fire-linked rail cannons (purchase DC 31 each), and grapplers (purchase DC 36). Using Table 7–16, we can convert each purchase DC into an Item Cost, add the Item Costs together, and determine that the total cost is $21,630,150. We then convert this dollar sum back into a purchase DC. According to the table, a fast freighter that costs $21,630,150 has an equivalent purchase DC of 53.

TABLE 7–16: PURCHASE DCS

Purchase DC	Item Cost	Purchase DC	Item Cost
2	$5	42	$1,200,000
3	$12	43	$1,500,000
4	$20	44	$2,000,000
5	$30	45	$2,750,000
6	$40	46	$3,500,000
7	$55	47	$5,000,000
8	$70	48	$6,500,000
9	$90	49	$9,000,000
10	$120	50	$12,000,000
11	$150	51	$15,000,000
12	$200	52	$20,000,000
13	$275	53	$27,500,000
14	$350	54	$35,000,000
15	$500	55	$50,000,000
16	$650	56	$65,000,000
17	$900	57	$90,000,000
18	$1,200	58	$120,000,000
19	$1,500	59	$150,000,000
20	$2,000	60	$200,000,000
21	$2,750	61	$275,000,000
22	$3,500	62	$350,000,000
23	$5,000	63	$500,000,000
24	$6,500	64	$650,000,000
25	$9,000	65	$900,000,000
26	$12,000	66	$1,200,000,000
27	$15,000	67	$1,500,000,000
28	$20,000	68	$2,000,000,000
29	$27,500	69	$2,750,000,000
30	$35,000	70	$3,500,000,000
31	$50,000	71	$5,000,000,000
32	$65,000	72	$6,500,000,000
33	$90,000	73	$9,000,000,000
34	$120,000	74	$12,000,000,000
35	$150,000	75	$15,000,000,000
36	$200,000	76	$20,000,000,000
37	$275,000	77	$27,500,000,000
38	$350,000	78	$35,000,000,000
39	$500,000	79	$50,000,000,000
40	$650,000	80	$65,000,000,000
41	$900,000	81	$90,000,000,000

BY HOOK OR BY CROOK

Heroes who cannot afford to buy their own starship can always borrow, requisition, rent, or steal one as the need arises.

Borrowing a Starship: A character with the favor talent (see page 30 of the *d20 Modern Roleplaying Game*) can attempt a favor check (DC 30) to borrow a starship from a friendly contact, assuming that the contact has a ship available. The contact must have an attitude of helpful, and improving a contact's attitude requires a Diplomacy check (see pages 57–58 of the *d20 Modern Roleplaying Game*). The GM sets the terms of the favor. One contact might send someone along to watch over the ship and make sure it's returned intact, while another contact might insist that the heroes use the ship only for interplanetary (not interstellar) travel.

Requisitioning a Starship: A character working for an agency can requisition a starship as "equipment," using the rules for requisitioning equipment given on pages 93–94 of the *d20 Modern Roleplaying Game*.

Renting a Starship: The issue of starship rental won't come up in campaigns where space traffic is limited to military vessels. However, in campaigns featuring commercial and privately owned starships, heroes can rent a starship for much less than it costs to buy one. Only ultralight or light starships with a restriction rating of licensed (+1) or restricted (+2) can be rented, and the heroes must have the appropriate license to operate the vessel. Renting a starship for a day requires a successful Wealth check against one-quarter of the starship's purchase DC. Increase the purchase DC by 2 if the ship is equipped for interstellar travel or if a trained crew is provided as part of the rental agreement. Renters must cover any damages sustained by the ship during the rental period.

Stealing a Starship: Characters can steal a starship only after disabling its security locks (Disable Device DC 40, one check per lock), overcoming any hostile crewmembers aboard, and defeating the ship's onboard computer security system (Computer Use DC 40). A ship's computer security system can be accessed from any onboard computer terminal, although using a bridge terminal reduces the DC by 5. For more information on defeating computer security, see the Computer Use skill description on page 51 of the *d20 Modern Roleplaying Game*.

CHAPTER EIGHT:

VEHICLES



Vehicle Chase KA

The "Car of the Future" in automobile advertising in the 1950s and 1960s was truly the stuff of science fiction. Cars still don't fly or switch to submersible mode at the touch of a button, yet the Car of the Future may be just around the corner.

NEW VEHICLES

As oil prices rise and consumers insist on more safety measures in vehicles, engineers push the technology envelope. The major motor companies create personal hovermobiles that handle like cars, build cars that drive themselves, and unveil vehicles that can travel over water, underwater, and, in some cases, underground.

CIVILIAN HOVERVEHICLES

Hovervehicles are extremely popular at Progress Level 7, when the ability to set down virtually anywhere allows "hoverists" (hovervehicle enthusiasts) to take the same vehicle into the wilderness that they take to work every day.

Air traffic control restricts hover traffic to 5,000 feet or less. Police and well-marked hoverlanes keep traffic in line.

Unless otherwise noted, civilian hovervehicles provide three-quarters cover for their occupants. The operative skill for hovervehicles is Pilot.

AD-BRIGHT POLICE CRUISER (PL 7)

Developed in PL 7 by AutoDyn and Bright Systems, the AD-Bright police cruiser uses hover technology to put police on equal footing with the private citizens' hovervehicles. When driven on the ground, the police cruiser's top speed drops to 215 (21). It is 3 squares wide and 3 squares long.

The main cab of an AD-Bright police cruiser contains the following equipment:

- Patrol box
- CB radio (professional)
- Maps (road atlas)
- GPS receiver
- 2 searchlights (a battery flood flashlight with double the usual range; mounted to the cruiser on either side)
- Standard flashlight
- 12 chemical lightsticks

The trunk of an AD-Bright police cruiser holds the following additional gear:

- First-aid kit
- Basic evidence kit
- Basic toolkit (including duct tape, bolt cutters, and a multi-purpose tool)
- Pair of handcuffs
- 25 plastic zip ties

- Blanket
- 2 days' worth of trail rations
- 8 road flares
- 2 strobing traffic cones
- Roll of crime scene tape
- Fire extinguisher

AUTODYN HOVERBIKE (PL 7)

The AutoDyn hoverbike can travel as high as 15,000 feet, and that limit is set due to the rider's inability to breathe at higher altitudes without an oxygen mask. When driven on the ground, the hoverbike's top speed is 380 (38). The hoverbike is 1 square wide and 2 squares long. It provides its rider with no cover.

AUTODYN HOVERBUS (PL 7)

AutoDyn's hoverbus provides the flying version of mass transit. The hoverbus's top speed is 120 (12). A hoverbus is 3 squares wide and 8 squares long.

AUTODYN HOVERCAR (PL 7)

The AutoDyn hovercar is capable of flying up to 30,000 feet when the cabin is sealed. When driven on the ground, the hovercar's top speed is 215 (21). A hovercar is usually 2 squares wide and 3 squares long, but larger luxury models exist.

AUTODYN HOVERTRUCK (PL 7)

The AutoDyn hovertruck is frequently used by emergency services personnel (with modifications) for rescuing stranded hoverists or reaching hikers and mountain climbers lost at high altitudes. When driven on the ground, the hovertruck's top speed is 145 (14). A hovertruck is 3 squares wide and 4 squares long.

HYDRODYN SEAHAWK (PL 7)

Unlike other hovervehicles, the SeaHawk is only capable of landing on water or on specially constructed brackets (purchase DC 23). When piloted on the water, the SeaHawk's top speed is 140 (14). It has a 5,000-foot legal ceiling, but it doesn't trouble with traffic lanes when used over open water. The SeaHawk is 3 squares wide and 5 squares long.

VEHICLES AND PROGRESS LEVELS

Although each of the vehicles listed below has a Progress Level associated with it, specifics of the vehicle can be modified to fit into an earlier or later Progress Level. Modify the top speed, initiative, and maneuver scores of vehicles—lower numbers for lower PLs, higher numbers for higher PLs—and adjust the purchase DC accordingly (as suggested in the Purchasing Items of Lower or Higher Progress Level sidebar, page 5).

CIVILIAN CARS

Civilian automobiles of the future are required by law to carry remote shutdown systems in the event the vehicle is involved in a high-speed chase. Cars can be equipped with options like heated side mirrors, power seats, and sunroofs; each of these added features increases the vehicle's purchase DC by 1.

Unless otherwise noted, civilian cars provide three-quarters cover for their occupants. The operative skill for cars is Drive.

AUTOMAC TAXI (PL 6)

The AutoMac is a computer-driven taxi equipped with a driver autocomp (see Vehicle Gear). It features two facing bench seats with room for six passengers, and a small view screen and speaker that hang down from the ceiling. The friendly voice of "Mac" requests destination information as well as displaying the question on the view screen. The computer calculates the fare and pre-charges the passenger. In case of emergency, a manual stop button mounted in the middle of the speaker allows passengers to safely halt the vehicle. Although there are no manual controls, the computer is equipped with an access jack behind the front seat. A notebook

TABLE 8–1: CIVILIAN HOVERVEHICLES

Name	Crew	Pass	Cargo	Init	Maneuver	Top Speed	Defense	Hard	Hit Points	Size	Purchase DC	Restriction
Progress Level 7: Gravity Age												
AD-Bright police cruiser	1	4	L	–2	+0	245 (24)	8	5	32	H	38	Res (+2)
AutoDyn hoverbike	1	1	D	+1	+2	410 (41)	10	5	15	M	37	Lic (+1)
AutoDyn hoverbus	1	38	H	–4	–4	160 (16)	6	5	45	G	45	Lic (+1)
AutoDyn hovercar	1	4	L	–1	+0	250 (25)	9	5	28	L	36	Lic (+1)
AutoDyn hovertruck	1	1	H	–3	–4	180 (18)	6	8	35	G	42	Lic (+1)
HydroDyn SeaHawk	1	3	S	–2	+0	160 (16)	9	5	30	L	36	Lic (+1)

TABLE 8–2: CIVILIAN CARS

Name	Crew	Pass	Cargo	Init	Maneuver	Top Speed	Defense	Hard	Hit Points	Size	Purchase DC	Restriction
Progress Level 6: Fusion Age												
AutoMac taxi	0	6	L	–3	–2	175 (17)	8	5	34	H	31	Lic (+1)
Kirsch Sunflower	1	2	S	–4	–2	160 (16)	9	5	25	L	27	Lic (+1)
Nakazawa Delta-9	1	4	L	–2	–1	245 (24)	8	5	34	H	31	Lic (+1)
SKG Lamplighter	1	4	M	–1	–1	210 (21)	8	5	32	H	28	Lic (+1)
Progress Level 7: Gravity Age												
Bendel Motors Spirit	1	4	M	–2	+0	290 (29)	8	5	36	H	29	Lic (+1)
Stradtler Hlidskjalf	1	4	L	–1	+1	255 (25)	8	5	35	H	36	Lic (+1)
TM Willow	1	4	M	–2	–2	205 (20)	8	5	35	H	28	Lic (+1)
Progress Level 8: Energy Age												
SKG Metropolitan	1	7	L	–2	–2	215 (21)	6	6	41	G	42	Lic (+1)

TABLE 8–3: CIVILIAN MOTORCYCLES

Name	Crew	Pass	Cargo	Init	Maneuver	Top Speed	Defense	Hard	Hit Points	Purchase Size	Purchase DC	Restriction
Progress Level 6: Fusion Age												
Harris-Musselman dirt bike	1	0	F	+0	+1	180 (18)	10	5	19	M	24	Lic (+1)
Progress Level 7: Gravity Age												
Stradtler Valkyrie	1	1	F	–2	+1	295 (29)	9	5	24	L	28	Lic (+1)

computer or PDA with the appropriate interface program can be plugged into this jack to override the computer and allow an occupant to manually control the vehicle with a successful Computer Use check (DC 20).

The AutoMac taxi is 2 squares wide and 3 squares long. Its drivercomp has a Drive skill modifier of +8.

KIRSCH SUNFLOWER (PL 6)

The Kirsch Sunflower is a solar-electrical economy coupe and its performance is abysmal in comparison to other cars. It is 2 squares wide and 3 squares long.

NAKAZAWA DELTA-9 (PL 6)

The Delta-9 from Nakazawa is a mid-size family wagon with a hatchback rear door and plenty of cargo space. It uses the popular hybrid gas/electrical engine developed in PL 5. It is 2 squares wide and 3 squares long.

SKG LAMPLIGHTER (PL 6)

The Lamplighter four-door economy sedan offers comfort and performance for a reasonable price. Slower than most civilian automobiles, the Lamplighter offers all the usual luxuries included in the base price—keeping the cost down by selling budget components, rather than the high-end electronics usually installed. The Lamplighter is 2 squares wide and 3 squares long.

BENDEL MOTORS SPIRIT (PL 7)

The Bendel Motors Spirit is a comfortable, four-door, midsize sedan with a powerful minireactor engine. It is 2 squares wide and 3 squares long.

STRADTLER HLIDSKJALF (PL 7)

The Hlidskjalf sedan is widely recognized as the finest four-door luxury sedan in production during its age. The Hlidskjalf is 2 squares wide and 3 squares long.

TM WILLOW (PL 7)

This mid-size, two-door sedan from Toner Motors is a common car model. It has improved air filters to keep out the kind of dust found in the environments of other planets. They are less popular on Earth, except when they are adapted to desert driving. The Willow is 2 squares wide and 3 squares long.

SKG METROPOLITAN (PL 8)

The Metropolitan is the ultimate in chauffeured luxury. Powered by a particle reactor, it is loaded with every available luxury feature. A partition divides the driver's seat from the rest of the vehicle. The solid construction lends the Metropolitan a slightly higher hardness than other civilian vehicles, and armored versions with hardness 10 are available (increase the vehicle's purchase DC by +1). The Metropolitan provides three-quarters cover for its occupants. It is 2 squares wide and 5 squares long.

CIVILIAN MOTORCYCLES

Mounting a motorcycle is a free action, and the motorcycle provides no cover to its occupants—except as noted below. The operative skill for motorcycles is Drive.

HARRIS-MUSSELMAN DIRT BIKE (PL 6)

Known as the "Muscleman," the H-M is a popular recreational motorcycle that also happens to enjoy wide use by military recon units. It is 1 square wide and 2 squares long.

STRADTLER VALKYRIE (PL 7)

Stradtler's version of the street bike upholds the Norwegian motor company's reputation for high performance and luxury. Constructed on the "chopper" frame, the Valkyrie has a triple-wide rear tire and a center of gravity set slightly further back than normal street cycles, enabling it to get up on the rear wheel for impressive displays of motorcycle riding. It is 1 square wide and 2 squares long.

CIVILIAN TRUCKS

Trucks usually have the same features as civilian cars, with the same luxury options. Trucks provide three-quarters cover to their occupants, except as noted below. The operative skill for trucks is Drive.

CRETAN MOTORS "HECATON" (PL 6)

The national automobile company of Crete came late to the industry, but has made impressive strides toward winning over truck buyers. The Hekatoncheires pickup truck—inaccurately referred to as the "Hecaton" by its target market—combines impressive power with high durability and generous cargo room in the bed. The six-wheel design includes puncture-resistant tires (see the Taking Out the Tires sidebar on page 163 of the *d20 Modern Roleplaying Game*) and is popular with construction companies. The cab can

TABLE 8–4: CIVILIAN TRUCKS

Name	Crew	Pass	Cargo	Init	Maneuver	Top Speed	Defense	Hard	Hit Points	Purchase Size	Purchase DC	Restriction
Progress Level 6: Fusion Age												
Cretan Motors "Hecaton"	1	4	H	–1	–1	190 (19)	6	5	39	G	31	Lic (+1)
Cretan Motors Kentaur	1	3	L	–1	+0	210 (21)	8	5	36	H	30	Lic (+1)
Gaia Motor Company Virgo	1	6	M	–2	–2	215 (21)	8	5	35	H	29	Lic (+1)
Progress Level 7: Gravity Age												
Zhang Motors XRL (SUV)	1	3	L	–2	–1	245 (24)	8	5	40	H	32	Lic (+1)

TABLE 8–5: OTHER CIVILIAN VEHICLES

Name	Crew	Pass	Cargo	Init	Maneuver	Top Speed	Defense	Hard	Hit Points	Size	Purchase DC	Restriction
Progress Level 7: Gravity Age												
AutoDyn hoverboard	1	0	F	+2	+4	50 (5)	14	2	8	D	17	Lic (+1)
WGM Wyoming	1	0	D	+1	+2	120 (12)	9	5	25	L	26	Lic (+1)

TABLE 8–6: MILITARY VEHICLES

Name	Crew	Pass	Cargo	Init	Maneuver	Top Speed	Defense	Hard	Hit Points	Size	Purchase DC	Restriction
Progress Level 6: Fusion Age												
Appel-Siems Gyrocopter	1	0	F	–3	–2	360 (36)	8	5	23	L	38	Mil (+3)
EU2A1 Mendez APC	3	8	M	–1	–1	95 (9)	6	15	56	G	42[1]	Mil (+3)
UN-500 Turtledove	3	12	L	–3	–2	360 (36)	6	10	46	G	48	Mil (+3)
Progress Level 7: Gravity Age												
IS-2000 Ifrit APC	4	11	L	–3	–3	100 (10)	6	15	58	G	46[1]	Mil (+3)
M-300 Hovertank	4	0	M	–4	–3	120 (12)	6	20	62	G	50[1]	Mil (+3)

1 The vehicle's purchase DC does not include its mounted weapons.

be sealed against harsh environments—ads show them driving into lakes and being pulled out with the interior dry as a bone and the occupants casually listening to the stereo. The Hekatoncheires is 3 squares wide and 4 squares long.

CRETAN MOTORS KENTAUR (PL 6)

Cretan Motors produces a smaller, faster, "light-duty" pickup with many of the same features of the larger Hekatoncheires but without all the cargo space. The Kentaur is 2 squares wide and 3 squares long.

GAIA MOTOR COMPANY VIRGO (PL 6)

The Gaia Motor Company developed a line of automobiles powered by the popular fusion minireactor. The Virgo minivan is a top seller, capable of high speeds yet comfortably easy to handle. It is 2 squares wide and 3 squares long.

ZHANG MOTORS XRL (PL 7)

The XRL is designed to operate using a less expensive particle reactor, rather than the slightly more stable fusion minireactor. This gamble ultimately paid off when an XRL won the Australian Rally Challenge. The XRL comes only in a two-door style. It is 2 squares wide and 3 squares long.

OTHER CIVILIAN VEHICLES

Some civilian vehicles are highly specialized, and so don't truly fit into any other category. The operative skill for these vehicles is Drive, unless otherwise noted.

AUTODYN HOVERBOARD (PL 7)

The AutoDyn hoverboard is a 3-foot-long board held aloft by a tiny but powerful forced-air system. A hoverboard is 1 square wide and 1 square long, and it provides no cover to its rider. The operative skill to control a hoverboard is Tumble.

WGM WYOMING (PL 7)

The Wallace General Mechanics Wyoming is essentially a four-wheeled dirt bike powered by a minireactor. It provides no cover for its rider. The Wyoming is 1 square wide and 2 squares long.

MILITARY VEHICLES

Despite being grouped together under the military vehicle heading, some of these vehicles are used by law-enforcement and emergency services. The operative skill for these vehicles depends on their mode of travel. Generally, the Drive skill is used for vehicles that travel on the ground or on water; if the vehicle flies or hovers, Pilot is the operative skill.

APPEL-SIEMS GYROCOPTER (PL 6)

Appel-Siems created its one-seat helicopter for the military, but many exist in the law enforcement roles and in the corporate sector. The mostly enclosed cockpit gives its pilot three-quarters cover. Its body is 1 square wide and 3 squares long.

EU2A1 MENDEZ (PL 6)

The Mendez armored personnel carrier is fusion-powered and fully enclosed. The crew consists of a driver and two gunners. The vehicle has three topside hatches, located directly above each crew position, with a large door/ramp in the back for infantry troops to board or disembark. Entering or disembarking through a top hatch requires a full-round action. The Mendez is 3 squares wide and 4 squares long, and it provides full cover to all its occupants.

The EU2A1 Mendez has a pair of mounted twin thunder machine guns mounted near two of the three topside hatches. See Chapter 3: Gear for a description of the twin thunder machine gun and Table 3–1: Ranged Weapons for its statistics.

UN-500 TURTLEDOVE (PL 6)

One of the last military helicopters in use by the United Nations before they were replaced with hovervehicles, the Turtledove was

TABLE 8–7: M-300 HOVERTANK WEAPONS

Weapon	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Magazine	Size	Purchase Weight	DC	Restriction
Progress Level 6: Fusion Age										
T-95 Cavalcade chain gun	7d6	20	Ballistic	60 feet	S, A	Linked	Huge	185 lb.	21	Mil (+3)
Progress Level 7: Gravity Age										
M-300 Rhino mass cannon	8d12	20	Ballistic	100 feet	S	—	Huge	450 lb.	29	Mil (+3)

a familiar sight over the battlefields of PL 6. It is 4 squares wide and 10 squares long.

IS-2000 IFRIT (PL 7)

The IS-2000 Ifrit APC is faster, more durable, and carries more troops than the Mendez APC. The Ifrit is crewed by a commander, a driver, and two gunners, each of whom has a topside hatch located directly above them. Entering or disembarking through a top hatch requires a full-round action. The rear door is not built for fast deployment, requiring a full round to open or close. The Ifrit is 3 squares wide and 4 squares long, and it provides full cover to all its occupants.

The IS-2000 Ifrit has a mounted twin thunder machine gun near one topside hatch and a mounted rail gun near another. See Chapter 3: Gear for descriptions of the twin thunder machine gun and the rail gun, and see Table 3–1: Ranged Weapons for their statistics. The twin thunder fires PL 6 plasma-coated rounds, while the rail gun fires rail gun shards (see Table 3–3: Ammunition Types).

M-300 HOVERTANK (PL 7)

The M-300 Hovertank is powered by a particle reactor and crewed by a pilot, gunner, gun loader, and commander. It comes equipped with a fully turreted M-300 Rhino mass cannon as its main gun and a T-95 Cavalcade chaingun in a separate turret located above the commander's hatch. (Modified versions of these weapons designed for mecha are described in Chapter 9: Mecha.) Each crew position has a topside hatch located directly above it. Entering or disembarking through a top hatch requires a full-round action, and starting the Hovertank requires another full round action.

The M-300 Hovertank is 3 squares wide and 6 squares long, and it provides full cover to all its occupants. A more expensive version of the Hovertank comes equipped with neovulcanium armor and an onboard tactical assist system (see Vehicle Gear, below).

Statistics for the Hovertank's M-300 Rhino mass cannon and T-95 Cavalcade chaingun are presented in Table 8–7: M-300 Hovertank Weapons.

VEHICLE GEAR

The following equipment can be purchased and installed on any vehicle of Progress Level 6 or higher (unless noted otherwise). In most cases, purchasing vehicle gear requires a Wealth check separate from the Wealth check to acquire the vehicle.

ANTI-ACCIDENT SYSTEM

Anti-accident systems use airbags, fire-retardant foam, no-skid brakes, gyroscopic stabilizers, and other safety features to improve a driver's chances of surviving or averting accidents.

The system reduces collision damage by half, though this only applies to the vehicle equipped with an anti-accident system. Further, the operator of a vehicle so equipped gains a +2 equipment bonus on Drive or Pilot checks to make hard brake or hard turn maneuvers.

Purchase DC: 17.
Restriction: None.

AUTOCOMP, DRIVER

A driver autocomp consists of an onboard computer with AI software capable to operating a vehicle, thereby removing the need for a driver or pilot. Most vehicles equipped with a driver autocomp still retain a driver's seat, allowing the vehicle to be controlled manually if the autocomp is deactivated or disabled. Disabling a driver autocomp requires a successful Disable Device check (DC 15).

The driver autocomp's modifier on all Drive or Pilot checks, as well as its purchase DC, depends on the quality of the system's AI software; see Table 8–8: Driver Autocomps for details.

Purchase DC: See Table 8–8.
Restriction: None.

TABLE 8–8: DRIVER AUTOCOMPS

Driver Autocomp	Drive or Pilot Check Modifier	Purchase DC
Roadlord AI-DA	+0	12
Pegasus AI-200	+2	15
Dervish AI-400	+4	18
Twister AI-800	+8	21
Zephyr AI-1200	+12	24

AUTOCOMP, GUNNER

A gunner autocomp is an onboard computer with AI software capable of automatically aiming and firing all of a vehicle's mounted weapons, thereby removing the need for one or more gunners.



All Aboard!

Most vehicles equipped with a gunner autocomp still allow the vehicle's weapons to be controlled manually if the autocomp is deactivated or disabled. Disabling a gunner autocomp requires a successful Disable Device check (DC 15).

The gunner autocomp's attack bonus, as well as its purchase DC, depends on the quality of the system's AI software; see Table 8–9: Gunner Autocomps for details.

Purchase DC: See Table 8–9, and increase the purchase DC by +1 for each additional weapon after the first. For example, a Hotshot AI-G8 autocomp designed to control two mounted vehicle weapons has a purchase DC of 28.

Restriction: Licensed (+1).

TABLE 8–9: GUNNER AUTOCOMPS

Gunner Autocomp	Attack Bonus	Purchase DC[1]
Marksman AI-GA	–2	15
Rattlesnake AI-GX	+0	18
Adder AI-G2	+2	21
Deadeye AI-G4	+4	24
Hotshot AI-G8	+8/+3	27

1 Increase the purchase DC by +1 for each additional weapon after the first.

REMOTE SHUTDOWN SYSTEM

This public safety feature, introduced at Progress Level 6, is required by law on all civilian vehicles. The remote shutdown system consists of a microcomputer attached to the vehicle's electrical system plus a microantenna. At a coded signal from an authorized law enforcement officer (via a dashboard-mounted unit installed in most police cruisers), the remote shutdown system switches off the vehicle, bringing it to a slow, safe stop (and, in the case of flying or hovering vehicles, a safe descent).

Law enforcement agencies maintain huge databases of codes for civilian vehicles, enabling officers to quickly determine the code for a vehicle by make, model, year, or license plate. Searching for a code requires a full-round action. Entering the code to shut down the vehicle is an attack action.

This system is installed on all civilian vehicles. Acquiring a civilian vehicle *without* a remote shutdown system or acquiring a vehicle with an altered code (so that the owner can shut it down, but no one else can) is treated like buying an illegal item (see Restricted Objects on pages 92–93 of the *d20 Modern Roleplaying Game*). Removing the system—an illegal act—requires a successful Disable Device check (DC 15). Changing the code—also an illegal act—requires a successful Computer Use check (DC 30).

An installed remote shutdown system does not increase a vehicle's purchase DC.

VEHICULAR ARMOR

Armor can be welded or otherwise fixed securely to a vehicle's chassis, providing an equipment bonus to the vehicle's Defense. Vehicular armor also makes a vehicle more ungainly, imposing a penalty on the vehicle operator's Drive or Pilot checks. Vehicular armor does not require a special license to purchase.

Installing armor on a vehicle requires 12 hours and a Craft (mechanical) check (DC 20). Armor can be removed in half the time with a successful Repair check (DC 20).

Different types of vehicular armor are described below, complete with the following statistics:

Equipment Bonus: The equipment bonus that the armor provides to the vehicle.

Drive/Pilot Check Penalty: Apply this penalty to the vehicle operator's Drive or Pilot checks.

Purchase DC: The cost of the vehicular armor.

ALUMISTEEL ARMOR (PL 5)

This easy-to-acquire alloy is lightweight and reasonably strong.

Equipment Bonus: +5.
Drive/Pilot Check Penalty: –3.
Purchase DC: 15 + the vehicle's hardness.

DURAPLASTIC ARMOR (PL 5)

Duraplastic armor is made of advanced plastic polymers, like carbon fiber and high-grade fiberglass. Although relatively cheap and light, it doesn't offer tremendous protection.

Equipment Bonus: +3.
Drive/Pilot Check Penalty: –2.
Purchase DC: 10 + the vehicle's hardness.

DURALLOY ARMOR (PL 6)

Duralloy is harder, heavier, and more durable than alumisteel.

Equipment Bonus: +8.
Drive/Pilot Check Penalty: –4.
Purchase DC: 15 + the vehicle's hardness.

RESILIUM ARMOR (PL 6)

Resilium is more malleable alloy than duralloy, although not as strong.

Equipment Bonus: +6.
Drive/Pilot Check Penalty: –2.
Purchase DC: 10 + the vehicle's hardness.

CRYSTAL CARBON ARMOR (PL 7)

"Grown" in orbital laboratories, crystal carbon is a composite fiber material that narrowly outperforms neovulcanium (see below) on the battlefield.

Equipment Bonus: +10.
Drive/Pilot Check Penalty: –4.
Purchase DC: 20 + the vehicle's hardness.

NEOVULCANIUM ARMOR (PL 7)

Similar to duralloy, neovulcanium uses plasma-forging techniques to create an alloy of surprising resilience.

Equipment Bonus: +10.
Drive/Pilot Check Penalty: –5.
Purchase DC: 15 + the vehicle's hardness.

MEGATANIUM ARMOR (PL 8)

Sandwiched layers of crystal carbon and neovulcanium held in a magnetic matrix, megatanium is exceedingly hard and durable.

Equipment Bonus: +12.
Drive/Pilot Check Penalty: –5.
Purchase DC: 20 + the vehicle's hardness.

REACTIVE ARMOR (PL 8)

Consisting of layers of insulating gel or compressed gas between cerametal sheets, reactive armor provides the same protection as crystal carbon armor but is considerably cheaper and easier to produce.

Equipment Bonus: +8.
Drive/Pilot Check Penalty: –2.
Purchase DC: 15 + the vehicle's hardness.

CHAPTER NINE:

MECHA



Mecha-Lo-Mania

A mecha (plural: mecha) is like an automated suit of powered armor. Not only does it surround its driver or pilot with armor, but it can also be equipped with an impressive array of defenses and state-of-the-art weapons.

Mecha technology can be found in societies of PL 6 or higher. The technology evolved from simple piloted loadlifters and powered exoskeletons used for heavy industrial work. Once someone realized that armor could be welded to the framework to create a "bulletproof cop," the idea really took off, both in law enforcement and the military.

The first mecha were frighteningly efficient in military roles, though less so in law enforcement. Essentially armored giants, mecha could wade into enemy positions and simply pick up artillery or overturn vehicles. Police mecha operators had to be much more careful, obviously, learning not to step on cars or topple onto houses.

The following rules allow you to create a mecha—from the hulking close-combat models slightly larger than the average human, to the gigantic mobile artillery platforms that take small crews to operate.

MECHA BODY SIZE

Mecha bodies come in Large, Huge, Gargantuan, and Colossal sizes. A mecha's size determines how many equipment slots (places where weapons and additional equipment can be installed) it has, and how well it measures up in combat. See Table 9–1: Mecha Sizes for a summary of this information.

Size Modifier: Apply this modifier to the mecha's attack rolls and to its Defense.

Equipment Slots: The number of locations where weapons and other mecha equipment can be installed.

Hit Points: The mecha's hit points, and the number of hit points the mecha provides its operator.

Base Speed: The mecha's base land speed. Certain types of armor reduce base speed (see Mecha Armor).

Height: The mecha's height in feet.

Weight: The mecha's weight in pounds.

Fighting Space: The mecha's fighting space. For more information on fighting space, see page 225 of the *d20 Modern Roleplaying Game.*

Reach: The mecha's reach, even without weapons. For more information on reach, see page 225 of the *d20 Modern Roleplaying Game.*

Purchase DC: The base purchase DC of the mecha without armor, weapons, and other equipment.

Restriction: The level of license required to purchase the mecha legally. For more information on restriction ratings, see Chapter Four: Equipment of the *d20 Modern Roleplaying Game.*

TABLE 9–1: MECHA SIZES

Size	Size Modifier	Equipment Slots	Hit Points	Base Speed	Height	Weight	Fighting Space	Reach	Purchase DC	Restriction
Colossal	–8	25	800	60 ft.	64–128 ft.	250,000 lb. or more	30 ft. by 30 ft.	15 ft.	60	Mil (+3)
Gargantuan	–4	17	400	50 ft.	32–64 ft.	32,000–250,000 lb.	20 ft. by 20 ft.	15 ft.	48	Mil (+3)
Huge	–2	11	200	40 ft.	16–32 ft.	4,000–32,000 lb.	15 ft. by 15 ft.	10 ft.	44	Mil (+3)
Large	–1	7	100	30 ft.	8–16 ft.	500–4,000 lb.	10 ft. by 10 ft.	10 ft.	40	Res (+2)

LARGE MECHA

Essentially big suits of armor, Large mecha excel in urban battlefields and starship boarding actions, where they move through buildings and corridors to find the enemy. Large mecha are the easiest to operate. However, they can't carry the intense array of weapons that bigger mecha can, nor are they as strong or durable.

Combat Statistics: A Large 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 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 mecha has a single slam attack that deals 1d8 points of damage (plus the character's increased Strength modifier). Its reach is 10 feet, and its base speed is 30 feet.

Base Purchase DC: 40.

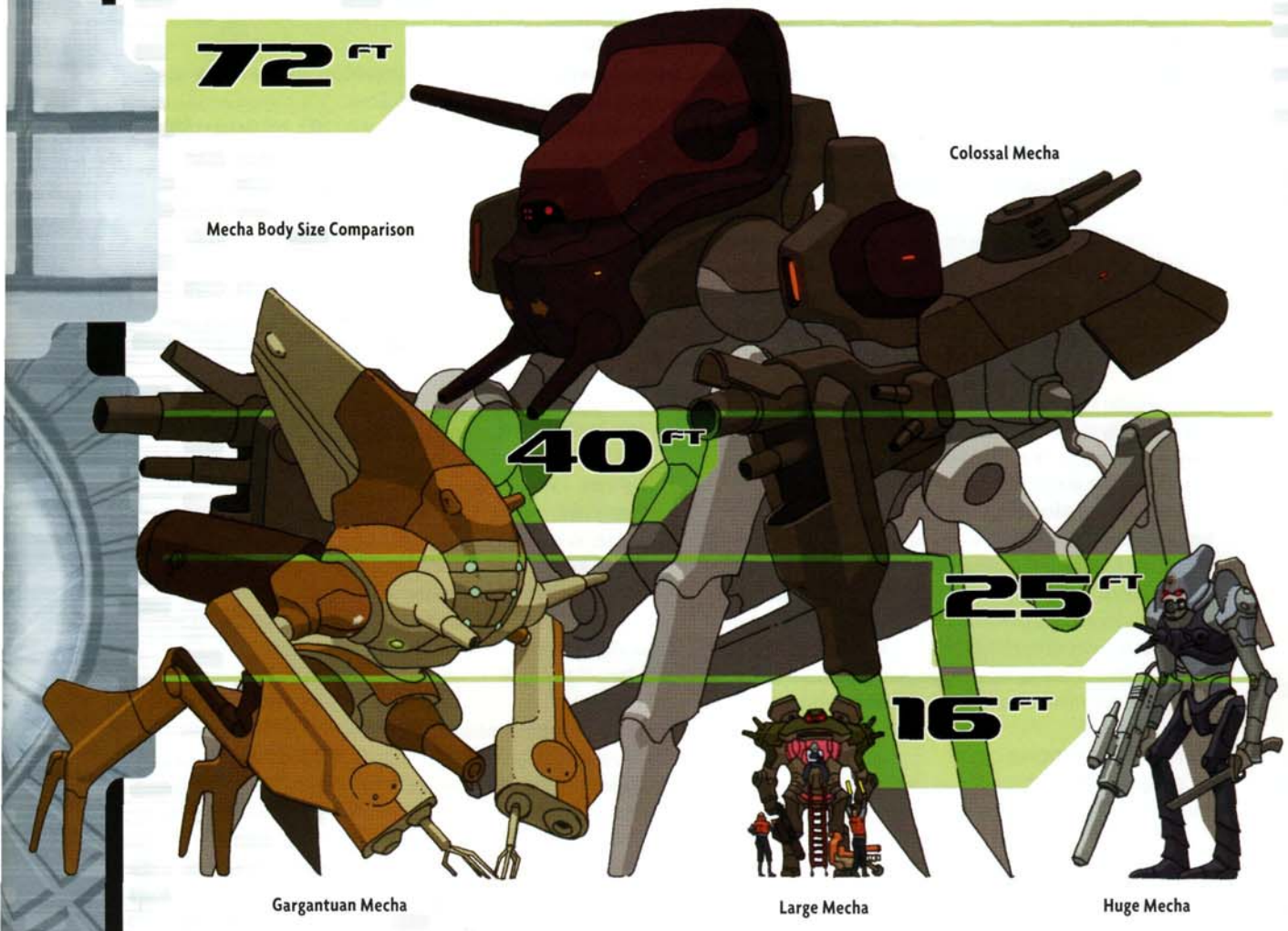
Equipment Slots: A Large mecha has 7 equipment slots available. These slots are located as follows.

Helmet: 1 slot.
Back: 1 slot.
Left arm: 1 slot.
Right arm: 1 slot.
Shoulders: 1 slot.
Torso: 1 slot.
Boots: 1 slot.

HUGE MECHA

Common weapons on the futuristic battlefield, Huge mecha offer a solid balance between cost, agility, and sheer bulk. They perform well in any combat environment, but they favor locations with some variation in terrain. In the wide-open desert or depths of outer space, they can fall prey larger mecha.

Combat Statistics: A Huge 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 mecha has 200 bonus hit points, which are added to the character's total



QUADRUPEDAL MECHA

Mecha can be built with four legs instead of two. A quadrupedal mecha sacrifices equipment slots for added speed and stability. Its base land speed increases by 10 feet, and it gains a +4 stability bonus on checks made to resist bull rush and trip attempts.

A Large quadrupedal mecha has 6 equipment slots instead of 7, giving up its boots slot.

A Huge quadrupedal mecha has 8 equipment slots instead of 11, giving up both hand slots (left and right) and its boots slot.

A Gargantuan quadrupedal mecha has 14 equipment slots instead of 17, giving up both hand slots (left and right) and its boots slot.

A Colossal quadrupedal mecha has 22 equipment slots instead of 25, giving up both hand slots (left and right) and its boots slot.

and subtracted first when the character takes damage. It takes a –8 penalty on Hide checks.

A Huge mecha has a single slam attack that deals 2d6 points of damage (plus the character's increased Strength modifier). Its reach is 10 feet.

Base Purchase DC: 44.

Equipment Slots: A Huge mecha has 11 equipment slots available. These slots are located as follows.

Helmet: 1 slot.
Visor: 1 slot.
Back: 1 slot.
Left arm: 1 slot.
Left hand: 1 slot.
Right arm: 1 slot.
Right hand: 1 slot.
Shoulders: 1 slot.
Torso: 1 slot.
Belt: 1 slot.
Boots: 1 slot.

GARGANTUAN MECHA

Gargantuan mecha are highly experimental in PL 6 societies, but quite common at PL 7. Units of this size are titans of the battlefield, able to destroy almost anything they can hit. Gargantuan mecha are common in outer space environments but are often too expensive and unwieldy for planet-based missions.

Combat Statistics: A Gargantuan 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 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 mecha has a single slam attack that deals 2d8 points of damage (plus the character's increased Strength modifier). Its reach is 15 feet.

Base Purchase DC: 48.

Equipment Slots: A Gargantuan mecha has 17 equipment slots available. These slots are located as follows.

Helmet: 1 slot.
Visor: 1 slot.
Cranium: 1 slot.
Back: 2 slots.
Left arm: 1 slot.
Left hand: 1 slot.
Right arm: 1 slot.
Right hand: 1 slot.
Shoulders: 2 slots.
Torso: 2 slots.
Belt: 1 slot.
Left leg: 1 slot.
Right leg: 1 slot.
Boots: 1 slot.

COLOSSAL MECHA

Colossal mecha do not exist in PL 6 societies and are rare sights even at PL 7. Only at PL 8 do they leave the experimental stage and enter the battlefield in respectable numbers. Massive juggernauts, Colossal mecha represent the epitome of futuristic warfare, with firepower sufficient to destroy starships or level entire city blocks. They typically serve as mobile artillery and walking weapon platforms.

Combat Statistics: A Colossal 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 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 mecha has a single slam attack that deals 4d6 points of damage (plus the character's increased Strength modifier). Its reach is 15 feet.

Base Purchase DC: 60.

Equipment Slots: A Colossal mecha has 25 equipment slots available. These slots are located as follows.

Helmet: 2 slots.
Visor: 1 slot.
Cranium: 1 slot.
Back: 2 slots.
Left arm: 2 slots.
Left hand: 1 slot.
Right arm: 2 slots.
Right hand: 1 slot.
Shoulders: 2 slots.
Torso: 4 slots.
Belt: 2 slots.
Left leg: 2 slots.
Right leg: 2 slots.
Boots: 1 slot.

MECHA SUPERSTRUCTURE

A mecha's superstructure—its exoskeleton, interior braces, and other structural parts—can be made from any sufficiently advanced metal alloy. Whatever its composition, a mecha's superstructure has a hardness that reduces the damage the mecha takes from weapons and collisions.

To build a mecha superstructure from scratch, a character must succeed at a Craft (mechanical) check (DC 30) and a Craft (structural) check (DC 30) after investing the requisite amount of assembly time, based on the mecha's size: Large 150 hours, Huge 300 hours, Gargantuan 600 hours, Colossal 1,200 hours. A character without a mechanical tool kit takes a –4 penalty on both skill checks. The character must also make a Wealth check against the mecha's base purchase DC.

Different types of superstructure materials are presented below and summarized in Table 9–2: Superstructure Materials.

Hardness: The amount of damage the material absorbs from a weapon hit or collision.

Base Purchase DC Modifier: The modifier applied to the mecha's base purchase DC.

Restriction: Since mecha require a license to own and operate, the materials used for making them do not require special licenses to purchase.

TABLE 9–2: SUPERSTRUCTURE MATERIALS

Superstructure Material	Hardness	—— Modified Base Purchase DC ——			
		Large	Huge	Gargantuan	Colossal
Alumisteel (PL 5)	10	36	40	44	56
Duralloy (PL 6)	15	40	44	48	60
Vanadium (PL 6)	20	44	48	52	64
Neovulcanium (PL 7)	20	40	44	48	60
Neutronite (PL 7)	25	44	48	52	64
Megatanium (PL 8)	30	40	40	48	60

ALUMISTEEL (PL 5)

This easy-to-acquire alloy is lightweight and reasonably strong. Alumisteel can also be used for armor (see Mecha Armor, below).

Hardness: 10.

Base Purchase DC Modifier: –4.

DURALLOY (PL 6)

Duralloy is harder, heavier, and more durable than alumisteel. It can also be used to fashion armor (see Mecha Armor, below).

Hardness: 15.

Base Purchase DC Modifier: None.

VANADIUM (PL 6)

Vanadium alloy absorbs a respectable amount of damage and is easy to mold.

Hardness: 20.

Base Purchase DC Modifier: +4.

NEOVULCANIUM (PL 7)

Similar to duralloy, neovulcanium uses plasma-forging techniques to create an alloy of unparalleled resilience. Neovulcanium can also be used for armor (see Mecha Armor, below).

Hardness: 20.

Base Purchase DC Modifier: None.

NEUTRONITE (PL 7)

Neutronite is a tough steel alloy into which a weave of free neutrons has been pressed. It is extremely resilient but also incredibly massive, weighing approximately five times more than a similar volume of lead.

Hardness: 25.

Base Purchase DC Modifier: +4.

MEGATANIUM (PL 8)

Sandwiched layers of crystal carbon and neovulcanium held in a magnetic matrix, megatanium is exceedingly hard and durable. Megatanium can also be used for armor (see Mecha Armor, below).

Hardness: 30.

Base Purchase DC Modifier: None.

MECHA ARMOR

Armor can be welded or otherwise fixed securely to a mecha's superstructure, providing an equipment bonus to the mecha's Defense. Mecha armor does not impose a maximum Dexterity bonus upon the mecha operator (as worn armor does) and does not require a special proficiency feat to use.

Installing armor on a mecha requires a Craft (mechanical) check (DC 20). The check is made after investing an amount of time determined by the mecha's size: Large 3 hours, Huge 6 hours, Gargantuan 12 hours, and Colossal 24 hours. Armor can be removed in half the time with a successful Repair check (DC 20).

Different types of mecha armor are presented below, along with the following statistics:

Equipment Bonus: The equipment bonus that the armor provides to the operator's Defense.

Armor Penalty: Mecha armor applies this penalty on its operator's Balance, Climb, Escape Artist, Hide, Jump, Move Silently, and Tumble checks.

Speed Penalty: The amount by which the armor reduces the mecha's base speed.

Purchase DC: The cost of the armor.

Restriction: Since mecha require a license to own and operate, mecha armor does not require a special license to purchase.

ALUMISTEEL ARMOR (PL 5)

This easy-to-acquire alloy is lightweight and reasonably strong. Alumisteel can also be used as a building material for mecha superstructures (see Mecha Superstructure, above).

Equipment Bonus: +5.

Armor Penalty: –6.

Speed Penalty: –5 feet.

Purchase DC: 10 + one-half the mecha's base purchase DC.

DURAPLASTIC ARMOR (PL 5)

Duraplastic armor is made of advanced plastic polymers, such as carbon fiber and high-grade fiberglass. Although relatively cheap and light, it doesn't offer tremendous protection.

Equipment Bonus: +3.

Armor Penalty: –4.

Speed Penalty: None.

Purchase DC: 5 + one-half the mecha's base purchase DC.

DURALLOY ARMOR (PL 6)

Duralloy is harder, heavier, and more durable than alumisteel. It can also be used as a building material for mecha superstructures (see Mecha Superstructure, above).

Equipment Bonus: +8.

Armor Penalty: –8.

Speed Penalty: –10 feet.

Purchase DC: 10 + one-half the mecha's base purchase DC.

RESILIUM ARMOR (PL 6)

Resilium is a more malleable alloy than duralloy, although not as strong.

Equipment Bonus: +6.

Armor Penalty: –5.

Speed Penalty: None.

Purchase DC: 5 + one-half the mecha's base purchase DC.

CRYSTAL CARBON ARMOR (PL 7)

Grown in orbital laboratories, crystal carbon is a composite fiber material that narrowly outperforms neovulcanium (see below) on the battlefield.

Equipment Bonus: +10.
Armor Penalty: –8.
Speed Penalty: None.
Purchase DC: 15 + one-half the mecha's base purchase DC.

NEOVULCANIUM ARMOR (PL 7)

Similar to duralloy, neovulcanium uses plasma-forging techniques to create an alloy of surprising resilience. It is also used as a building material for mecha superstructures (see Mecha Superstructure, above).

Equipment Bonus: +10.
Armor Penalty: –10.
Speed Penalty: –5 feet.
Purchase DC: 10 + one-half the mecha's base purchase DC.

MEGATANIUM ARMOR (PL 8)

Sandwiched layers of crystal carbon and neovulcanium held in a magnetic matrix, megatanium is exceedingly hard and durable. It can also be used as a building material for mecha superstructures (see Mecha Superstructure, above).

Equipment Bonus: +12.
Armor Penalty: –10.
Speed Penalty: –10 feet.
Purchase DC: 10 + one-half the mecha's base purchase DC.

REACTIVE ARMOR (PL 8)

Consisting of layers of insulating gel or compressed gas between cerametal sheets, reactive armor provides the same protection as crystal carbon armor but is considerably cheaper and easier to produce.

Equipment Bonus: +8.
Armor Penalty: –5.
Speed Penalty: None.
Purchase DC: 5 + one-half the mecha's base purchase DC.

MECHA EQUIPMENT

Mecha equipment falls into several categories: flight systems, sensor systems, defense systems, weapons (both handheld and integrated), and miscellaneous systems.

Installing a piece of equipment on a mecha—be it a weapon or some other integrated system—requires a Craft (mechanical) check (DC 20). The check is made after investing an amount of time determined by the mecha's size: Large 10 minutes, Huge 30 minutes, Gargantuan 1 hour, Colossal 3 hours. If the weapon or system occupies more than one equipment slot on the mecha, multiply the installation time by the number of slots it takes up. An integrated weapon or system can be removed in half the time with a successful Repair check (DC 20).

In addition to a general description, each piece of equipment includes the following information:

Equipment Slots: The number of equipment slots needed to install the equipment. Some pieces of equipment are limited to specific body slots, as noted here. A jetpack, for example, is typically installed in the back slot or boots slot.

Activation: How long it takes to activate the piece of equipment (usually an attack action).

Range/Range Increment: A range listing indicates the maximum distance out to which the equipment functions. If a range increment is listed instead, it represents the distance at which accuracy begins to decline, as per the rules on range increments. Unless otherwise noted, equipment with a range increment has a maximum of ten increments.

Target or Targets/Effect/Area: This entry starts with one of three headings: Target, Effect, or Area. If the target of the component is You, you do not receive a saving throw (and there is no saving throw entry for the piece of equipment). If a component is a weapon capable of autofire, it will be noted here.

Duration: The amount of time a piece of equipment continues to operate before it needs to be reactivated, or how long its effect lasts. A duration of persistent means the equipment functions until the mecha is destroyed (reduced to 0 hit points) or the mecha's operator turns it off (usually as a free action).

Saving Throw: If a piece of equipment calls for a saving throw, the type of saving throw is listed here, along with the effect of a successful save.

Purchase DC: The purchase DC for the Wealth check to acquire the equipment.

Restriction: The level of license required to purchase the equipment legally. For more information on restriction ratings, see Chapter Four: Equipment of the *d20 Modern Roleplaying Game*.

MECHA FLIGHT SYSTEMS

All mecha are equipped with legs that allow them to walk and run. A mecha's size determines its base speed, as noted in Table 9–1: Mecha Sizes. This section describes various optional flight systems.

To build a flight system from scratch, a character must succeed at a Craft (mechanical) check (DC 30) after investing 60 hours in its assembly. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the flight system's purchase DC.

AFTERBURNER SYSTEM (PL 6)

The afterburner system dumps a shot of raw fuel into the mecha's thruster system, giving the mecha a temporary speed boost. The mecha's fly speed is doubled for 1 round. The afterburner system is good for only one use; additional activations require additional afterburner systems.

Equipment Slots: 1, must be torso, back, or leg.
Activation: Free action.
Range: Personal.
Target: You.
Duration: 1 round.
Saving Throw: None.
Purchase DC: 8 + one-quarter the mecha's base purchase DC.
Restriction: None.

JETPACK (PL 6)

A jetpack combines vectored thrust with simple avionics, granting the mecha a fly speed of 100 feet (clumsy). The jetpack carries enough fuel for the mecha to travel a total of 1,000 feet; refueling has a purchase DC of 16.

Equipment Slots: 1, must be back or boots; or 2, must be left leg and right leg.
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.

JET-ASSIST WINGS (PL 7)

Jet-assist wings allow a flying mecha to maneuver more effectively, but do not provide the mecha with the ability to fly. A mecha with jet-assist wings improves its flight maneuverability by one category (clumsy to poor, poor to average, and so on).

Equipment Slots: 1, must be back or shoulders (Large or Huge); 2, must be back or shoulders (Gargantuan or Colossal).
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 5 + one-quarter the mecha's purchase DC.
Restriction: None.

THRUSTER BOOTS (PL 7)

Thruster boots combine powerful fusion thrusters to give the mecha a fly speed of 150 feet (poor).

Equipment Slots: 1, must be boots.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's purchase DC.
Restriction: None.

RAMJET THRUSTER BOOTS (PL 8)

The best thruster system available uses ramjet technology to improve the performance of the PL 7 thruster boots, granting the mecha a fly speed of 200 feet (poor).

Equipment Slots: 1, must be boots.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's purchase DC.
Restriction: None.

MECHA SENSOR SYSTEMS

Sensor systems make it easier for mecha operators to perceive their surroundings; however, not all mecha are equipped with sensors (or even require them). In such cases, mecha operators must rely on their own acute vision and hearing.

A mecha equipped with sensors conducts passive scans of the surrounding area constantly, without the operator's attention. A passive scan extends in all directions at once, providing the operator with data on surrounding terrain, obstacles, and the location of other creatures, vehicles, and mecha within several miles of the mecha's position.

A sensor system can also be used to conduct an active scan of a single target. With a successful Computer Use check (DC 15) and a move action, a mecha's operator can use the onboard sensor system to actively scan a single nonliving target (usually another mecha or vehicle) and determine specific information about that target, as specified in the sensor system's description.

To build a sensor system from scratch, a character must succeed at a Craft (electrical) check (DC 30) after investing 60 hours in its assembly. A character without an electrical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the sensor system's purchase DC.

LEAVE ROOM FOR THE PILOT!

When equipping a mecha from scratch, make sure to leave at least two vacant equipment slots for the mecha operator's cockpit. (The cost of the cockpit is already factored into the mecha's base purchase DC.) On Large mecha, the operator always occupies two of the following three equipment slots: helmet, torso, and back. On Huge and bigger mecha, the designer has more choice when placing the operator's cockpit.

Copilot and passenger cockpits are described under Miscellaneous Equipment (page 165).

CLASS I SENSOR SYSTEM (PL 6)

This sensor system includes air/space radar that allows a mecha operator to scan the basic topography of the surrounding area and pick out targets well enough to aim weapons at them.

A Class I sensor system grants a +2 equipment bonus on the operator's Navigate and Spot checks.

With a successful Computer Use check (DC 15) and a move action, the operator can use the sensor system to actively scan a single nonliving target (usually another mecha or vehicle) and determine all the following information about that target:

- The target's size.
- The target's locomotive capabilities.
- The target's present direction or trajectory.

Equipment Slots: 1.
Activation: Move action (active scan mode only).
Range: 1-mile-radius emanation centered on your mecha.
Area: 1 nonliving target (active scan only).
Duration: Persistent (passive scan mode) or 1 round (active scan mode).
Saving Throw: None.
Purchase DC: 18.
Restriction: None.

CLASS II SENSOR SYSTEM (PL 6)

This sensor system includes an electromagnetic (EM) detector array that localizes electromagnetic emissions, and an infrared detector that tracks targets by their heat signatures. It also incorporates a high-resolution video system that differentiates targets by their visual profile. The hi-res video system incorporates a zoom feature, allowing close inspection of distant targets.

A Class II sensor system grants a +2 equipment bonus on the operator's Navigate and Spot checks.

With a successful Computer Use check (DC 15) and a move action, the operator can use the sensor system to actively scan a single nonliving target (usually another mecha or vehicle) and determine all the following information about that target:

- The target's size.
- The target's locomotive capabilities.
- The target's present direction or trajectory.
- The number of living creatures aboard, if applicable.
- The composition of the target's hull or superstructure, as well as the type of its armor, if any.
- The target's weapon systems (functional and nonfunctional).

Equipment Slots: 1.
Activation: Move action (active scan mode only).
Range: 1-mile-radius emanation centered on your mecha.
Area: 1 nonliving target (active scan only).

Duration: Persistent (passive scan mode) or 1 round (active scan mode).

Saving Throw: None.

Purchase DC: 21.

Restriction: None.

CLASS III SENSOR SYSTEM (PL 6)

This system combines the features of the Class II sensor system with an advanced night-vision unit.

The mecha operator gains darkvision to a range of 90 feet. A Class III sensor system also grants a +2 equipment bonus on the operator's Navigate and Spot checks.

With a successful Computer Use check (DC 15) and a move action, the operator can use the sensor system to actively scan a single nonliving target (usually another mecha or vehicle) and determine all the following information about that target:

- The target's size.
- The target's locomotive capabilities.
- The target's present direction or trajectory.
- The number of living creatures aboard, if applicable.
- The composition of the target's hull or superstructure, as well as the type of its armor, if any.
- The target's weapon systems (functional and nonfunctional).

Equipment Slots: 1.

Activation: Move action (active scan mode only).

Range: 1-mile-radius emanation centered on your mecha.

Area: 1 nonliving target (active scan only).

Duration: Persistent (passive scan mode) or 1 round (active scan mode).

Saving Throw: None.

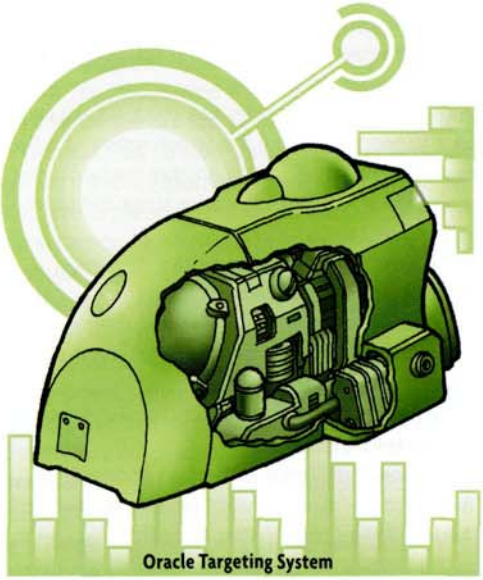
Purchase DC: 25.

Restriction: Licensed (+1).

ENIGMA SENSOR SUITE (PL 6)

Using a combination of thermal imaging, X-rays, and vibration sensors, the Enigma sensor suite enables the operator to effectively see through solid objects. Fine details can't be detected, but a mecha using the Enigma suite could tell, for example, that three Medium-size humanoids were crouched behind a closed door, or that an escape tunnel runs from one building to another.

A mecha with the Enigma suite reduces the effects of concealment by two grades. Thus, an object with total concealment (50% miss chance) would have three-quarters concealment (30% miss chance) instead.



Oracle Targeting System

Equipment Slots: 1.

Activation: None.

Range: 150 feet.

Area: *Cone-shaped emanation.*

Duration: 1 round.

Saving Throw: None.

Purchase DC: 29.

Restriction: None.

ORACLE TARGETING SYSTEM (PL 6)

The standard computer-assisted targeting system for mecha combines holographic displays and heuristic target-prediction profiling to increase a mecha operator's accuracy. The system grants an enhancement bonus on attack rolls (+1 to +5) when using a specific ranged weapon selected by the operator. Switching the bonus from one weapon to another requires a move action.

The Oracle system has five different categories (denoted Mark I through Mark V). The purchase DC varies depending on the enhancement bonus conferred.

Equipment Slots: 1, must be helmet or visor.

Activation: Move action (to activate or switch).

Range: Personal.

Target: You.

Duration: Persistent.

Saving Throw: None.

Purchase DC: 16 for Mark I (+1), 18 for Mark II (+2), 20 for Mark III (+3), 22 for Mark IV (+4), 24 for Mark V (+5).

Restriction: None.

CLASS IV SENSOR SYSTEM (PL 7)

This system includes electromagnetic (EM), infrared detector, hi-res video, and nightvision sensors similar to those found on the Class II and Class III systems. It also incorporates a ladar system that uses low-powered laser beams to quickly locate and identify difficult terrain, distant obstacles, and targets.

The mecha operator gains darkvision to a range of 120 feet. A Class IV sensor system also grants a +4 equipment bonus on the operator's Navigate and Spot checks.

With a successful Computer Use check (DC 15) and a move action, the operator can use the sensor system to actively scan a single nonliving target (usually another mecha or vehicle) and determine all the following information about that target:

- The target's size.
- The target's locomotive capabilities.
- The target's present direction or trajectory.
- The number of living creatures aboard, if applicable.
- The composition of the target's hull or superstructure, as well as the type of its armor, if any.
- The target's weapon systems (both functional and nonfunctional).
- How much damage (in hit points) the target has taken.

Equipment Slots: 1.

Activation: Move action (active scan mode only).

Range: 10-mile-radius emanation centered on your mecha.

Area: 1 nonliving target (active scan only).

Duration: Persistent (passive scan mode) or 1 round (active scan mode).

Saving Throw: None.

Purchase DC: 27.

Restriction: Licensed (+1).

CLASS V SENSOR SYSTEM (PL 7)

This system improves upon earlier sensor systems by replacing the air/space radar with powerful multiband radar that quickly and effortlessly identifies and tracks mecha, creatures, and vehicles. It also combines the electromagnetic, infrared, and video scanners into a single, more powerful array. The Class V sensor system also extends the mecha's nightvision capability.

The mecha operator gains darkvision to a range of 180 feet. A Class V sensor system also grants a +6 equipment bonus on the operator's Navigate and Spot checks.

With a successful Computer Use check (DC 15) and a move action, the operator can use the sensor system to actively scan a single nonliving target (usually another mecha or vehicle) and determine all the following information about that target:

- The target's size.
- The target's locomotive capabilities.
- The target's present direction or trajectory.
- The number of living creatures aboard, if applicable.
- The composition of the target's hull or superstructure, as well as the type of its armor, if any.
- The target's weapon, defense, and sensor systems (both functional and nonfunctional).
- How much damage (in hit points) the target has taken.

Equipment Slots: 1.
Activation: Move action (active scan mode only).
Range: 10-mile-radius emanation centered on your mecha.
Area: 1 nonliving target (active scan only).
Duration: Persistent (passive scan mode) or 1 round (active scan mode).
Saving Throw: None.
Purchase DC: 30.
Restriction: Licensed (+1).

CLASS VI SENSOR SYSTEM (PL 8)

This sensor system resembles the Class V sensor array, except that it replaces the multiband radar unit with multiphase radar capable of penetrating nearly any obstacle or barrier.

The mecha operator gains darkvision to a range of 180 feet. A Class VI sensor system also grants a +8 equipment bonus on the operator's Navigate and Spot checks.

With a successful Computer Use check (DC 15) and a move action, the operator can use the sensor system to actively scan a single nonliving target (usually another mecha or vehicle) and determine all the following information about that target:

- The target's size.
- The target's locomotive capabilities.
- The target's present direction or trajectory.
- The number of living creatures aboard, if applicable.
- The composition of the target's hull or superstructure, as well as the type of its armor, if any.
- The target's weapon, defense, and sensor systems (both functional and nonfunctional).
- How much damage (in hit points) the target has taken, and how much damage it can withstand (that is, hit points remaining).

Equipment Slots: 1.
Activation: Move action (active scan mode only).
Range: 100-mile-radius emanation centered on your mecha.
Area: 1 nonliving target (active scan only).
Duration: Persistent (passive scan mode) or 1 round (active scan mode).
Saving Throw: None.
Purchase DC: 32.
Restriction: Licensed (+1).

MECHA DEFENSE SYSTEMS

Defense systems include energy shields, life support systems, and other equipment intended to protect the mecha and its operator from harm.

To build a defense system from scratch, a character must succeed at a Craft (mechanical) check (DC 30) after investing 60 hours in its assembly. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the defense system's purchase DC.

BULWARK TACTICAL SHIELD (PL 5)

The Bulwark tactical shield—a high-tech version of the shields carried by knights of old—is worn on one of the mecha's arms. It improves the mecha's equipment bonus to Defense by +4.

Equipment Slots: 1, must be arm.
Activation: None.
Range: Touch.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 5 + one-quarter the mecha's base purchase DC.
Restriction: None.

BASTION TACTICAL SHIELD (PL 6)

The Bastion tactical shield improves upon the Bulwark tactical shield (see above). It improves the mecha's equipment bonus to Defense by +6.

When not deployed, the Bastion tactical shield can retract into the mecha's arm. Deploying or retracting the shield is a move action.

Equipment Slots: 1, must be arm.
Activation: None or move action (see text).
Range: Touch.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 5 + one-quarter the mecha's base purchase DC.
Restriction: None.

LX-10 ANTISHOCK ARRAY (PL 6)

The LX-10 antishock array grounds the mecha and protects it against electrical attacks. The mecha gains electricity resistance 10.

Equipment Slots: 1.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 21.
Restriction: None.

BARRICADE TACTICAL SHIELD (PL 7)

A larger version of the Bastion tactical shield, the Barricade shield not only improves the mecha's equipment bonus to Defense by +8, but its superior ceramic coating grants the mecha fire resistance 10.

When not deployed, the Barricade tactical shield can retract into the mecha's arm. Deploying or retracting the shield is a move action.

Equipment Slots: 1, must be arm.

Activation: None or move action (see text).
Range: Touch.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 8 + one-quarter the mecha's base purchase DC.
Restriction: None.

DELPHI DEFENSE SUITE (PL 7)

The Delphi defense suite consists of a heuristic collision avoidance system, enhanced crew restraints, and a series of adrenal and nonadrenal autoinjectors for the mecha operator. The Delphi defense suite grants the operator a resistance bonus on all saving throws for 1 minute: +1 for the Mark I version and up to +5 for the Mark V version.

Equipment Slots: 1 (Mark I and Mark II versions), 2 (Mark III, Mark IV, and Mark V versions).
Activation: Attack action.
Range: Personal.
Target: You.
Duration: 1 minute.
Saving Throw: None.
Purchase DC: 21 for Mark I (+1), 23 for Mark II (+2), 25 for Mark III (+3), 27 for Mark IV (+4), 29 for Mark V (+5).
Restriction: None.

LIGHT FORTIFICATION (PL 7)

The mecha's structural integrity is reinforced so it can shake off attacks that would cripple it otherwise. Light fortification converts 25% of all critical hits into regular hits.

Installing light fortification requires a Craft (structural) check instead of a Craft (mechanical) check. Light fortification takes the place of one of the mecha's equipment slots.

Equipment Slots: 1 (equivalent).
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 10 + one-half the mecha's base purchase DC.
Restriction: Licensed (+1).

LX-20 ANTISHOCK ARRAY (PL 7)

Similar to the LX-10 antishock array, the LX-20 antishock array grants the mecha electricity resistance 20. In addition, it insulates and protects the crew from the collateral dazing effect of an electromagnetic pulse, such as the type caused by an M-70 EMP rocket launcher (page 163).

CLOAKING SCREEN (PL 8)

The cloaking screen warps light and energy around the mecha, rendering it invisible to visual and electronic sensors.

A cloaked mecha has total concealment. To attack a cloaked mecha, an attacker must guess in which square the mecha currently is (or determine its position based on where it attacked last), and even if the guess is accurate, there is a 50% chance that the attack misses.

A cloaked mecha gains a +40 bonus on Hide checks if immobile, or a +20 bonus on Hide checks if moving. Pinpointing the location of a cloaked mecha that isn't attempting to hide requires a Spot check against DC 40 if immobile or DC 20 if moving (as if the mecha operator had rolled a 0 on the Hide check).

Equipment Slots: 1.
Activation: Attack or move action.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 20 + one-quarter the mecha's base purchase DC.
Restriction: Military (+3).

DEFLECTION FIELD (PL 8)

The deflection field uses broadcast magnetics to provide a semi-permeable energy field around the mecha. It provides a +1 to +5 deflection bonus to the mecha's Defense. The purchase DC of the system is based on the type of field (denoted Mark I through Mark V).

The operator can activate or deactivate the deflection field once per round as a free action.

Equipment Slots: 1.
Activation: None or free action (see text).
Range: Touch.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 24 for Mark I (+1), 27 for Mark II (+2), 30 for Mark III (+3), 33 for Mark IV (+4), 36 for Mark V (+5).
Restriction: Licensed (+1).

MEDIUM FORTIFICATION (PL 8)

Similar to the light fortification system, the medium fortification system converts 75% of all critical hits into regular hits.

Medium fortification takes the place of two of the mecha's equipment slots.

Equipment Slots: 2 (equivalent).

HEAVY FORTIFICATION (PL 9)

Similar to the light fortification system, the heavy fortification system converts all critical hits into regular hits.

Heavy fortification takes the place of three of the mecha's equipment slots.

Equipment Slots: 3 (equivalent).

MECHA WEAPONS

Mecha use both melee and ranged weapons to dispatch foes. In addition, a weapon can either be handheld or integrated into the mecha's superstructure; each version has its benefits.

Handheld Weapons: A handheld weapon does not cost an equipment slot. However, a mecha with a handheld weapon can be disarmed (see the disarm rules in Chapter Five: Combat of the *d20 Modern Roleplaying Game*).

Integrated Weapons: An integrated weapon takes up one or more of the mecha's equipment slots, but the mecha cannot be disarmed of the weapon.

Table 9–3: Mecha Weapons summarizes each weapon's statistics.

To build a handheld or integrated weapon from scratch, a character must succeed at a Craft (mechanical) check (DC 30) after investing 60 hours in its assembly. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the weapon's purchase DC.

A3X DRAGON FLAME-THROWER (PL 5)

Used primarily against soft, unarmored targets, the A3X Dragon flame-thrower sprays a 30-foot cone of burning liquid fuel. Anyone caught within the cone must succeed at a Reflex save (DC 13) or take 4d6 points of fire damage. The flame-thrower carries enough fuel for 20 attacks; refueling the tank has a purchase DC of 12.

Equipment Slots: 1.
Activation: Attack action.
Range Increment: Emanates from mecha.
Area: 30-foot cone.
Duration: Instantaneous.
Saving Throw: Reflex half (DC 13).
Purchase DC: 21.
Restriction: Military (+3).

M-9 BARRAGE CHAINGUN (PL 5)

Essentially a high-tech version of the medium machinegun, the M-9 Barrage has multiple barrels that fire large-caliber ammunition, dealing 5d6 points of ballistic damage on a successful hit. The base unit has enough room for four 50-round ammo belts. Each additional equipment slot devoted to ammo storage has room for six more ammo belts. Each additional ammo belt has a purchase DC of 8.

Equipment Slots: 1, must be hand (or arm if Large), arm, or shoulders.
Activation: Attack action.
Range Increment: 60 feet.
Target: Single target within 600 feet, or autofire.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 21.
Restriction: Restricted (+2).

M-53 FIRESTAR ROCKET LAUNCHER (PL 5)

M-53 Firestar rocket launchers fire self-guided incendiary-tipped rockets at any point within range. When the rocket reaches the designated target point—which can be a point in mid-air—it explodes, dealing 10d6 points of fire damage to everything within its burst radius. A successful Reflex save (DC 17) reduces the damage by half. The system carries six rockets.

Equipment Slots: 1 for launcher, must be hand (or arm if Large), arm, or shoulders; 1 for each six-rocket pack.
Activation: Attack action.
Range: 200 feet.
Area: 20-foot-radius burst.
Duration: Instantaneous.
Saving Throw: Reflex half (DC 17).
Purchase DC: 24 for rocket launcher and 6 rockets, 12 per additional 6-rocket pack.
Restriction: Military (+3).

M-55 CRUD ROCKET LAUNCHER (PL 5)

The M-55 Crud rocket launcher is similar to the M-53 Firestar rocket launcher. M-55 Crud shells release high-velocity shrapnel that deals 10d6 points of slashing damage to everything within its burst radius. A successful Reflex save (DC 17) reduces the damage by half.

M-87 TALON MISSILE LAUNCHER (PL 5)

The most common missile launcher installed on mecha, the M-87 Talon deals 15d6 points of damage to its target; half of the damage is ballistic damage, and half of the damage is fire damage. The missile's guidance system negates the normal penalty for range increments.

Equipment Slots: 1 for launcher, must be hand (or arm if Large), arm, or shoulders; 1 for each 4-missile battery.
Activation: Attack action.
Range: 2,000 feet.
Target: Single target.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 23 for missile launcher and 4 missiles, 21 per additional 4-missile pack.
Restriction: Military (+3).

PS-15 PANTHER CLAWS (PL 5)

A mecha equipped with these durable alloy claws can tear great rents in most metal plating. The claws can be extended or retracted as a free action.

The claws convert the mecha's slam attack into a claw attack that deals slashing damage. The amount of damage is based on the mecha's size: Large 2d6, Huge 2d8, Gargantuan 4d6, and Colossal 4d10. The claws have a critical threat range of 19–20.

The claws are one size category smaller than the mecha's size category (for example, a Large mecha has Medium-size claws).

Equipment Slots: 1, must be hand (or arm if Large).
Activation: Attack action.
Range: Touch.
Target: Single target within reach.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: None.

THUNDERBOLT SHOCK ROD (PL 5)

The Thunderbolt shock rod is essentially a one-handed metal rod with an electrical current running through the end. Damage is determined by the size of the mecha wielding it: Large 6d6, Huge 8d6, Gargantuan 10d6, and Colossal 12d6. Half of the damage is bludgeoning damage, and half is electricity damage.

The shock rod's size category is the same as the mecha's size category (for example, a Large mecha wields a Large shock rod).

Equipment Slots: 1, must be hand (or arm if Large).
Activation: Attack action.
Range: Touch.
Target: Single target within reach.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: None.

WARPATH RECOILLESS RIFLE (PL 5)

The Warpath recoilless rifle is a rapid-fire cannon that fires shells that detonate on impact. Each shell deals 10d6 points of damage, and the system's magazine holds 20 shells.

Equipment Slots: 1 for rifle, must be hand (or arm if Large); 1 for each 20-round magazine.
Activation: Attack action.
Range Increment: 40 feet.
Target: Single target within 400 feet, or autofire.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 22 for rifle and 20-round magazine, 15 per additional magazine.
Restriction: Military (+3).

TABLE 9–3: MECHA WEAPONS

Weapon	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Magazine	Size	Weight	Purchase DC	Restriction
Progress Level 5: Information Age										
A3X Dragon flame thrower	4d6	—	Fire	—	Single	20 int.	Large	75 lb.	21	Mil (+3)
M-9 Barrage chaingun	5d6	20	Ballistic	60 ft.	S, A	Linked	Huge	100 lb.	21	Res (+2)
M-53 Firestar rocket launcher	10d6	—	Fire	—	Single	6 int.	Huge	35 lb.	24	Mil (+3)
M-55 Crud rocket launcher	10d6	—	Slashing	—	Single	6 int.	Huge	35 lb.	24	Mil (+3)
M-87 Talon missile launcher	15d6	20	Ballistic/ Fire	—	Single	4 int.	Huge	20 lb.	23	Mil (+3)
PS-15 Panther claws	Varies [1]	19–20	Slashing	—	—	—	Varies [1]	—	Varies [1]	—
Thunderbolt shock rod	Varies [1]	20	Electricity/ Bludgeoning	—	—	—	Varies [1]	—	Varies [1]	—
Warpath recoilless rifle	10d6	20	Ballistic	40 ft.	S, A	20 box	Huge	50 lb.	22	Mil (+3)
Progress Level 6: Fusion Age										
Corona microwave beam	5d6	20	Fire	15 ft.	Single	—	Large	15 lb.	19	Res (+2)
LK8 armor-piercing pike	Varies [1]	3	Piercing	—	—	—	Varies [1]	—	Varies [1]	—
M-21 Comet autolaser	8d6	20	Fire	75 ft.	S, A	—	Huge	40 lb.	22	Mil (+3)
M-70 EMP rocket launcher	10d6 [2]	20	Electricity	—	Single	6 int.	Huge	35 lb.	27	Mil (+3)
M-75 Cricket rocket launcher	10d6 [2]	—	Sonic	—	Single	6 int.	Huge	35 lb.	25	Mil (+3)
NKP Puma pop-up turret	8d6	20	Fire	75 ft.	Single	—	Large	20 lb.	23	Mil (+3)
T-95 Cavalcade chaingun	7d6	20	Ballistic	60 ft.	S, A	Linked	Huge	80 lb.	21	Res (+2)
Typhoon 240 laser cannon	10d6	20	Fire	100 ft.	Single	—	Huge	80 lb.	25	Mil (+3)
Progress Level 7: Gravity Age										
Chrysanthemum laser array	16d6	—	Fire	—	Single	1 int.	Huge	50 lb.	26	Mil (+3)
M-300 Rhino mass cannon	8d12	20	Ballistic	100 ft.	Single	—	Huge	65 lb.	29	Mil (+3)
PS-25 Tiger claws	Varies [1]	19–20	Slashing	—	—	—	Varies [1]	—	Varies [1]	—
Tsunami 480 plasma cannon	12d6	See text	Fire	See text	Single	—	Huge	75 lb.	25	Mil (+3)
XJ-A Python electro-whip	Varies [1]	20	Electricity	—	—	—	Varies [1]	—	Varies [1]	—
Progress Level 8: Energy Age										
Avenger electro-scimitar [3]	Varies [1]	18–20	Slashing/ Electricity	—	—	—	Varies [1]	—	Varies [1]	—
LT-5 Longshot mass driver	15d6	20	Ballistic	120 ft.	Single	10 box	Huge	90 lb.	24	Mil (+3)
RP-91 Reaper laser scythe [3]	Varies [1]	4	Slashing/ Fire	—	—	—	Varies [1]	—	Varies [1]	—

1 See the weapon's description for details.

2 See the weapon's description for collateral effects to crew and passengers.

3 This mastercraft weapon grants a +1 bonus on attack rolls.

CORONA MICROWAVE BEAM (PL 6)

The Corona microwave beam is the cheapest PL 6 mecha energy weapon. It deals 5d6 points of fire damage on a successful hit.

Equipment Slots: 1.
Activation: Attack action.
Range Increment: 15 feet.
Target: Single target within 150 feet.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 19.
Restriction: Restricted (+2).

LK8 ARMOR-PIERCING PIKE (PL 6)

This massive carbon-alloy polearm deals piercing damage based on the size of the mecha wielding it: Large 2d10, Huge 4d10, Gargantuan 6d10, and Colossal 8d10. It deals triple damage on a successful critical hit. The mecha applies one and one-half times its Strength bonus on damage rolls when wielding the weapon with both hands. The pike has an extra 5 feet of reach.

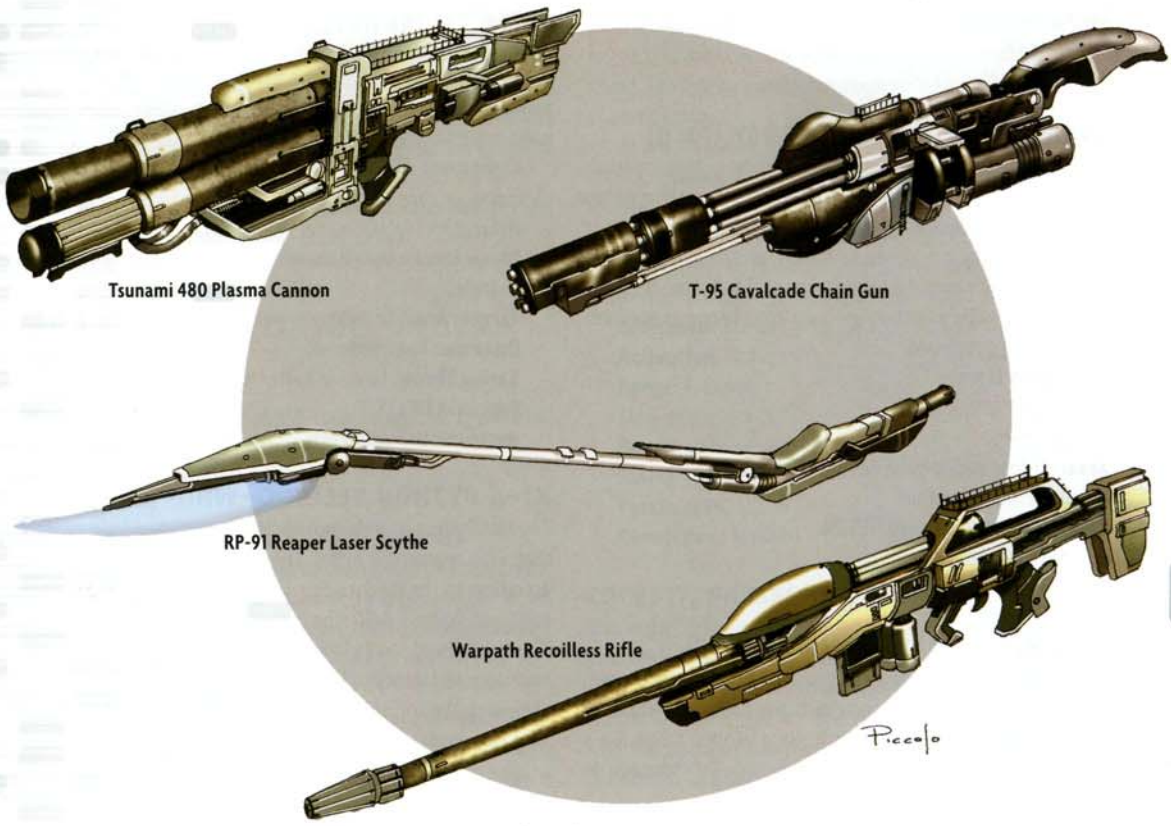
The armor-piercing pike's size category is one greater than the mecha's size category (for example, a Large mecha wields a Huge pike), up to a maximum size of Colossal.

Equipment Slots: 1, must be hand (or arm if Large).
Activation: Attack action.
Range: Touch.
Target: Single target within reach.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: None.

M-21 COMET AUTOLASER (PL 6)

Consisting of a rotating ring of laser cannons, the M-21 Comet autolaser deals 8d6 points of fire damage with a successful attack.

Equipment Slots: 2, including hand (or arm if Large), arm, or shoulders.
Activation: Attack action.
Range Increment: 75 feet.
Target: Single target within 750 feet, or autofire.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 22.
Restriction: Military (+3).



Sample Mecha Weapons

M-70 EMP ROCKET LAUNCHER (PL 6)

The M-70 EMP rocket launcher is similar to the M-53 Firestar rocket launcher. An EMP shell releases an electromagnetic pulse that deals 10d6 points of electricity damage to everything within its burst radius. A successful Reflex save (DC 17) reduces the damage by half.

If a mecha takes any damage from an EMP rocket, all crew and passengers aboard the damaged mecha must succeed at a Fortitude save (DC 15) or be dazed for 1 round.

Purchase DC: 27 for rocket launcher and 6 rockets, 15 per additional 6-rocket pack.

M-75 CRICKET ROCKET LAUNCHER (PL 6)

The M-75 Cricket rocket launder is similar to the M-53 Firestar rocket launder. A Cricket shell releases a sonic pulse that deals 10d6 points of sonic damage to everything within its burst radius. A successful Reflex save (DC 17) reduces the damage by half.

If a mecha takes any damage from a Cricket rocket, all crew and passengers aboard the damaged mecha must succeed at a Fortitude save (DC 15) or be deafened for 1d6 rounds.

Purchase DC: 25 for rocket launcher and 6 rockets, 13 per additional 6-rocket pack.

NKP PUMA POP-UP TURRET (PL 6)

The NKP Puma pop-up turret is a miniature plasma cannon concealed under a breakaway hatch in a mecha's hull. A triumph of miniaturization, it packs significant wallop in a small, versatile (it can be installed in any equipment slot) package. It deals 8d6 points of fire damage.

Equipment Slots: 1.
Activation: Attack action.
Range Increment: 75 feet.
Target: Single target within 750 feet.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 23.
Restriction: Military (+2).

T-95 CAVALCADE CHAINGUN (PL 6)

More compact and powerful than the M-9 Barrage chaingun, the M-95 Cavalcade has multiple barrels that fire large-caliber ammunition, dealing 7d6 points of ballistic damage on a successful hit. The base unit has enough room for four 50-round ammo belts. Each additional equipment slot devoted to ammo storage has room for six more ammo belts. Each additional ammo belt has a purchase DC of 10.

Equipment Slots: 1, must be hand (or arm if Large), arm, or shoulders.
Activation: Attack action.
Range Increment: 60 feet.
Target: Single target within 600 feet, or autofire.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 21 for weapon, 10 for ammo belt.
Restriction: Restricted (+2).

TYPHOON 240 LASER CANNON (PL 6)

A reliable laser cannon, the Typhoon 240 deals 10d6 points of fire damage with a successful attack.

Equipment Slots: 2, including hand (or arm if Large), arm, shoulders, or visor.
Activation: Attack action.
Range Increment: 100 feet.
Target: Single target within 1,000 feet.
Duration: Instantaneous.

Saving Throw: None.
Purchase DC: 25.
Restriction: Military (+3).

CHRYSANTHEMUM LASER ARRAY (PL 6)

A barrage of phosphorus lasers deals massive damage to the mecha's surroundings, making this a weapon of last resort. Everything within 60 feet of the mecha (but not the mecha itself) takes 16d8 points of fire damage, after which the lasers burn themselves out. A successful Reflex save (DC 25) means the target takes only half damage.

Once fired, the Chrysanthemum burst array becomes nonfunctional and must be replaced.

Equipment Slots: 1.
Activation: Attack action.
Range: 0 feet.
Area: 60-foot-radius burst centered on you.
Duration: Instantaneous.
Saving Throw: Reflex half (DC 25).
Purchase DC: 26.
Restriction: Military (+3).

M-300 RHINO MASS CANNON (PL 7)

The M-300 Rhino mass cannon charges a small bit of matter with incredible gravitational energy, then hurls it at the target, where its increased gravitational pull causes it to slam into the target like a wrecking ball. The weapon deals 8d12 points of ballistic damage on a successful hit.

Equipment Slots: 2, including hand (or arm if Large), arm, or shoulders.
Activation: Attack action.
Range Increment: 100 feet.
Target: Single target within 1,000 feet.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 29.
Restriction: Military (+3).

PS-25 TIGER CLAWS (PL 7)

An improvement over the PS-15 Panther claws, PS-25 Tiger claws have monofilament edges that shear through armor plating like knives through butter. They can be extended or retracted as a free action.

The claws convert the mecha's slam attack into a claw attack that deals slashing damage. The amount of damage is based on the mecha's size: Large 6d8, Huge 8d8, Gargantuan 10d8, and Colossal 12d8. The claws have a critical threat range of 19–20.

The claws are one size category smaller than the mecha's size category (for example, a Large mecha has Medium-size claws).

Equipment Slots: 1, must be hand (or arm if Large).
Activation: Attack action.
Range: Touch.
Target: Single target within reach.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: None.

TSUNAMI 480 PLASMA CANNON (PL 7)

The Tsunami 280 plasma cannon has two aperture settings: focused beam and wide-angle beam. The mecha operator can switch between settings as a move action. The focused beam setting deals 12d6 points of fire damage with a successful ranged attack, and it has a critical threat range of 20. On the wide-angle setting, the weapon automatically hits everything within a 60-foot cone for 12d6 points of fire damage, but those in the area can make a Reflex save (DC 19) to reduce the damage by half. Critical hits aren't possible on the wide-angle setting.

Equipment Slots: 3, including hand (or arm if Large), arm, shoulders, or visor.
Activation: Attack action.
Range Increment/Range: 150 feet (focused beam), or 60 feet (wide-angle).
Target/Area: Single target within 1,500 feet, or 60-foot cone.
Duration: Instantaneous.
Saving Throw: None or Reflex half (DC 19; see text).
Purchase DC: 25.
Restriction: Military (+3).

XJ-A PYTHON ELECTRO-WHIP (PL 7)

The XJ-A Python is an electrified cable with embedded servomotors that wrap around the target. The Python deals electricity damage according to the mecha's size: Large 2d10, Huge 4d10, Gargantuan 6d10, and Colossal 8d10. The Python has an extra 15 feet of reach.

When using the Python, you get a +2 equipment bonus on your opposed attack roll when attempting to disarm an opponent (including the roll to avoid being disarmed if you fail to disarm your opponent).

Because the electro-whip can wrap around an enemy's leg or other limb, you can make a trip attack with it by succeeding at a melee touch attack. If you are tripped during your own trip attempt, you can drop or detach the Python electro-whip to avoid being tripped.

The electro-whip's size category is the same as the mecha's size category (for example, a Gargantuan mecha wields a Gargantuan electro-whip).

Equipment Slots: 1, must be hand (or arm if Large).
Activation: Attack action.
Range: Touch.
Target: Single target within reach.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: Restricted (+2).

AVENGER ELECTRO-SCIMITAR (PL 8)

The Avenger electro-scimitar is a lightweight and efficient one-handed melee weapon. As a mastercraft item, it grants a +1 bonus on attack rolls.

Damage for the energy scimitar is based on the size of the mecha wielding it: Large 4d6, Huge 8d6, Gargantuan 12d6, and Colossal 16d6. The energy scimitar has a critical threat range of 18–20. Half of the damage the energy sword deals is slashing damage, and the other half is electricity damage.

The electro-scimitar's size category is the same as the mecha's size category (for example, a Huge mecha wields a Huge energy scimitar).

Equipment Slots: 1, must be hand (or arm if Large).
Activation: Attack action.
Range: Touch.
Target: Single target within reach.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 15 + one-quarter the mecha's base purchase DC.
Restriction: None.

LT-5 LONGSHOT MASS DRIVER (PL 8)

Mass drivers fire hyper-accelerated spent-uranium slugs at the target, dealing damage strictly through the massive kinetic energy the round imparts to the target. A mass driver round deals 15d6 points of ballistic damage, and the system's magazine holds 10 rounds. Each 10-round magazine has a purchase DC of 12.

Equipment Slots: 2 for weapon, including hand (or arm if Large), arm, or shoulders; 1 for each 10-round ammo bay.
Activation: Attack action.
Range Increment: 120 feet.
Target: Single target within 1,200 feet.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 24 for drive and 10-round magazine, 12 per additional magazine.
Restriction: Military (+3).

RP-91 REAPER LASER SCYTHE (PL 8)

The RP-91 Reaper is a two-handed melee weapon with a crystal carbon shaft housing laser and magnetic field generators. When activated by the mecha operator, it suspends a laser beam within a razor-thin magnetic "envelope" shaped like a farmer's scythe. As a mastercraft item, it grants a +1 bonus on attack rolls.

Damage with a successful melee attack depends on the size of the wielding mecha: Large 4d10, Huge 6d10, Gargantuan 8d10, and Colossal 10d10. On a successful critical hit, the damage is quadrupled. Half of the damage the energy sword deals 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 scythe's size category is one size category larger than the mecha's size category (for example, a Huge mecha wields a Gargantuan laser scythe), up to a maximum size of Colossal.

Equipment Slots: 2, must be hand (or arm if Large).
Activation: Attack action.
Range: Touch.
Target: Single target within reach.
Duration: Instantaneous.
Saving Throw: None.
Purchase DC: 15 + one-quarter the mecha's base purchase DC.
Restriction: None.

MISCELLANEOUS EQUIPMENT

This section describes various other pieces of mecha equipment that don't fall neatly under the other categories, including a variety of electrical systems.

Building a system from scratch requires a character to make a Wealth check against the system's purchase DC, invest time in its assembly, and succeed at a Craft (electrical), Craft (mechanical), or Craft (structural) check (DC 30)—whichever seems most appropriate given the type of equipment. See the Craft skill description in the *d20 Modern Roleplaying Game* for further guidance. A character without the appropriate electrical or mechanical tool kit takes a –4 penalty on the skill check.

COCKPIT, COPILOT (PL 5)

This extra cockpit provides a comfortable station inside the mecha for a Small or Medium-size copilot. A copilot has the ability to fire the mecha's ranged weapons, perform active scans using the mecha's sensor systems, or aid the pilot's attacks and skill checks (using the aid another action). Melee combat, defense, and movement remain under the control of the mecha's operator in the main cockpit. A copilot doesn't grant the mecha additional attacks in a round, and only one character may fire each ranged weapon each round. The mecha operator or copilot can transfer weapon control as a free action.

As a move action, the mecha's operator can lock out one or more copilot cockpits, shutting off the cameras, locking the hatches, and so on.

It takes a successful Computer Use check (DC 25 if the operator is disabled, 35 if the operator is still active) to switch overall control of the mecha to a copilot cockpit.

Equipment Slots: 3, must be torso or back.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 20.
Restriction: None.

COCKPIT, PASSENGER (PL 5)

This extra cockpit merely provides a comfortable place inside the mecha for a Small or Medium-size passenger to sit. The passenger can't do anything other than observe the surroundings (seeing exactly what the mecha's operator sees), communicate privately with the operator and publicly over open frequencies, and leave the cockpit as a full-round action. As a move action, the operator can prevent any of the above by shutting off the cameras, locking the hatch, and so on.

Equipment Slots: 2, must be torso or back.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 20.
Restriction: None.

COMM SYSTEM (PL 5)

The mecha is equipped with a radio transceiver that can transmit on multiple frequencies in either LOS (line of sight) or omnidirectional mode. It can handle up to ten simultaneous two-way conversations.

Equipment Slots: 0.
Activation: Free action.
Range: 100 miles.
Target: One or more radio transceivers.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 21.
Restriction: None.

LIFE SUPPORT SYSTEM (PL 5)

The mecha's life support system provides a closed environment, allowing the mecha operator to ignore the effects of inhaled poisons and immersion in water. The onboard air supply lasts for 24 hours.

A mecha equipped with a life support system has one less equipment slot.

Equipment Slots: 1 (equivalent).
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.

Saving Throw: None.
Purchase DC: 14.
Restriction: None.

HV-5 HAVEN ESCAPE POD (PL 6)

The HV-5 Haven escape pod jettisons the cockpit and the mecha operator from the rest of the mecha (typically because the mecha is about to be destroyed). The operator can activate it as a move action and move normally at the Haven's fly speed. The Haven can also be activated as a free action, in which case it flies under the operator's direction up to its fly speed, but can move no farther that round.

The Haven escape pod has a fly speed of 90 feet (clumsy), 50 hit points, hardness 10, and a Defense of 18. Three rounds after it jettisons from the mecha, it runs out of fuel, landing or crashing as appropriate.

Equipment Slots: 1, must be torso.
Activation: Free action or move action (see text).
Range: Personal.
Target: You.
Duration: 3 rounds.
Saving Throw: None.
Purchase DC: 15 + one-quarter the mecha's base purchase DC.
Restriction: None.

SPACE SKIN (PL 6)

Space skin colloquially refers to a series of environmental stabilizers that allow the mecha operator (and other living creatures aboard the mecha) to ignore the effects of vacuum, thus enabling the mecha to operate in space.

A mecha equipped with space skin has one less equipment slot.

Equipment Slots: 1 (equivalent).
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 18.
Restriction: None.

STEALTH SUITE (PL 6)

Based on high-tech low observables technology, this combination of sound baffles, heat dispersers, and nonreflective paint combines to give the mecha a +10 bonus on Hide and Move Silently checks. Cost and the size penalty combine to make this structural option impractical on all but the smallest mecha.

Equipment Slots: 1.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 10 + one-quarter the mecha's base purchase DC.
Restriction: Licensed (+1).

ADVANCED DIAGNOSTICS (PL 7)

Multiple redundant systems coupled with the ability to detect and correct minor system faults allow the mecha to repair moderate damage. Advanced diagnostics restores 1d10 points of damage per hour, during which time the mecha cannot move or attack. Only the mecha's bonus hit points are repaired, not damage to the mecha's operator.

Equipment Slots: 1.
Activation: Move action.
Range: Personal.
Target: You.
Duration: 1 round.
Saving Throw: None.
Purchase DC: 15 + one-quarter the mecha's base purchase DC.
Restriction: None.

STRUCTURAL ENHANCEMENT (PL 7)

Significant advances in engineering inspire a series of modifications to the mecha's superstructure, granting it an additional 50 hit points. A mecha can undergo structural enhancement multiple times, gaining 50 additional hit points each time, but it can never have more than twice its starting hit points (as noted in Table 9–1: Mecha Sizes).

A character may structurally enhance a mecha with a successful Craft (structural) check (DC 30) after devoting an amount of time that varies depending on the mecha's size: Large 30 hours, Huge 60 hours, Gargantuan 120 hours, Colossal 240 hours. A character attempting the procedure without a mechanical tool kit takes a –4 penalty on the skill check.

Each time a mecha is structurally enhanced, it loses one equipment slot.

Equipment Slots: 1 (equivalent).
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 15 + one-half the mecha's base purchase DC.
Restriction: None.

ZERO-G STABILIZER (PL 7)

A zero-G stabilizer allows the mecha and its operator to function normally in low-gravity and zero-gravity environments, as though the operator has the Zero-G Training feat (see page 15).

Equipment Slots: 1.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 15.
Restriction: None.

CRACKERJACK NEURAL LINK (PL 8)

This unit links the operator's brain directly to the mecha, making it feel less like a machine and more like an extension of the operator's body. While driving or piloting the mecha, the operator gains a +2 bonus on initiative checks. In addition, the operator can use any of his nonmecha-specific feats while operating a mecha. (This ability does not grant the operator any new feats.)

Equipment Slots: 1, must be helmet or cranium.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 15 + one-quarter the mecha's base purchase DC.
Restriction: Restricted (+2).

NANOREPAIR UNIT (PL 8)

State-of-the-art nanites swarm over the surface of the mecha at the first indication of damage. The mecha automatically heals 5 points of damage per round. The nanorepair unit ceases to function if the mecha loses all its hit points.

Equipment Slots: 1.
Activation: None.
Range: Personal.
Target: You.
Duration: Persistent.
Saving Throw: None.
Purchase DC: 15 + one-quarter the mecha's base purchase DC.
Restriction: Restricted (+2).

SAMPLE MECHA

The following mecha represent relatively straightforward designs. Accordingly, they make good mecha for GM characters or starting points for heroes who want to customize an existing design.

Size: The mecha's body size (and its size penalty on attack rolls and to Defense, in parentheses).

Bonus Hit Points: The bonus hit points the mecha gives the operator. This value also represents the mecha's total hit points.

Superstructure: The chief material used in the construction of the mecha's superstructure.

Hardness: The hardness afforded by the mecha's superstructure. Hardness reduces the amount of damage the mecha takes from an attack.

Armor: The type of armor installed on the mecha. Some types of armor reduce a mecha's speed.

Bonus to Defense: The mecha's equipment bonus to Defense, as provided by its armor.

Armor Penalty: Apply this penalty to the operator's Balance, Climb, Escape Artist, Hide, Jump, Move Silently, and Tumble checks.

Reach: The mecha's reach.

Strength Bonus: The equipment bonus the mecha provides to its operator's Strength.

Dexterity Penalty: The penalty the mecha applies to its operator's Dexterity (if any).

Speed: The mecha's base land speed (and fly speed, if applicable).

Base Purchase DC: The mecha's base purchase DC does not include armor or equipment.

Standard Equipment Package: The standard equipment found on the baseline model.

MYRMIDON (PL 6)

The Myrmidon primarily serves as a light infantry support mecha, replacing an armored vehicle on the battlefield. It has also proven effective in close-combat situations, particular in urban arenas.

A Myrmidon installed with the standard equipment package (see below) has a purchase DC of 41.

Size: Large (–1 size)
Superstructure: Duralloy
Armor: Duralloy
Armor Penalty: –8
Strength Bonus: +8
Speed: 20 ft., fly 90 ft. (clumsy)
Bonus Hit Points: 100
Hardness: 15
Bonus to Defense: +8
Reach: 10 ft.
Dexterity Penalty: —
Base Purchase DC: 40

A MECHA'S TOTAL PURCHASE DC

The rules in this chapter are written to allow a character to buy the necessary components to build a mecha from scratch. A mecha's components (armor, flight systems, sensors, defense systems, weapons, and so forth) are sold separately and thus have separate purchase DCs.

In most cases, the combined cost of a mecha's armor and equipment is enough to increase the mecha's base purchase DC by 1. To verify the total purchase DC of a mecha with preinstalled equipment, use Table 7–16: Purchase DCs (page 145) and follow these three steps:

1. Determine the item cost (in dollars) of each component, based on its purchase DC.
2. Total the various item costs to get the total cost of the mecha (in dollars).
3. Use Table 7–16: Purchase DCs to convert the total cost of the mecha back into a single purchase DC.

For example, a character wants to buy a Large Myrmidon mecha with a duralloy superstructure (base purchase DC 40) equipped with duralloy armor (purchase DC 30), a Class II sensor system (purchase DC 21), an M-9 Barrage chaingun (purchase DC 21), 6 additional ammo belts for the chaingun (purchase DC 8 apiece), PS-15 Panther claws (purchase DC 20), and a jetpack (purchase DC 20). Using Table 7–16, the player converts each purchase DC into an item cost, adds the costs together, and determines that the total cost is $694,920. He then converts this dollar sum back into a purchase DC. According to the table, a mecha that costs $694,920 has a purchase DC of 41.

Standard Equipment Package: Pilot's cockpit (torso and back), Class II sensor system (helmet), M-9 Barrage chaingun (left arm), 6 50-round ammo belts for M-9 Barrage chaingun (shoulders), PS-15 Panther claws (right arm), jetpack (boots), comm system (no slots).

SCOURGE (PL 6)

The Scourge assault mecha uses heavy weapons to disable enemy mecha and vehicles, and leaves them to a mop-up crew of traditional infantry. This frees up the assault mecha for more suitable tasks than disassembling captured ordnance.

A Scourge installed with the standard equipment package (see below) has a purchase DC of 49.

Size: Huge (–2 size)
Superstructure: Vanadium
Armor: Duralloy
Armor Penalty: –8
Strength Bonus: +16
Speed: 30 ft., fly 90 ft. (poor)
Bonus Hit Points: 200
Hardness: 20
Bonus to Defense: +8
Reach: 10 ft.
Dexterity Penalty: —
Base Purchase DC: 48

Standard Equipment Package: Pilot's cockpit (torso and back), Class II sensor system (helmet), Enigma sensor suite (visor), Typhoon 240 laser cannon (left arm and left hand), M-53 Firestar rocket launcher (right hand), 6-pack of M-53 Firestar rockets (right arm), jet-assist wings (shoulders), LX-10 antishock array (belt), jetpack (boots), comm system (no slots).

MANTICORE (PL 7)

The Manticore is a flying quadrupedal assault mecha (see the Quadrupedal Mecha sidebar, page 154) designed to take out enemy infantry units with a hailstorm of large-caliber shells. The Manticore has a special tail slot that replaces its belt equipment slot; the tail incorporates a deadly Chrysanthemum laser array.

A Manticore installed with the standard equipment package (see below) has a purchase DC of 45.

Size: Huge (–2 size)
Superstructure: Neovulcanium
Armor: Crystal carbon
Armor Penalty: –8
Strength Bonus: +16
Speed: 50 ft., fly 100 ft. (poor)
Bonus Hit Points: 200
Hardness: 20
Bonus to Defense: +10
Reach: 10 ft.
Dexterity Penalty: —
Base Purchase DC: 44

Standard Equipment Package: Pilot's cockpit (torso and helmet), Class IV sensor system (visor), T-95 Cavalcade chaingun (right arm), 6 extra 50-round ammo belts (left arm), Chrysanthemum laser array (tail), jet-assist wings (shoulders), jetpack (back), comm system (no slots).

TEMPEST (PL 7)

The Tempest is a heavy support mecha, designed to work alongside tanks and other heavy armored vehicles, or as the centerpiece of smaller mecha platoons.

A Tempest installed with the standard equipment package (see below) has a purchase DC of 49.

Size: Gargantuan (–4 size)
Superstructure: Neovulcanium
Armor: Crystal carbon
Armor Penalty: –8
Strength Bonus: +24
Speed: 50 ft., fly 150 ft. (average)
Bonus Hit Points: 450
Hardness: 20
Bonus to Defense: +10
Reach: 15 ft.
Dexterity Penalty: –2
Base Purchase DC: 48

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 electro-whip (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).

PARAGON (PL 8)

Nothing less than a mobile weapons platform, the Paragon dominates any battlefield and can lay waste to entire armies. In space, it can fight toe-to-toe with armed starships.

A Paragon installed with the standard equipment package (see below) has a purchase DC of 61.

Size: Colossal (–8 size)
Superstructure: Megatanium
Armor: Megatanium
Armor Penalty: –10
Strength Bonus: +32
Speed: 50 ft., fly 200 ft. (poor)
Bonus Hit Points: 900
Hardness: 30
Bonus to Defense: +12
Reach: 15 ft.
Dexterity Penalty: –4
Base Purchase DC: 60

Standard Equipment Package: Advanced diagnostics (helmet), Class V sensor system (helmet), Crackerjack neural link (cranium), Mark IV Oracle targeting system (visor), jet-assist wings (back), Avenger electro-scimitar (left hand), Barricade tactical shield (right arm), M-300 Rhino mass cannon (right hand and right arm), M-87 Talon missile launcher (left shoulder), 2 4-packs of M-87 Talon missiles (left arm), M-70 EMP rocket launcher (right shoulder), 2 6-packs of M-70 EMP rockets (torso), HV-5 Haven escape pod (torso), zero-G stabilizer (torso), Mark II deflection field (belt), life support system (left leg), ramjet thruster boots (boots), 100-hp structural enhancement (2 slots equivalent), light fortification (1 slot equivalent), space skin (1 slot equivalent).

MECHA CARGO CAPACITY

Although they are not built to haul cargo, mecha superstructures have a limited amount of storage space. Table 9–4: Mecha Cargo Capacity lists the maximum weight in additional cargo (not including crew, weapons, or other integrated equipment) a mecha can transport in its internal storage compartments, as well as the maximum size of an object that will fit inside one of these internal compartments.

TABLE 9–4: MECHA CARGO CAPACITY

Mecha Size	Cargo Capacity	Maximum Object Size
Colossal	1,250 lb.	Huge
Gargantuan	500 lb.	Large
Huge	250 lb.	Medium-size
Large	50 lb.	Small

MOVEMENT AND COMBAT

Combat between mecha is conducted much as it is between characters. Characters operating mecha are simply much larger and stronger than they would otherwise be, and they can wield truly frightening weapons. However, they still obey the essential rules of *d20 Modern* movement and combat. They still threaten squares within their reach, take move actions and attack actions, duck behind cover to gain a bonus to Defense, and so forth.

In some respects, however, mecha movement and combat differs from character movement and combat. The following sections describe specific situations that arise when mecha maneuver and clash on the battlefield.

COCKPIT ACCESS

It takes a full-round action to climb into a mecha's cockpit and a move action to activate its various systems so it can move and fight. It takes a full-round action to get out of a mecha unless an HV-5 Haven escape pod or similarly expeditious device is used (see Miscellaneous Equipment, page 165).

DRIVING, PILOTING, AND MOVEMENT

Mecha operators use the Drive skill to operate their mecha on the ground and the Pilot skill to operate their mecha in the air or in space.

In general, mecha operators don't need to make Drive or Pilot checks to steer their mecha around the battlefield. However, these skills may come into play in combat under the following circumstances:

- When trying to move past a foe without provoking an attack of opportunity, a mecha operator can make a Drive check or Pilot check (as appropriate) instead of a Tumble check.

TABLE 9–5: FLIGHT MANEUVERABILITY

Maneuver	Perfect	Good	Average	Poor	Clumsy
Minimum forward speed	None	None	Half	Half	Half
Hover	Yes	Yes	No	No	No
Fly backward	Yes	Yes	No	No	No
Reverse	Free	–5 ft.	—	—	—
Turn	Any	90°/5 ft.	45°/5 ft.	45°/5 ft.	45°/10 ft.
Turn in place	Any	+90°/5 ft.	+45°/5 ft.	No	No
Maximum turn	Any	Any	90°	45°	45°
Up angle	Any	Any	60°	45°	45°
Up speed	Full	Half	Half	Half	Half
Down angle	Any	Any	Any	45°	45°
Down speed	Double	Double	Double	Double	Double
Between down and up	0 ft.	0 ft.	5 ft.	10 ft.	20 ft.

- A mecha operator can oppose a trip attempt with a Drive check (if on the ground) or a Pilot check (if in the air).
- A successful Pilot check can pull a mecha out of a stall (see Flying Mecha, below).
- A character in a copilot cockpit can use the aid another action, making Drive or Pilot checks (as appropriate) to aid the Drive and Pilot checks of the mecha's operator.

FLYING MECHA

The vehicle rules in the *d20 Modern Roleplaying Game* are entirely appropriate for ground cars and other normal modes of transportation; however, even a clumsy mecha is more maneuverable than a normal vehicle.

On the ground, mecha move as characters. They can turn at any time, move in any direction, and stop on a dime. In the air, though, they are more limited.

Most flying mecha have to slow down to make a turn, and many are limited to fairly wide turns and must maintain a minimum forward speed. Each flying mecha has a maneuverability rating, as shown on Table 9–5: Flight Maneuverability. A mecha's flight systems (see page 156) determine its maneuverability.

Minimum Forward Speed: If a flying mecha fails to maintain its minimum forward speed, it must land at the end of its movement. If it is too high above the ground to land, it falls straight down, descending 150 feet in the first round of falling. If this distance brings it to the ground, it takes falling damage. If the fall doesn't bring the mecha to the ground, the operator must succeed at a Pilot check (DC 20) to recover. Otherwise, it falls another 300 feet. If it hits the ground, it takes falling damage. Otherwise, it has another chance to recover on its next turn.

Hover: The ability to stay in one place while airborne.

Fly Backward: The ability to fly backward.

Reverse: A mecha with good maneuverability uses up 5 feet of its speed to start flying backward.

Turn: How much the flying mecha can turn after covering the stated distance.

Turn in Place: A mecha with good or average maneuverability can "spend" some of its speed to turn in place.

Maximum Turn: How much the mecha can turn in any one space.

Up Angle: The angle at which the mecha can ascend.

Up Speed: How fast the mecha can ascend.

Down Angle: The angle at which the mecha can descend.

Down Speed: A flying mecha can descend at twice its normal flying speed.

Between Down and Up: An average, poor, or clumsy mecha must fly level for a minimum distance after descending and before ascending. Any flying mecha can begin descending after an ascent without an intervening distance.

MECHA IN OUTER SPACE

Only a mecha equipped with space skin (see Miscellaneous Equipment, page 165) can operate in outer space. However, the mecha's operator takes a –4 penalty on all attack rolls and skill checks unless she has the Zero-G Training feat (see page 15) or has equipped her mecha with a zero-g stabilizer (see page 166).

In outer space, mecha fly just like they do in the atmosphere, with three exceptions. First, all flying mecha improve by one maneuverability category (clumsy becomes poor, poor becomes average, average becomes good, and so on). Second, all mecha can ascend and descend regardless of the limitations on Table 9–5: Flight Maneuverability, and their speed is unchanged if they do so. Finally, all mecha can hover in space and need not maintain a minimum forward speed.

MECHA CRITICAL HITS

Whenever you confirm a critical hit against a mecha, you may choose to roll percentile dice and consult Table 9–6: Mecha Critical Hits instead of dealing the normal critical hit damage for the attack. However, you must accept the results of the roll, even if those results are less than desirable.

TABLE 9–6: MECHA CRITICAL HITS

d% Roll	Effect(s)
01–15	Normal damage, crew dazed
16–35	Normal critical hit, crew dazed
36–45	Normal critical hit, mecha knocked prone
46–50	Severe critical hit, crew dazed, mecha stunned
51–55	Severe critical hit, mecha knocked prone
56–60	Crew hit (normal damage)
61–70	Normal damage, equipment damaged
71–80	Normal damage, equipment destroyed
81–90	Normal critical hit, slot damaged
91–100	Normal critical hit, slot destroyed

Normal Damage: The attack deals normal damage (do not apply critical hit multipliers).

Crew Dazed: Each crewmember aboard the mecha, including its operator, must succeed on a Fortitude save (DC 15) or be dazed for 1 round. Unable to act, a dazed character can take no actions, but still retains his or her full Defense.

Normal Critical Hit: Roll critical hit damage normally.

Mecha Knocked Prone: The force of the attack knocks the mecha prone. All crewmembers and passengers aboard take 1d6 points of bludgeoning damage as they are knocked about their cockpits. A prone mecha takes a –4 penalty on melee attack rolls and can't use thrown ranged weapons. The mecha gains a +4 bonus to Defense against ranged attacks, but takes a –4 penalty to Defense against melee attacks.

Standing up from prone is a move action that provokes attacks of opportunity.

Mecha Stunned: The mecha automatically drops what it is holding and can take no attack or move actions for 1 round. While the mecha is stunned, apply a –2 penalty to the mecha operator's Defense (even though the operator is not stunned).

Severe Critical Hit: Roll critical hit damage using a ×5 multiplier instead of the weapon's normal multiplier.

Crew Hit: The attack bypasses the mecha's armor and superstructure. Apply normal damage to one crewmember or passenger (determined randomly), ignoring the mecha's bonus hit points.

Equipment Destroyed: One piece of equipment (attacker's choice) is damaged and ceases to function until repaired. It can be a flight system, sensor system, defense system, weapon (handheld or integrated), or miscellaneous system. Repairing a damaged system requires 1 hour of work and a successful Repair check (DC 20).

Equipment Destroyed: One piece of equipment (attacker's choice) is destroyed and ceases to function. It can be a flight system, sensor system, defense system, weapon (handheld or integrated), or miscellaneous system. A destroyed system cannot be repaired, only replaced.

Slot Damaged: One of the mecha's equipment slots (attacker's choice) is damaged. Any piece of equipment wholly or partially installed in that slot will not function until the slot is repaired. Repairing a damaged equipment slot requires 1 hour of work and a successful Repair check (DC 25).

Slot Destroyed: One of the mecha's equipment slots (attacker's choice) is destroyed, along with any piece of equipment wholly or partially installed in it. Rebuilding a destroyed equipment slot requires 12 hours of work and a successful Craft (mechanical) check (DC 30).

RANGED ATTACKS AND ATTACKS OF OPPORTUNITY

Mecha only provoke attacks of opportunity from creatures of their own size or larger (including other mecha) when they fire a ranged weapon in a threatened area.

STOWING HAND SLOT EQUIPMENT

Any piece of mecha equipment integrated into a mecha's hand slot—and only the hand slot—can be stowed magnetically against the mecha or in a storage compartment as a move action. This frees up the hand to perform more delicate manipulation (such as opening a door or pressing a button) or grabbing another piece of mecha equipment.

A mecha may have more pieces of equipment for its hand slots than it has hand slots available; it just can't use them all at once.

MECHA-RELATED FEATS

Mecha operators can select feats that relate specifically to operating mecha. These feats are all considered bonus feats for the Mecha Jockey advanced class (see page 172). Whenever the Mecha Jockey is allowed to select a bonus feat, she can choose one of these.

ESSENTIAL MECHA FEATS

A character without the Mecha Operation feat and Mecha Weapon Proficiency feat suffers serious penalties while operating a mecha of any size. The penalties for not having these feats are summarized below:

Mecha Operation: A character without this feat takes a –4 penalty on Balance, Climb, Drive, Escape Artist, Hide, Move Silently, Pilot, and Tumble checks when operating a mecha. Furthermore, the character cannot run or charge.

Mecha Weapon Proficiency: A character without this feat takes a –4 penalty on attack rolls made while operating a mecha. Furthermore, the character cannot apply the various *d20 Modern* firearm feats (such as Advanced Firearms Proficiency, Dead Aim, Double Tap, Shot on the Run, and Strafe) to a mecha's ranged weapons.



Mecha Fling Feat

ADVANCED MECHA OPERATION

You have received advanced training or extensive practice in mecha movement.

Prerequisite: Mecha Operation.

Benefit: Choose a size of mecha (Large, Huge, Gargantuan, or Colossal). When you are operating a mecha of the chosen size, you gain a +1 dodge bonus to Defense. Furthermore, armor penalties for operating the mecha are 2 less than they would otherwise be (minimum penalty –0).

HAIR TRIGGER

You have developed a delicate sense of timing, and your area attacks hit your foes when they're ill-prepared to defend against them.

Prerequisite: Base attack bonus +6.

Benefit: Whenever you make an attack from your mecha that requires enemies to make Reflex saving throws, the DC for such saves is increased by +2.

MECHA CRUSH

You can hurl your mecha's body onto opponents to deal tremendous damage.

Prerequisite: Mecha Operation.

Benefit: As an attack action, you can maneuver your mecha to jump or fall onto opponents, using the mecha's body to crush them. This attack is useful only against creatures at least two size categories smaller than your mecha. The base damage for a crush attack depends on your mecha's size category, as given below. Add 1.5 times your mecha-modified Strength bonus to this base damage to determine the total damage for the attack.

Mecha Size	Damage
Large	2d6
Huge	2d8
Gargantuan	4d6
Colossal	4d8

A crush attack deals bludgeoning damage and affects as many creatures as can fit under your mecha's body. (See Big and Little Creatures in Combat in Chapter Five: Combat in the *d20 Modern Roleplaying Game*.) Each creature in the affected area must succeed on a Reflex save (DC 10 + your mecha's size modifier for grapple attacks). On a failure, the creature is pinned and automatically takes crush damage each round the pin is maintained.

MECHA FLING

You can pick up an opponent with your mecha and fling it.

Prerequisite: Mecha Operation, at least one free hand slot.

Benefit: Your mecha can make a grapple check at a –20 penalty against an opponent at least two size categories smaller than it. If the grapple succeeds, you can use an attack action to fling the held opponent on your next action. The range increment for the thrown foe is 10 feet, and the maximum range is 100 feet.

A creature may be thrown horizontally or vertically. If thrown vertically, it takes normal falling damage. If thrown horizontally, it takes damage as though it had fallen half the distance thrown (rounded down), and you may apply your mecha-modified Strength bonus to the damage. For example, if a creature is thrown 70 feet horizontally, it takes damage equal to 3d6 + your mecha-modified Strength bonus.

MECHA AND *D20 MODERN* FEATS

If you have the Mecha Weapon Proficiency feat, any feats that apply to firearms (such as Double Tap and Strafe) also apply to relevant ranged mecha weapons. For example, you can strafe with an M-21 Comet autolaser or deal extra damage with a LT-5 Longshot mass driver.

Melee-oriented feats from the Brawl and Combat Martial Arts trees don't apply if you're operating a mecha, although a character with the Mecha Operation feat threatens all areas within reach of the mecha, and making a slam or other melee attack with a mecha doesn't provoke an attack of opportunity. Feats from the Defense Martial Arts tree function normally for characters in mecha.

Your mecha may also fling your opponent at another mecha, vehicle, or creature. To do so, make an attack roll at a –4 penalty, with appropriate range penalties, against the target. If you hit, both the thrown creature and the target take the amount of damage that the thrown creature would have otherwise taken, as given above.

MECHA OPERATION

You know how to operate a mecha.

Benefit: You do not suffer the restrictions on movement and penalties on skill checks for being unfamiliar with mecha controls. You can move normally in a mecha and generally perform any action as if you weren't inside a mecha, subject to the obvious limitations of size. You threaten areas within your reach even if unarmed.

Normal: Characters without this feat take a –4 penalty on Balance, Climb, Drive, Escape Artist, Hide, Move Silently, Pilot, and Tumble checks when operating a mecha. Furthermore, they cannot run or charge.

MECHA SWEEP

You can use your mecha to wield improvised weapons and attack several spaces at once.

Prerequisite: Mecha Operation, Power Attack, two free hand slots.

Benefit: You can use your mecha's great size and strength, along with your own knowledge of balance and leverage, to pick up a heavy object (such as a large tree or boulder) and attack an area as an attack action. The area affected is a half-circle with a radius equal to your mecha's reach. This attack deals damage to all creatures two or more size categories smaller than your mecha within the area. The base damage dealt depends on your mecha's size, as given below. Add 1.5 times your mecha's Strength bonus to this base damage to determine the total damage for the attack.

Mecha Size	Damage
Large	1d6
Huge	1d8
Gargantuan	2d6
Colossal	2d8

Though it can deal significant damage, this form of attack is awkward and unbalancing. You take a –2 penalty to your mecha's Defense and on Reflex saves until your next turn.

MECHA TRAMPLE

Your mecha can knock down and crush opponents.

Prerequisite: Mecha Operation, base attack bonus +4.

Benefit: When you attempt to overrun an opponent while operating a mecha, the target may not choose to avoid your mecha. If your mecha knocks down the target, your mecha may make one free slam attack against the target, gaining a +4 bonus on the attack roll because the target is prone. (See Overrun in Chapter Five: Combat of the *d20 Modern Roleplaying Game*.)

MECHA WEAPON BOOST

By disabling safeguards and shunting auxiliary power into your weapons, you can attain greater destructive power at the cost of weapon accuracy.

Prerequisite: Base attack bonus +8, Repair 6 ranks.

Benefit: You can take a penalty of up to –5 on your attack roll. If you do, the mecha weapon of your choice deals +1d6 points of damage for each –1 penalty you took. The attack penalty persists until the beginning of your next turn, but the additional damage applies only to the next single attack you make.

MECHA WEAPON PROFICIENCY

You know how to acquire targets and fire your mecha's weapons using onboard computers and sensors.

Prerequisite: Mecha Operation.

Benefit: You no longer suffer the standard penalties on attack rolls while you're in your mecha. You can use any feats that refer to firearms with your ranged mecha weapons.

Normal: Characters without this feat take a –4 penalty on attack rolls made while in a mecha cockpit. Furthermore, they cannot apply firearm feats to a mecha's ranged weapons.

STUN MECHA

By channeling electricity into an enemy mecha's control system, you can temporarily short it out.

Prerequisite: Base attack bonus +8, Mecha Operation, Precise Shot.

Benefit: If you threaten a critical hit with an electricity attack against another mecha, you may automatically confirm the critical. In addition to suffering the effects of the critical hit, the mecha is automatically stunned for 2d4 rounds. The stunned mecha automatically drops what it is holding and can take no attack or move actions. While the mecha is stunned, apply a –2 penalty to the mecha operator's Defense (even though the operator is not stunned).

THRUSTER BLAST

By directing your vectored thrusters all around your mecha, you can kick up a cloud of dust and debris that obscures the battlefield.

Prerequisite: Pilot 10 ranks, mecha flight system (either jetpack, thruster boots, or ramjet thruster boots).

Benefit: You can aim your thruster exhaust toward the ground to create a hemispherical cloud. If you are within 30 feet of the ground and there is loose debris or dust, you can create a cloud with a 50-foot radius centered directly below you. The generated winds snuff out small fires and give guided missiles attacking you a –4 penalty on their attack rolls. Creatures without eye protection caught within the debris cloud are blinded while inside it and for 1 round after emerging from it. The debris cloud grants anyone inside it one-half concealment (20% miss chance). Mecha with sensor systems ignore the concealment effects.

Because some mecha have vectored thrust systems, their flight path isn't affected by the aim of the exhaust. They don't have to hover or fly upward to create the cloud.

MECHA JOCKEY

While anyone reasonably proficient with a mecha's cockpit can strap in and guide the hulking metal monster across the field of battle, only the Mecha Jockey makes it look effortless as he rains destruction upon his enemies from an impersonal distance. The Mecha Jockey masters rapid turns, bursts of speed, evasive maneuvers, and sudden stops—all the things that can make the difference on the battlefield. Perfect hand-eye coordination, stubborn resolve, and soaring bravado serve to impress and infuriate his enemies, as well as less experienced mecha pilots.

Select this advanced class if you want your character to be an expert mecha operator, in command of a massive, armored war machine equipped with terrifying weaponry.

The fastest path into this advanced class is from the Fast hero basic class, though other paths are possible.

REQUIREMENTS

To qualify to become a Mecha Jockey, a character must fulfill all the following criteria.

Skills: Drive 6 ranks.

Feats: Mecha Operation.

CLASS INFORMATION

The following information pertains to the Mecha Jockey advanced class.

TABLE 9–7: THE MECHA JOCKEY

Class Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+0	+2	+1	Mecha Weapon Proficiency	+1	+0
2nd	+1	+0	+3	+2	Luv my mecha (+1)	+1	+0
3rd	+2	+1	+3	+2	Bonus feat	+2	+1
4th	+3	+1	+4	+2	Mecha feint	+2	+1
5th	+3	+1	+4	+3	Luv my mecha (+2)	+3	+2
6th	+4	+2	+5	+3	Bonus feat	+3	+2
7th	+5	+2	+5	+4	Evasive action	+4	+3
8th	+6	+2	+6	+4	Luv my mecha (+3)	+4	+3
9th	+6	+3	+6	+4	Bonus feat	+5	+4
10th	+7	+3	+7	+5	Improved evasive action	+5	+4

HIT DIE

The Mecha Jockey gains 1d10 hit points per level. The character's Constitution modifier applies.

ACTION POINTS

The Mecha Jockey gains a number of action points equal to 6 + one-half his character level, rounded down, each time he attains a new level in this class.

CLASS SKILLS

The Mecha Jockey's class skills are as follows.

Bluff (Cha), Computer Use (Int), Drive (Dex), Knowledge (current events, popular culture, streetwise, technology) (Int), Navigate (Int), Pilot (Dex), Profession (Wis), Read/Write Language (none), Repair (Int), Sleight of Hand (Dex), Speak Language (none), Spot (Wis), Tumble (Dex).

Skill Points at Each Level: 5 + Int modifier.

CLASS FEATURES

The following features pertain to the Mecha Jockey advanced class.

MECHA WEAPON PROFICIENCY

At 1st level, the Mecha Jockey gains the bonus feat Mecha Weapon Proficiency.

LUV MY MECHA

Starting at 2nd level, a Mecha Jockey gains a bonus on Drive, Pilot, and Repair checks when applied to a mecha he designates as familiar. The same bonus is applied to the Mecha Jockey's attack rolls with the mecha's ranged weapons. This bonus is +1 at 2nd level and increases by 1 every three levels thereafter (+2 at 5th level, +3 at 8th level).

To designate a mecha as familiar, the Mecha Jockey must have operated it for at least one month. Minor changes and upgrades to the mecha don't affect familiarity, but if the Mecha Jockey switches to a mecha with a different size, different superstructure, different flight system, or more than one new weapon, he must operate it for at least one month before he is familiar with it. A Mecha Jockey can be familiar with only one mecha at a time.

BONUS FEAT

At 3rd, 6th, and 9th level, the Mecha Jockey gains a bonus feat. The bonus feat must be selected from the following list, and the Mecha Jockey must meet all the prerequisites of the feat to select it.

Advanced Firearms Proficiency, Advanced Mecha Operation*, Burst Fire, Cleave, Combat Expertise, Dead Aim, Dodge, Double Tap, Far Shot, Force Stop, Gearhead, Great Cleave, Hair Trigger*, Improved Bull Rush, Improved Disarm, Improved Sunder, Improved Trip, Mecha Crush*, Mecha Fling*, Mecha Operation*, Mecha Sweep*, Mecha Trample*, Mecha Weapon Boost*, Mobility, Personal Firearms Proficiency, Point Blank Shot, Power Attack, Precise Shot, Shot on the Run, Skip Shot, Spring Attack, Strafe, Stun Mecha*, Thruster Blast*, Weapon Focus (mecha weapon only), Whirlwind Attack.

**Feat described in this chapter (see Mecha-Related Feats, page 170).*

MECHA FEINT

At 4th level, a Mecha Jockey operating a mecha can make a Bluff check in combat as a move action (instead of an attack action). He receives a +2 bonus on the Bluff check made to feint in melee combat.

If the Mecha Jockey has the Improved Feint feat, his bonus on Bluff checks made to feint increases to +4 while operating a mecha.

EVASIVE ACTION

At 7th level, the Mecha Jockey can make a Drive, Pilot, or Tumble check (as appropriate) to lessen the damage dealt by a successful attack against his mecha. If the check result exceeds the attack roll, the damage is reduced by half (round fractions down, minimum of 1 point of damage). The Mecha Jockey can make an evasive action check once per round.

IMPROVED EVASIVE ACTION

At 10th level, the Mecha Jockey's evasive action ability improves. A successful Drive, Pilot, or Tumble check negates all damage dealt by the attack.

Mecha Jockey with Myrmidon



CHAPTER TEN:

ROBOTICS



Yorikobot

Robots have been a staple of science fiction since Karel Capek invented the word in R.U.R. (Rossum's Universal Robots) in 1921, but the concept of automata has been around since the clockwork figures that sometimes adorned churches in the Middle Ages. Initially conceived as servants to humankind, robots are just as frequently depicted as programmable slaves who occasionally rebel against their human masters in protest against their lack of rights. In countless movies, novels, and short stories, robots explore the unknown, build cities, tend children, entertain adults, keep the peace, and fight wars.

EVOLUTION OF ROBOTICS

Although robots exist in the modern day, the classic conception of the thinking automaton usually involves advances yet to come in the field of robotics. Today's robots are, at best, boxlike affairs with crude grippers and simplistic sensors, governed by complex, though limited, computer programs. However, the robots of the future take countless forms, from lumbering 30-foot war machines to sophisticated androids indistinguishable from living beings.

Robots consist of several integrated systems: chassis, locomotion, control system, manipulators, and sensors. Additional systems—armor, weapons, tools, and so forth—help further define a robot's purpose, though any robot can have multiple purposes, if its creator is willing to spend the money on parts and programs. Accordingly, as the technology advances and prices drop, robots become more multifunctional and, to an extent, autonomous.

Progress Level 5: Though crude automata have existed before this era, PL 5 is the widely accepted dawn of robotics, due to the development of the programmable manipulator arm in 1954. The field rapidly advanced, hand in hand with computer technology, until a crude form of artificial intelligence allowed for the creation of robots with the ability to solve basic problems on their own. Such robots are still generally confined to military and scientific applications, but simple, programmable robots are available as high-tech "toys." Humanoid robots exist, though they qualify only by dint of their general shape; robots in the shape of animals are also common.

Progress Level 6: The versatility of robots continues to improve throughout this Progress Level. Robots can make choices from among a multitude of options, and specific components like legs and hands become more commonplace. Emergency services routinely use specialized robots to handle dangerous situations, and many households include "smart" appliances that cook, clean, patrol,

and even babysit. In some cultures, robots are more common than pets. Truly bipedal robots finally become feasible for widespread use, paving the way for the first androids—robots that resemble and behave more or less like humans (or animals), but which are still easily distinguishable from the real thing.

Progress Level 7: Robots have become so common by this era that they appear in nearly every sector of daily life. Robots teach schoolchildren, maintain hazardous equipment, and fight wars. Miniature electroflex technology—artificial muscles—arrives, paving the way for the first lifelike androids. Bioreplica robots are in limited use, however; they raise so many legal questions that most manufacturers stick to the more easily identifiable non-replica androids. The legal ramifications do not extend to animal bioreplicas, however, and "synthetic pets" are both common and popular.

Progress Level 8: Advances in metallurgy enable robotics designers to create "liquid-state" robots: machines that can alter their physical form into nearly any shape desired. Applications involving such robots are mostly confined to space exploration, but the military and intelligence communities show great interest.

ROBOTS AS HEROES

This section presents two types of anthropomorphic robots that can be played as heroes: the *biodroid* (more commonly referred to as an "android") and the *bioreplica* (also known as a "synthetic"). Although neither is truly sentient, their artificial intelligence allows them to make independent decisions and learn through experience. Biodroids are present in societies with technology of Progress Level 6 or higher, while bioreplicas are products of Progress Level 7 ingenuity.

A biodroid or bioreplica hero begins play as a 1st-level Strong, Fast, Tough, Smart, Dedicated, or Charismatic hero. Whereas other robots may only advance as Ordinary characters, biodroid and bioreplica heroes gain levels just as human characters do. They may even choose to take levels in advanced classes for which they're eligible.

There are advantages and drawbacks to playing a biodroid or bioreplica hero; these are discussed in-depth below.

BIODROID ("ANDROID")

Biodroids exist in societies of Progress Level 6 or higher. They are typically modeled after their anthropomorphic creators, such that human biodroids look like humans, vrusk biodroids look like vrusk, and so on. The technology that creates them is so versatile that virtually any living creature (except oozes and plants) can be emulated, at least in terms of movement and behavior. Under certain conditions, a biodroid can be mistaken for what it was made to resemble. However, reasonably close inspection of the biodroid reveals the presence of robotic parts in place of biological parts.

Some biodroids are built to serve their masters, while others are sold to interested buyers looking for loyal servants. As utilities, their usefulness is boundless, and most biodroids are content to perform their assigned duties without question. Biodroids make able security guards, couriers, gardeners, shuttle pilots, expendable soldiers, and even nannies.

Much to the chagrin of their creators, some biodroids are not content to serve. Perhaps due to some flaw in their construction, they choose to pursue a different path and strive to gain experiences that will lend meaning to their existence. Although some agencies have an interest in capturing and demolishing free-willed biodroids, most societies in general have greater concerns to worry about. Consequently, many freethinking biodroids are given a chance to chase their dreams ... if one assumes they even have them.

BIODROID TRAITS

Biodroids are constructs. They also share the following traits:

Size: Same as the emulated species, although only Small and Medium-size biodroids may be selected as player characters.

Speed: A biodroid has the same means of locomotion and speed as its emulated species (base speed 30 feet for human biodroids).

Ability Scores: A heroic biodroid has no Constitution score and a starting Charisma score of 5. To determine its remaining ability scores, roll 4d6 four times and discard the lowest die result each time to generate scores between 3 and 18, then apply the ability score modifiers of its emulated species (none for human biodroids).

Instead of randomly determining ability scores, a player may use a preset array—14, 13, 12, 10—and assign these scores to Strength, Dexterity, Intelligence, and Wisdom as he or she sees fit. Once the scores have been assigned, apply ability modifiers (if any) based on the robot's emulated species.

Biodroids can improve their mental abilities (Intelligence, Wisdom, and Charisma) at 4th level and every four levels thereafter (just as organic heroes do), but not their physical abilities (Strength and Dexterity).

Starting Occupation: Biodroids never get starting occupations. Starting occupations represent life experiences gained before becoming a hero, but robots have no such life experiences.

Hit Points: Regardless of class, a biodroid gains 1d10 hit points per level. At character creation, a 1st-level biodroid gets maximum hit points (10). It does not apply a Constitution modifier to its hit points but gains additional hit points at 1st level based on its size: Small 5, Medium-size 10. (For other sizes, see Table 8–5: Constructs on page 219 of the *d20 Modern Roleplaying Game*.)

Armor: A biodroid hero can wear a suit of armor or have certain types of integrated armor attached to its frame (see Armor, page 183).

Critical Systems: Although they are constructs, biodroids have vital areas and critical systems. Consequently, they are subject to critical hits.

Cybernetic Incompatibility: A biodroid cannot be fitted with cybernetic attachments.

Immunities: Biodroids are immune to mind-influencing effects, poison, sleep, paralysis, stunning, disease, necromancy effects, and any effect that requires a Fortitude save unless the effect also works on objects or is harmless. They are not subject to nonlethal damage, ability damage, ability drain (except as noted under Destruction/Restoration, below), energy drain, or the effects of massive damage. They cannot be raised from the dead (but again, see below).

Lifelike Appearance: Distinguishing a biodroid from members of its emulated species requires a successful Spot check (DC 10). It can use the Disguise skill to increase the Spot check DC (see the skill's description on page 59 of the *d20 Modern Roleplaying Game*).

Manipulators: The manipulators of a biodroid resemble the organic manipulating digits of its emulated species (a humanlike biodroid has humanlike hands, for example). These manipulators otherwise function identically to their organic counterparts.

Rejuvenation Cycle: A biodroid runs on energy cells that need to rejuvenate regularly. During a 24-hour period, it must shut down for 8 hours to replenish its energy supply. During its rejuvenation cycle, the biodroid is essentially asleep. If it fails to rejuvenate, it suffers a cumulative –1 penalty on attack rolls, ability checks, skill checks, and saving throws each day until it fully recharges itself.

Repairable: Biodroids cannot heal damage on their own but can be repaired using the Repair skill. A successful Repair check (DC 30) heals 1d10 points of damage to a biodroid, and each check represents 1 hour of work.

Robot Resurrection: A biodroid reduced to 0 hit points is immediately destroyed and cannot be repaired, although its "brain" may be removed and installed in an similar but intact frame. See the Robot Resurrection sidebar for details.

Sensors: A biodroid hero begins play with a Class IV sensor system. For more information on robot sensor systems, see Sensors (page 184).

Skills: A biodroid gains and assigns skill points as other nonhuman characters do. It uses its Charisma modifier on Constitution-based skill checks (including Concentration checks).

Free Language Skills: A biodroid can read, write, and speak one language.

Feats: A biodroid receives no feats at 1st level. However, it gains feats normally as it advances in level.

Action Points: A biodroid hero gains action points just as organic heroes do.

Height and Weight: A biodroid has the same height range as its biological counterpart. Its weight, however, is equal to 1.5 × the normal weight of its biological counterpart.

Level Adjustment: +0.

BIOREPLICA ("SYNTHETIC")

Bioreplicas exist in societies of Progress Level 7 or higher. These anthropomorphic robots, modeled after their creators in most instances, are so convincingly lifelike that they are virtually indistinguishable from their biological counterparts. A bioreplica's components are made up of lightweight plastics in a synthetic sheath that looks and feels like real flesh and skin. Bioreplicas are so lifelike that their fabrication and distribution are strictly regulated. Most bioreplicas are built for military needs, and they are frequently put to use as disposable soldiers, scouts, and spies. A few synthetics find roles in law enforcement and military-funded scientific expeditions.

A bioreplica's artificial intelligence is so sophisticated and finely calibrated that it can simulate subtle facial expressions or complex emotions. It learns and adapts quickly, so much so that organic beings find it easy to mistake the artificial intelligence for biological intuition.

Although freethinking synthetics are hunted down in societies that feel threatened by robots with autonomy, other "enlightened" cultures prefer to treat bioreplicas with the same rights afforded to sentient biological species. Regardless of how everyone else perceives them, bioreplicas are generally more interested in finding answers to the big questions plaguing their synthetic existence, such as what it means to be sentient and what happens to a bioreplica after it "dies."

BIOREPLICA TRAITS

Bioreplicas are constructs. They also share the following traits:

Size: Same as emulated species, although only Small and Medium-size bioreplicas may be selected as player characters.

Speed: A bioreplica has the same means of locomotion and speed as its emulated species (base speed 30 feet for human bioreplicas).

Ability Scores: A heroic bioreplica has no Constitution score and a starting Charisma score of 10. To determine its remaining ability scores, roll 4d6 four times and discard the lowest die result each time to generate scores between 3 and 18, then apply the ability score modifiers of its emulated species (none for human bioreplicas).

Instead of randomly determining ability scores, a player may use a preset array—14, 13, 12, 10—and assign these scores to Strength, Dexterity, Intelligence, and Wisdom as he or she sees fit. Once the scores have been assigned, apply ability modifiers (if any) based on the robot's emulated species.

Bioreplicas can improve their mental abilities (Intelligence, Wisdom, and Charisma) at 4th level and every four levels thereafter (just as organic heroes do), but not their physical abilities (Strength and Dexterity).

Starting Occupation: Bioreplicas never get starting occupations. Starting occupations represent life experiences gained before becoming a hero, but robots have no such life experiences.

Hit Points: Regardless of class, a bioreplica gains 1d10 hit points per level. At character creation, a 1st-level bioreplica gets maximum hit points (10). It does not apply a Constitution modifier to its hit points but gains additional hit points at 1st level based on its size: Small 5, Medium-size 10. (For other sizes, see Table 8–5: Constructs on page 219 of the *d20 Modern Roleplaying Game*.)

Armor: A bioreplica modeled after a creature with natural armor does not gain the creature's natural armor bonus.

Critical Systems: Although they are constructs, bioreplicas have vital areas and critical systems. Consequently, they are subject to critical hits.

Cybernetic Incompatibility: A bioreplica cannot be fitted with cybernetic attachments.

Immunities: Bioreplicas are immune to mind-influencing effects, poison, sleep, paralysis, stunning, disease, necromancy effects, and any effect that requires a Fortitude save unless the effect also works on objects or is harmless. They are not subject to nonlethal damage, ability damage, ability drain (except as noted under Destruction/Restoration, below), energy drain, or the effects of massive damage. They cannot be raised from the dead (but again, see below).

Lifelike Appearance: Distinguishing a bioreplica from members of its emulated species requires a successful Spot check (DC 20). It can use the Disguise skill to increase the Spot check DC (see the skill's description on page 59 of the *d20 Modern Roleplaying Game*).

Manipulators: The manipulators of a bioreplica resemble the organic manipulating digits of its emulated species (a humanlike bioreplica has humanlike hands, for example). These manipulators otherwise function identically to their organic counterparts.

Rejuvenation Cycle: A bioreplica runs on energy cells that need to rejuvenate regularly. During a 24-hour period, it must shut down for 8 hours to replenish its energy supply. During its rejuvenation cycle, the bioreplica is essentially asleep. If it fails to rejuvenate, it suffers a cumulative –1 penalty on attack rolls, ability checks, skill checks, and saving throws each day until it fully recharges itself.

Repairable: Bioreplicas cannot heal damage on their own but can be repaired using the Repair skill. A successful Repair check (DC 30) heals 1d10 points of damage to a bioreplica, and each check represents 1 hour of work.

Robot Resurrection: A bioreplica reduced to 0 hit points is immediately destroyed and cannot be repaired, although its "brain" may be removed and installed in an similar but intact frame. See the Robot Resurrection sidebar for details.

Sensors: A bioreplica hero begins play with a Class VII sensor system. For more information on robot sensor systems, see Sensors (page 184).

Skills: A bioreplica gains and assigns skill points as other nonhuman characters do. It uses its Charisma modifier on Constitution-based skill checks (including Concentration checks).

Free Language Skills: A bioreplica can read, write, and speak one language.

Feats: A bioreplica receives no feats at 1st level. However, it gains feats normally as it advances in level.

Action Points: A bioreplica hero gains action points just as organic heroes do.

Height and Weight: A bioreplica has the same height range as its biological counterpart. Its weight, however, is equal to 1.5 × the normal weight of its biological counterpart.

Level Adjustment: +0.

NONHEROIC ROBOTS

Most robots exist to perform mundane, routine, or dangerous tasks without argument or ambition. Except for biodroids and bioreplicas with heroic class levels, all robots are treated as constructs and share the general traits outlined below.

Nonheroic robots don't get class levels. However, they can receive factory-installed skill and feat software, allowing them to emulate specific skills and feats as part of their programming (see Skill Software, page 185, and Feat Software, page 186).

GENERAL ROBOT TRAITS

As constructs, robots share the following traits that set them apart from organic beings:

Hit Die: d10.

Base Attack Bonus: 3/4 of total Hit Dice.

Good Saving Throws: None.

Skill Points: None.

Feats: None.

Starting Occupation: Robots never get starting occupations. Starting occupations represent life experiences gained before acquiring 1st level. Robots have no life experiences before rolling off the assembly line; before then, they were nothing but parts.

Weapon and Armor Proficiency: Robots are proficient with their manipulators only. They are not proficient with armor.

Ability Scores: Robots have no Constitution score and usually no Intelligence score. A robot's size and frame determines its ability scores, as shown on Tables 10–1 to 10–5.

Extra Hit Points: Robots gain extra hit points according to their size, as shown on Tables 10–1 to 10–5.

Manipulators: A robot typically has two functioning manipulators, although Large or bigger robots can have a higher number of functioning manipulators based on their size (see Manipulators, page 181).

Immunities: As constructs, robots are immune to mind-influencing effects, poison, sleep, paralysis, stunning, disease, necromancy effects, and any effect that requires a Fortitude save unless the effect also works on objects or is harmless. They are not subject to nonlethal damage, ability damage, ability drain, energy drain, or the effects of massive damage.

Robots with armature, biomorph and liquid-state frames are not subject to critical hits. Biodroids and bioreplicas, like the creatures they imitate, have vital areas and critical systems that can be attacked; consequently, they are susceptible to critical hits.

Repairable: Robots cannot heal damage on their own but can be repaired using the Repair skill. A successful Repair check (DC 30) heals 1d10 points of damage to a robot, and each check represents 1 hour of work.

Robot Resurrection: A robot reduced to 0 hit points is immediately destroyed and cannot be repaired, although its "brain" may be removed and installed in an similar but intact frame. See the Robot Resurrection sidebar for details.

Weight: A robot is generally heavier than an organic creature of similar size. When estimating a robot's weight, use Table 8–1: Creature Sizes on page 217 of the *d20 Modern Roleplaying Game*, but multiply the listed weight by 1.5.

ROBOT RESURRECTION

A robot's core programming and experiences are contained within its central processor—its brain. The brain's "drive to survive" is determined by its force of personality, as represented by the robot's Charisma.

Whenever a robot is destroyed (reduced to 0 or fewer hit points), some brain degradation occurs. Each time its body is destroyed, the robot suffers a permanent drain of 1 point of Charisma. The brain ceases to function and the robot "dies" if its Charisma drops to 0 as the result of a permanent ability drain.

If a robot has at least 1 point of Charisma left after its body is destroyed, its brain can be removed and transplanted into another robot of the same size and frame. Removing a robot's brain from a destroyed frame and installing it in a similar but intact frame requires 10 minutes of work, a mechanical tool kit, and a successful Repair check; the Repair check DC varies by frame type (see below). Not using a tool kit imposes a –4 penalty on the Repair check.

A robot that gains a new body retains the memories of its previous "life," as well as any previously installed skill software (see page 185) and feat software (see page 186). It also retains any previously installed mental ability score upgrades (see Ability Upgrades, page 187). It does not retain the previous frame's armor, locomotive means, manipulators, sensors, physical ability score upgrades, accessories, or mounted weapons, as these were all destroyed.

Robot Frame	Repair Check DC
Armature or Biomorph	20
Biodroid	30
Bioreplica	40
Liquid-State	50

ROBOT FRAMES

A robot's frame is the basic form the robot takes, from a simple barebones armature to a convincingly lifelike replica or metallic liquid. It includes both the robot's chassis and its internal power source.

The frame determines a robot's base statistics and base purchase DC, as shown on Tables 10–1 to 10–5.

Frame Size: The size of the frame, which determines the robot's base purchase DC, base Hit Dice, and ability scores.

Base Purchase DC: The purchase DC of the frame (or its components). The base purchase DC does not include the cost of accessories (modes of locomotion, manipulators, armor, sensors, or equipment) or increased Hit Dice.

Base Hit Dice: The robot's Hit Dice, not counting any additional Hit Dice that may be added (see below).

Extra Hit Points: Additional hit points gained due to the robot's size.

Base Ability Scores: The robot's ability scores, before improvements. Robots that do not have Constitution or Intelligence scores cannot improve these abilities.

Maximum Hit Dice/Purchase DC Modifier: The maximum Hit Dice the robot can have, and the amount by which the robot's purchase DC increases for each Hit Die added to its base Hit Dice. A dash (—) indicates that the robot cannot have its Hit Dice increased.

ARMATURE (PL 5)

The most basic of robot designs, armatures are essentially mechanical skeletons.

TABLE 10–1: ARMATURE ROBOT FRAMES (PL 5)

Robot Size	Base Purchase DC	Base Hit Dice	Extra Hit Points	Base Ability Scores						Maximum Hit Dice/ Purchase DC Modifier
				Str	Dex	Con	Int	Wis	Cha	
Colossal	44	32d10	120	47	6	—	—	10	1	64d10/+3 per HD
Gargantuan	36	16d10	80	39	6	—	—	10	1	31d10/+3 per HD
Huge	28	8d10	40	31	6	—	—	10	1	15d10/+2 per HD
Large	24	2d10	20	23	8	—	—	10	1	7d10/+1 per HD
Medium-size	20	1d10	10	15	10	—	—	10	1	—
Small	16	1/2d10	5	11	12	—	—	10	1	—
Tiny	12	1/4d10	—	7	14	—	—	10	1	—
Diminutive	8	1/8d10	—	5	16	—	—	10	1	—
Fine	4	1/16d10	—	1	18	—	—	10	1	—

TABLE 10–2: BIOMORPH ROBOT FRAMES (PL 5)

Robot Size	Base Purchase DC	Base Hit Dice	Extra Hit Points	Base Ability Scores						Maximum Hit Dice/ Purchase DC Modifier
				Str	Dex	Con	Int	Wis	Cha	
Colossal	48	32d10	120	46	6	—	—	10	1	64d10/+3 per HD
Gargantuan	40	16d10	80	38	6	—	—	10	1	31d10/+3 per HD
Huge	32	8d10	40	30	6	—	—	10	1	15d10/+2 per HD
Large	28	2d10	20	22	8	—	—	10	1	7d10/+1 per HD
Medium-size	24	1d10	10	14	10	—	—	10	1	—
Small	20	1/2d10	5	10	12	—	—	10	1	—
Tiny	16	1/4d10	—	6	14	—	—	10	1	—
Diminutive	12	1/8d10	—	4	16	—	—	10	1	—
Fine	8	1/16d10	—	1	18	—	—	10	1	—

To build an armature frame from scratch, a character must succeed at a Craft (mechanical) check (DC 20) after investing time in the frame's construction: 12 hours for a Tiny or smaller frame, 24 hours for a Small to Large frame, or 48 hours for a Huge or larger frame. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the frame's purchase DC.

Table 10–1: Armature Robot Frames provides the base purchase DC, Hit Dice, and ability scores for factory-model armature robots, as well as purchase DC modifiers for improving ability scores.

Immunities: Robots with armature frames have all the normal construct immunities, including immunity to critical hits.

Restriction: None.



BIOMORPH (PL 5)

A biomorph frame is essentially a hard plastic or metallic casing, often in a shape that suggests a living creature—for example, a human, dog, cat, or chimpanzee—though the resemblance is vague, at best.

To build a biomorph frame from scratch, a character must succeed at a Craft (mechanical) check (DC 25) after investing time in the frame's construction: 24 hours for Large or smaller frame or 72 hours for a Huge or larger frame. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the frame's purchase DC.

Table 10–2: Biomorph Robot Frames provides the base purchase DC, Hit Dice, and ability scores for factory-model biomorph robots, as well as purchase DC modifiers for improving ability scores.

Immunities: Robots with biomorph frames have all the normal construct immunities, including immunity to critical hits.

Restriction: None.

TABLE 10–3: BIODROID ROBOT FRAMES (PL 6)

Robot Size	Base Purchase DC	Base Hit Dice	Extra Hit Points	Base Ability Scores Str	Dex	Con	Int	Wis	Cha	Maximum Hit Dice/ Purchase DC Modifier
Colossal	48	32d10	120	44	7	—	10	10	5	45d10/+4 per HD
Gargantuan	40	16d10	80	36	7	—	10	10	5	31d10/+3 per HD
Huge	32	8d10	40	28	7	—	10	10	5	15d10/+2 per HD
Large	28	2d10	20	20	9	—	10	10	5	7d10/+1 per HD
Medium-size	24	1d10	10	12	11	—	10	10	5	—
Small	20	1/2d10	5	8	13	—	10	10	5	—
Tiny	16	1/4d10	—	4	15	—	10	10	5	—
Diminutive	12	1/8d10	—	2	17	—	10	10	5	—
Fine	8	1/16d10	—	1	19	—	10	10	5	—

TABLE 10–4: BIOREPLICA ROBOT FRAMES (PL 7)

Robot Size	Base Purchase DC	Base Hit Dice	Extra Hit Points	Base Ability Scores Str	Dex	Con	Int	Wis	Cha	Maximum Hit Dice/ Purchase DC Modifier
Colossal	52	32d10	120	44	7	—	10	10	10	45d10/+4 per HD
Gargantuan	44	16d10	80	36	7	—	10	10	10	31d10/+3 per HD
Huge	36	8d10	40	28	7	—	10	10	10	15d10/+2 per HD
Large	32	2d10	20	20	9	—	10	10	10	7d10/+1 per HD
Medium-size	28	1d10	10	12	11	—	10	10	10	—
Small	24	1/2d10	5	8	13	—	10	10	10	—
Tiny	20	1/4d10	—	4	15	—	10	10	10	—
Diminutive	16	1/8d10	—	2	17	—	10	10	10	—
Fine	12	1/16d10	—	1	19	—	10	10	10	—

BIODROID (PL 6)

Biodroids are a step up from biomorphs, in that they can be mistaken, under certain conditions, for what they are made to resemble. However, reasonably close inspection reveals the presence of robotic parts and the lack of biological parts. Purchasing a factory-model biodroid requires a license.

To build a biodroid frame from scratch, a character must succeed at two skill checks—a Craft (mechanical) check (DC 30) and a Craft (electronic) check (DC 30). These checks are made after investing time in the frame's construction: 48 hours for a Large or smaller frame or 72 hours for a Huge or larger frame. A character without a mechanical tool kit or electrical tool kit takes a –4 penalty on the skill check (–8 if the character has neither). The character must also make a Wealth check against the frame's purchase DC.

Table 10–3: Biodroid Robot Frames provides the base purchase DC, Hit Dice, and ability scores for factory-model biodroid robots, as well as purchase DC modifiers for improving ability scores.

Critical Systems: Although they are constructs, biodroids have vital areas and critical systems. Consequently, they are subject to critical hits.

Lifelike Appearance: Distinguishing a biodroid from members of its emulated species requires a successful Spot check (DC 10). A biodroid can use the Disguise skill to increase the Spot check DC (see the skill's description on page 59 of the *d20 Modern Roleplaying Game*).

Restriction: Licensed (+1).

BIOREPLICA (PL 7)

A step up from biodroids, bioreplicas are robots so convincingly lifelike that they are virtually indistinguishable from their living counterparts. The bioreplica's components are made up of lightweight plastics in a synthetic sheath that looks and feels like real flesh and skin. Bioreplicants are restricted, and in some areas, buying or owning one is illegal.

To build a bioreplica frame from scratch, a character must succeed at two skill checks—a Craft (mechanical) check (DC 30) and a Craft (electronic) check (DC 30). These checks are made after investing time in the frame's construction: 48 hours for a Large or smaller frame or 72 hours for a Huge or larger frame. A character without a mechanical tool kit or electrical tool kit takes a –4 penalty on the skill check (–8 if the character has neither). The character must also make a Wealth check against the frame's purchase DC.

Table 10–4: Bioreplica Robot Frames provides the base purchase DC, Hit Dice, and ability scores for factory-model bioreplica robots, as well as purchase DC modifiers for improving ability scores.

Critical Systems: Although they are constructs, bioreplicas have vital areas and critical systems. Consequently, they are subject to critical hits.

Lifelike Appearance: Distinguishing a bioreplica from members of its emulated species requires a successful Spot check (DC 20). A bioreplica can use the Disguise skill to increase the Spot check DC (see the skill's description on page 59 of the *d20 Modern Roleplaying Game*).

Restriction: Restricted (+2) or Illegal (+4).

LIQUID-STATE (PL 8)

The liquid-state robot is a mass of metal alloy resembling liquid mercury. It contains a molecular network of subprocessors that interpret the central processor's instructions to form a nearly endless variety of shapes. The liquid metal can emulate radically different densities within the same form, meaning that the robot can feel like flesh on the outside, but be as solid as stone on the inside. Being able to assume different forms does not allow the robot to duplicate appearances or abilities; a liquid-state robot cannot change its color any more than it can breathe fire. For example, if it assumes the shape of a human, the robot would appear to be a human made of metal. Furthermore, a liquid-state robot is limited to the quality of its own components. A liquid-state robot equipped with a rotor for locomotion cannot simply change shape and acquire a pair of legs, for example; any change must be of the same Progress Level or lower. A liquid-state robot can, however, reattach separated components.

TABLE 10–5: LIQUID-STATE ROBOT FRAMES (PL 8)

Robot Size	Base Purchase DC	Base Hit Dice	Extra Hit Points	Base Ability Scores Str	Dex	Con	Int	Wis	Cha	Maximum Hit Dice/ Purchase DC Modifier
Colossal	56	32d10	120	45	8	—	10	11	10	40d10/+3 per HD
Gargantuan	48	16d10	80	37	8	—	10	11	10	32d10/+3 per HD
Huge	40	8d10	40	29	8	—	10	11	10	24d10/+2 per HD
Large	36	4d10	20	23	10	—	10	11	10	16d10/+2 per HD
Medium-size	32	2d10	10	13	12	—	10	11	10	8d10/+1 per HD
Small	28	1d10	5	9	14	—	10	11	10	—
Tiny	24	1/2d10	—	5	16	—	10	11	10	—
Diminutive	20	1/4d10	—	3	18	—	10	11	10	—
Fine	16	1/8d10	—	1	20	—	10	11	10	—

To build a liquid-state "frame" from scratch, a character must succeed at two skill checks—a Craft (mechanical) check (DC 30) and a Craft (electronic) check (DC 30). These checks are made after investing 96 hours the frame's construction. A character without a mechanical tool kit or electrical tool kit takes a –4 penalty on the skill check (–8 if the character has neither). The character must also make a Wealth check against the frame's purchase DC.

Table 10–5: Liquid-State Robot Frames provides the base purchase DC, Hit Dice, and ability scores for factory-model liquid-state robots, as well as purchase DC modifiers for improving ability scores.

Natural Armor: A liquid-state robot gains a +5 natural armor bonus to Defense.

Attacks: A liquid-state robot, regardless of its form, has two appendages (treat as natural weapons) with which it can attack each round. It can shape these appendages into various crude weapons as a free action; depending on their shape, one or both weapons can deal bludgeoning, piercing, or slashing damage. The robot's size determines the amount of damage these appendages deal: Fine 1, Diminutive 1d2, Tiny 1d3, Small 1d4, Medium-size 1d6, Large 1d8, Huge 2d6, Gargantuan 2d8, Colossal 4d6.

Amorphous Form (Ex): Because a liquid-state robot can alter its shape and density, it gains a +10 bonus on Escape Artist checks.

Fast Healing (Ex): A liquid-state robot has fast healing 10. This ability ceases to function when the robot is destroyed (reduced to 0 or fewer hit points).

Fire Vulnerability: A liquid-state robot takes 50% more damage from any fire-based attack.

Immunities: Robots with liquid-state frames have all the normal construct immunities, including immunity to critical hits.

Restriction: Military (+3).

LOCOMOTION

How a robot moves is determined by its means locomotion. Most robots have only one means of locomotion, each of which comes with its own advantages and disadvantages, as shown below.

To build a mode of locomotion from scratch, a character must succeed at a Craft (mechanical) check (DC 25) after investing 24 hours in its construction. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the purchase DC for the given mode of locomotion.

Base Speed: Each mode of locomotion has a base speed. This speed can be improved, but each 5-foot increase in speed also increases the purchase DC by +1. The base speed can never be increased more than double the listed amount; for example, a robot with multiple legs has a normal base speed of 30 feet and a maximum base speed of 60 feet.

Purchase DC: The cost of the components necessary to grant the robot this particular mode of locomotion. This cost is always a fraction of the base purchase DC of the robot's frame (see Frame, above).

ASIMOV'S LAWS OF ROBOTICS

In his novel *I, Robot* (1942), Russian-born science fiction writer Isaac Asimov posited that the development of robotics would have to include a series of interconnected programming laws designed to keep robots from harming their human masters. The "Three Laws of Robotics" were:

1. A robot may not injure a human being, or, through inaction, allow a human being to come to harm.
2. A robot must obey the orders given it by human beings, except where such orders would conflict with the First Law.
3. A robot must protect its own existence, except where such protection would conflict with the First or Second Law.

Asimov later reconsidered and added a fourth law, widely referred to as the "Zeroth Law."

0. A robot may not injure humanity, or, through inaction, allow humanity to come to harm.

Many science fiction writers since have referred to Asimov's Laws of Robotics in their own works, but the laws are actually both unrealistic and simplistic (though of course they are only considered to be humanistic explanations of the actual programming the robots receive). Certainly, they do not fit in with the history of the development of neural networks and artificial intelligence. (The crude AIs that already exist in the modern day have no such programming, for example.)

Instead of Asimov's Laws, the future of robotics might more accurately include core programming designed to give a robot a basic grasp of ethics, morality, and consequences (each of which is, of course, somewhat subjective). Supplied with an understanding of these concepts, the average robot of the future should easily be just as ethical, moral, and aware of consequences as the average human being. Some could be better, some could be worse, but none are likely to have programming that prevents them from acting (or not acting) as they see fit.

Of course, when a robot sees fit to inflict harm on human beings, or to stand by when human beings are harmed, responsibility for the robot's decisions is more likely to fall squarely on the shoulders of the robot's programmers and owners—much like responsibility falls on the owner of a particularly vicious dog that attacks and injures someone.

FORCED AIR (PL 5)

The robot takes in air through a vent and forces it out beneath itself, allowing it to hover about an inch off the ground. It handles poorly and moves at half speed over poor surface conditions.

Base Speed: Fly 30 feet (clumsy).

Purchase DC: One-half the base purchase DC of the robot's frame.

LEGS (MULTIPLE) (PL 5)

The robot has three or more mechanical legs that allow it to walk, after a fashion. The robot moves at half speed when navigating obstructions, stairs, or poor surface conditions.

Only robots equipped with legs can jump.

Base Speed: 30 feet.

Purchase DC: One-half the purchase DC of the robot's frame.

PROPELLER (AIR) (PL 5)

The robot has a propeller for air travel. It cannot travel on land without another mode of locomotion. If for some reason the robot's speed drops below its base speed during any given round, it falls.

Base Speed: Fly 40 feet (clumsy).

Purchase DC: One-quarter the purchase DC of the robot's frame.

PROPELLER (WATER) (PL 5)

The robot has one or more propellers for water travel. It cannot travel on land without another mode of locomotion.

Base Speed: Swim 20 feet.

Purchase DC: One-quarter the base purchase DC of the robot's frame.

ROTOR (PL 5)

The robot is equipped with a rotor, like a helicopter's. It doesn't move as quickly as a robot equipped with an air propeller, but it can hover without falling.

Base Speed: Fly 30 feet (poor).

Purchase DC: One-quarter the base purchase DC of the robot's frame.

STATIONARY (PL 5)

The robot cannot move at all. It is most likely bolted or otherwise secured in place. Factory robots are usually stationary.

Base Speed: 0 feet. (This speed cannot be improved.)

Purchase DC: Not applicable. (This cost is included in the robot's base purchase DC.)

TRACK (PL 5)

The robot follows a preset track and cannot deviate from that course. If the robot is somehow separated from the track, it becomes effectively stationary. The robot can maneuver over an obstacle only if the track leads over the obstacle, but if something obstructs the track, the robot comes to a halt.

Base Speed: 10 feet.

Purchase DC: One-tenth the base purchase DC of the robot's frame (rounded down).

TREADS (PL 5)

The robot is equipped with a pair of tanklike treads that allow it to roll along over most terrain without significant difficulties. It can negotiate reasonably shallow steps, but stairs are beyond its abilities.

Robots with treads cannot jump or swim.

Base Speed: 20 feet.

Purchase DC: One-quarter the base purchase DC of the robot's frame.

WHEELS (PL 5)

Wheels are somewhat more effective than treads on level ground, but the robot moves at half speed when navigating poor surface conditions. Most wheeled robots have four, six, or eight wheels.

Robots with wheels cannot jump or swim.

Base Speed: 30 feet.

Purchase DC: One-half the base purchase DC of the robot's frame.

CASTERS (PL 6)

The robot moves about on spherical wheels, or casters. These are somewhat more efficient than wheels and enable the robot to change direction easily.

Robots with casters cannot jump or swim.

Base Speed: 20 feet.

Purchase DC: One-quarter the base purchase DC of the robot's frame.

LEGS (PAIR) (PL 6)

The robot is bipedal, walking on two legs as well as a human.

Only robots equipped with legs can jump.

Base Speed: 20 feet.

Purchase DC: One-half the base purchase DC of the robot's frame.

THRUSTER (PL 7)

Thrusters use a miniature impulse engine to produce a stream of high-energy particles, contained and directed by magnetic fields. The exhaust is hot, but not dangerously so. Thrusters enable the robot to fly and hover.

Base Speed: Fly 30 feet (poor).

Purchase DC: One-half the base purchase DC of the robot's frame.

INDUCTOR (PL 8)

Induction engine technology allows the robot to move about on a thin cushion of artificial gravity. The thrust does not enable the robot to corner quickly, but it can hover and float above liquid surfaces (including water).

Base Speed: 30 feet.

Purchase DC: One-half the base purchase DC of the robot's frame.

MANIPULATORS

Without some kind of manipulating appendage, robots cannot lift or move objects. Manipulators can be as crude as a simple probe or as complex as a five-fingered hand.

A Medium-size or smaller robot may have up to two functioning manipulators. Larger robots may be equipped with a greater number of functioning manipulators, as determined by their size:

Robot's Frame Size	Manipulators
Medium-size or smaller	Up to 2
Large	Up to 4
Huge or larger	Up to 8

To build a manipulator from scratch, a character must succeed at a Craft (mechanical) check (DC 25) after investing 24 hours in its



Robot Sentry

construction. A character without a mechanical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the manipulator's purchase DC.

Mastercraft robot manipulators can be fashioned using the Mastercrafter feat (see page 12).

Size: A manipulator, as an object, is usually two size categories smaller than the robot for which it's designed; for example, a hand designed for a Medium-size robot can be considered a Tiny object. A manipulator's size is usually important only for portability and concealment purposes.

Damage: Robots can use their manipulators as melee weapons, dealing piercing, slashing, or bludgeoning damage based on the type of manipulator and the robot's size (see Table 10–6: Manipulator Damage). Some types of manipulators deal nonlethal damage only.

Purchase DC: The cost of each manipulator. This cost is always a fraction of the base purchase DC of the robot's frame (see Frame, above).

CLAW (PL 5)

Claws resemble pincers, but the opposed surfaces cover the length of the appendage. Claws suffer the same handicaps as pincers when attempting tasks involving manual dexterity, but they deal greater damage.

Damage: Lethal slashing or nonlethal bludgeoning.

Purchase DC: 10 + one-quarter the base purchase DC of the robot's frame.

JAWS (PL 5)

Only robots modeled after creatures with bite attacks have jaws. Robotic jaws are essentially large clamps with teeth.

Damage: Lethal piercing.

Purchase DC: 10 + one-quarter the base purchase DC of the robot's frame.

PINCER (PL 5)

A pincer is a two-fingered, clawlike appendage that focuses all the grip strength on a pair of opposed surfaces, rather like a pair of tongs. Pincers allow the robot to manipulate and lift objects without much difficulty, but objects specifically made for humanoid hands (like firearms) are usually beyond the pincers' ability to operate. At the GM's discretion, tasks involving manual dexterity suffer a –4 penalty for a robot equipped with pincers.

Damage: Lethal piercing or nonlethal bludgeoning.

Purchase DC: 5 + one-quarter the base purchase DC of the robot's frame.

PROBE (PL 5)

Similar to a special-use gripper, a probe is simply an instrument of some kind, meant to measure torque, temperature, or some other factor. If the robot attempts to manipulate or lift an object with a probe, it takes a –4 penalty on the check.

Damage: Lethal piercing or nonlethal bludgeoning.

Purchase DC: 5 + one-tenth the base purchase DC of the robot's frame (rounded down).

SPECIAL-USE GRIPPER (PL 5)

The robot has a manipulator designed for a specific task. When the robot uses a special-use gripper for a task other than its intended task, the robot suffers a –4 penalty on the check if the check involves manual strength or dexterity.

Damage: Nonlethal bludgeoning only.

Purchase DC: 5 + one-tenth the base purchase DC of the robot's frame (rounded down).

HAND (PL 6)

A hand is a step up from a claw, in that it has more digits—usually three or four, total. Hands are a bit more adaptable as well,

TABLE 10–6: MANIPULATOR DAMAGE

	Robot Size								
Manipulator Type	Fine	Diminutive	Tiny	Small	Medium-size	Large	Huge	Gargantuan	Colossal
Advanced Hand [1]	—	—	1	1d2	1d3	1d4	1d6	1d8	2d6
Claw	—	1	1d2	1d3	1d4	1d6	1d8	2d6	2d8
Hand [1]	—	—	1	1d2	1d3	1d4	1d6	1d8	2d6
Jaws	—	1	1d2	1d3	1d4	1d6	1d8	2d6	2d8
Pincer	—	—	1	1d2	1d3	1d4	1d6	1d8	2d6
Probe	—	—	—	1	1d2	1d3	1d4	1d6	1d8
Special-Use Gripper [1]	—	—	1	1d2	1d3	1d4	1d6	1d8	2d6
Task Hand [1]	—	—	1	1d2	1d3	1d4	1d6	1d8	2d6

1 This type of manipulator deals nonlethal damage only.

imposing only a –2 penalty when attempting tasks involving manual dexterity.

Damage: Nonlethal bludgeoning only.

Purchase DC: 10 + one-quarter the base purchase DC of the robot's frame.

ADVANCED HAND (PL 7)

Advanced hands are essentially the same in structure as human hands, though some might have additional fingers for specialized work. Advanced hands suffer no penalties when attempting tasks involving manual dexterity.

Damage: Nonlethal bludgeoning only.

Purchase DC: 10 + one-quarter the base purchase DC of the robot's frame.

TASK HAND (PL 7)

Task hands function just like advanced hands, except that they are equipped with additional joints and often with additional or telescoping digits, enabling them to multitask, as well as to spread the robot's grip strength over a slightly wider area.

A robot with a task hand gains a +1 equipment bonus on Climb, Craft, Demolitions, Disable Device, Drive, Escape Artist, Forgery, Pilot, Repair, Search, Sleight of Hand, and Treat Injury checks. This bonus improves to +2 if the robot has two or more task hands. At the GM's discretion, the robot can gain this bonus when attempting certain Perform checks as well.

Damage: Nonlethal bludgeoning only.

Purchase DC: 10 + one-quarter the base purchase DC of the robot's frame.

ARMOR

Although composed of durable alloys or resilient plastic polymers, robots are easily damaged. For this reason, combat models are usually equipped with some form of armor, depending on the robot's frame.

A robot can be equipped with a suit of removable armor (identical in form and function to armor worn by organic characters), or it can have armor integrated into its frame. A robot may be limited to one type or another depending on its shape, size, and frame. Liquid-state robots cannot have armor of any sort.

Removable Armor: Anthropomorphic biodroids and bioreplicas typically wear removable suits of armor, which provides an equipment bonus to Defense. A robot equipped with removable armor must have the appropriate Armor Proficiency feat to gain the armor's full equipment bonus, and the armor's maximum Dexterity bonus applies. Armor penalties on Balance, Climb, Escape Artist, Hide, Jump, Move Silently, and Tumble checks apply as normal.

See Chapter 3: Gear for various removable suits of armor.

Integrated Armor: This type of armor is welded or otherwise fixed securely to the robot's frame. Integrated armor provides an equipment bonus to Defense.

Robots equipped with integrated armor suffer no armor penalties if the armor is installed properly. Improperly installed armor causes the robot to take a –10 penalty on Balance, Climb, Escape Artist, Hide, Jump, Move Silently, and Tumble checks.

Installing integrated armor on a robot requires a Craft (mechanical) check (DC 20). The check is made after investing an amount of time determined by the robot's size: Colossal 24 hours, Gargantuan 12 hours, Huge 6 hours, Large 3 hours, Medium-size 2 hours, Small 1 hour, Tiny or smaller 30 minutes. Integrated armor can be removed in half the time with a successful Repair check (DC 20).

INTEGRATED ARMOR

Different types of integrated armor are presented below. Only one type of armor can be installed on a given robot.

Equipment Bonus: The equipment bonus that the integrated armor provides to the robot's Defense.

Weight: How much weight integrated armor adds to the robot's weight.

Speed Penalty: The amount by which the armor reduces the robot's speed, given in feet. If a robot's speed drops to zero because of the penalty, it cannot move (the armor is too heavy for its frame).

Purchase DC: The cost of the integrated armor (or its components).

Restriction: Some types of armor have a restriction rating and an appropriate black market purchase DC modifier. Remember to apply this modifier to the purchase DC when making a Wealth check to acquire the armor on the black market.

ALUMISTEEL ARMOR (PL 5)

This easy-to-acquire alloy is lightweight and reasonably strong. Bioreplica robots and liquid-state robots cannot have integrated aluminsteel armor.

Equipment Bonus: +5.

Weight: One-quarter the weight of the robot's frame (rounded down).

Speed Penalty: –5 feet.

Purchase DC: 10 + one-half the base purchase DC of the robot's frame.

Restriction: None.

DURAPLASTIC ARMOR (PL 5)

Duraplastic armor is made of advanced plastic polymers, like carbon fiber and high-grade fiberglass. Although relatively cheap and light, it doesn't offer tremendous protection. Bioreplica robots of Medium-size or smaller and liquid-state robots cannot have integrated duraplastic armor.

Equipment Bonus: +3.

Weight: One-eighth the weight of the robot's frame (rounded down).

Speed Penalty: None.

Purchase DC: 5 + one-half the base purchase DC of the robot's frame.

Restriction: None.

DURALLOY ARMOR (PL 6)

Duralloy armor is harder, heavier, and more durable than alumisteel. Bioreplica robots and liquid-state robots cannot have integrated duralloy armor.

Equipment Bonus: +8.

Weight: One-half the weight of the robot's frame (rounded down).

Speed Penalty: –10 feet.

Purchase DC: 10 + one-half the base purchase DC of the robot's frame.

Restriction: None.

RESILIUM ARMOR (PL 6)

Resilium is more malleable alloy than duralloy, although not as strong. Bioreplica robots of Medium-size or smaller and liquid-state robots cannot have integrated resilium armor.

Equipment Bonus: +6.

Weight: One-eighth the weight of the robot's frame (rounded down).

Speed Penalty: None.

Purchase DC: 5 + one-half the base purchase DC of the robot's frame.

Restriction: None.

CRYSTAL CARBON ARMOR (PL 7)

"Grown" in orbital laboratories, crystal carbon is a composite fiber material that outperforms neovulcanium (see below) on the battlefield. Bioreplica robots of Medium-size or smaller and liquid-state robots cannot have integrated crystal carbon armor.

Equipment Bonus: +8.

Weight: One-eighth the weight of the robot's frame (rounded down).

Speed Penalty: None.

Purchase DC: 15 + one-half the base purchase DC of the robot's frame.

Restriction: Licensed (+1).

NEOVULCANIUM ARMOR (PL 7)

Similar to duralloy, neovulcanium uses plasma-forging techniques to create an alloy of unparalleled resilience. Bioreplica robots and liquid-state robots cannot have integrated neovulcanium armor.

Equipment Bonus: +7.

Weight: One-quarter the weight of the robot's frame (rounded down).

Speed Penalty: –5 feet.

Purchase DC: 10 + one-half the base purchase DC of the robot's frame.

Restriction: None.

MEGATANIUM ARMOR (PL 8)

Sandwiched layers of crystal carbon and neovulcanium held in a magnetic matrix, megatanium represents the apex of robot armor. It is exceedingly hard and durable. Bioreplica robots and liquid-state robots cannot have integrated megatanium armor.

Equipment Bonus: +10.

Weight: One-quarter the weight of the robot's frame (rounded down).

Speed Penalty: –5 feet.

Purchase DC: 10 + one-half the base purchase DC of the robot's frame.

Restriction: Licensed (+1).

REACTIVE ARMOR (PL 8)

Consisting of layers of insulating gel or compressed gas between cerametal sheets, reactive armor provides the same protection as crystal carbon armor but is considerably cheaper and easier to produce. Biodroid robots, bioreplica robots, and liquid-state robots cannot have integrated reactive armor.

Equipment Bonus: +8.

Weight: One-quarter the weight of the robot's frame (rounded down).

Speed Penalty: –5 feet.

Purchase DC: 5 + one-half the base purchase DC of the robot's frame.

Restriction: None.

SENSORS

Robots are unable to perceive their surroundings without a sensor system of some kind. Without sensors, they are effectively blind and deaf, and they suffer penalties on certain checks—if they can attempt them at all.

Sight: A robot without visual sensors suffers a –4 penalty on all skill checks and cannot make Spot checks.

Sound: A robot without audio sensors suffers a –2 penalty on all skill checks and cannot make Listen checks.

Touch: A robot without tactile sensors suffers a –4 penalty on all Demolitions, Disable Device, Forgery, and Repair checks.

Smell: A robot without olfactory sensors suffers no particular penalties.

Taste: A robot without gustatory sensors suffers no particular penalties.

To build a sensor system from scratch, a character must succeed at a Craft (electrical) check (DC 30) after investing 60 hours in its assembly. A character without an electrical tool kit takes a –4 penalty on the skill check. The character must also make a Wealth check against the sensor system's purchase DC.

Robot sensor systems are further separated by type and purchase DC:

Type: The type of sensors (visual, audio, tactile, olfactory, gustatory) included in the system.

Purchase DC: The cost of the sensor system.

Restriction: A sensor system does not require a special license to purchase.

CLASS I SENSOR SYSTEM (PL 5)

This sensor system includes a low-res video camera and a basic audio receiver (effectively a robotic ear).

A robot with a Class I sensor system takes a –4 penalty on all Demolitions, Disable Device, Forgery, and Repair checks, and a –2 penalty on all other skill checks.

Type: Audio, Visual.

Purchase DC: 13.

CLASS II SENSOR SYSTEM (PL 5)

This sensor system includes a video camera with infrared capability, capable of discerning creatures and objects by their heat signatures. It also includes a basic audio receiver and a crude chemical sniffer (a series of filters that detect free-floating chemical residues).

A robot with a Class II sensor system takes a –4 penalty on all Demolitions, Disable Device, Forgery, and Repair checks. All other skill checks are made without penalty.

Type: Audio, Olfactory, Visual.

Purchase DC: 15.

CLASS III SENSOR SYSTEM (PL 5)

This sensor system includes a video camera with infrared capability, a basic audio receiver, and a crude chemical sniffer.

A robot with a Class III sensor system takes no penalties on skill checks.

Type: Audio, Olfactory, Visual.

Purchase DC: 17.

CLASS IV SENSOR SYSTEM (PL 6)

This sensor system includes hi-res video sensors, a hi-fidelity audio sensor, a chemical vapor scanner, and a pressure sensor that enables the robot to perform tasks requiring manual dexterity.

A robot with a Class IV sensor system gains a +2 equipment bonus on Listen and Spot checks. All other skill checks are made without penalty.

Type: Audio, Olfactory, Tactile, Visual.
Purchase DC: 17.

CLASS V SENSOR SYSTEM (PL 6)

This sensor system includes hi-res video sensors with darkvision (out to 60 feet), hi-fidelity audio sensors, a chemical vapor scanner, pressure sensors, and either a ladar or sonar system. Ladar uses laser detectors and ranging sensors to rapidly play low-powered laser beams across the robot's surroundings, allowing it to locate targets. Sonar sensors are used mostly in subaquatic environments, but the technology works almost as well in the air. By bouncing sound waves off objects and measuring the length of time it takes to receive an echo, sonar can produce a clear image of the robot's surroundings.

Ladar Version: A robot with a ladar-equipped Class V sensor system gains a +4 equipment bonus on Spot checks and a +2 equipment bonus on Listen checks. All other skill checks are made without penalty.

Sonar Version: A robot with a sonar-equipped Class V sensor system gains a +4 equipment bonus on Listen checks and a +2 equipment bonus on Spot checks. All other skill checks are made without penalty.

Type: Audio, Olfactory, Tactile, Visual.
Purchase DC: 19.

CLASS VI SENSOR SYSTEM (PL 6)

This sensor system includes hi-res video sensors with darkvision (out to 120 feet), hi-fidelity audio sensors, a chemical vapor scanner, pressure sensors, and short-range radar that allows a robot to not only perceive its surroundings but also target more effectively.

A robot with a Class VI sensor system gains a +2 equipment bonus on Listen and Spot checks. All other skill checks are made without penalty. The robot also gains a +1 equipment bonus on initiative checks.

Type: Audio, Olfactory, Tactile, Visual.
Purchase DC: 22.

CLASS VII SENSOR SYSTEM (PL 7)

This sensor system includes hi-definition video sensors with darkvision (out to 120 feet), acoustic audio sensors, a chemical vapor scanner, pressure sensors, and multiband radar that uses multiple concurrent radar signals in different frequencies to gather more data.

A robot with a Class VII sensor system gains a +2 equipment bonus on Listen, Search, and Spot checks. All other skill checks are made without penalty. The robot also gains a +2 equipment bonus on initiative checks.

Type: Audio, Olfactory, Tactile, Visual.
Purchase DC: 22.

CLASS VIII SENSOR SYSTEM (PL 7)

This sensor system includes hi-definition video sensors with darkvision (out to 120 feet), acoustic audio sensors, a sophisticated olfactory sensor, a tactile sensor array, and multiband radar.

A robot with a Class VII sensor system gains the scent ability (see page 228 of the *d20 Modern Roleplaying Game*). It also gains a +2 equipment bonus on Demolitions, Disable Device, Forgery, Listen, Repair, Search, and Spot checks. All other skill checks are made without penalty. The robot also gains a +2 equipment bonus on initiative checks.

Type: Audio, Olfactory, Tactile, Visual.
Purchase DC: 25.

PROGRAMMING VS. ARTIFICIAL INTELLIGENCE

Mechanical intelligence is extremely limited in the early stages of robotic technology. The best PL 5 robots have processors only as advanced as computers, and they are little better than remotes. If a situation falls outside the conditions for which the PL 5 robot was programmed, the robot doesn't know what to do and sees no reason to take any actions at all.

At Progress Level 6, robots step closer to achieving true artificial intelligence with the invention of the first commercially viable neural networks: "learning" computers. Designed to mimic how an organic brain processes and stores information, the neural network allows the robot to analyze the data it receives from its sensors and make autonomous decisions based upon that data. In other words, a neural network allows a robot to think.

However, true artificial intelligence does not arrive until Progress Level 7. While neural networks allow robots to learn and think, artificial intelligence allows robots to plan and be creative. Further, the AI attaches appropriate significance to what it learns; not only can it create but also it can decide for itself whether doing so is a good idea. In effect, artificial intelligence allows a robot to simulate humanoid behavior (for better or for worse) without being programmed to do so. It learns by observation and deduction, not unlike a human child learns to behave as the adults he knows.

CLASS IX SENSOR SYSTEM (PL 8)

This sensor system includes a full-spectrum eye with darkvision (out to 180 feet), a full-frequency ear, a sophisticated olfactory sensor, a tactile sensor array, and multiband radar.

A robot with a Class IX sensor system gains the scent ability (see page 228 of the *d20 Modern Roleplaying Game*). It also gains a +2 equipment bonus on Demolitions, Disable Device, Forgery, Listen, Repair, Search, and Spot checks. All other skill checks are made without penalty. The robot also gains a +3 equipment bonus on initiative checks.

Type: Audio, Olfactory, Tactile, Visual.
Purchase DC: 26.

NERVE WEB (PL 8)

The nerve web is an advanced sensor array that simulates the function of an organic nervous system. This sensor system includes a full-spectrum eye with darkvision (out to 180 feet), a full-frequency ear, a sophisticated olfactory sensor, tactile and gustatory sensors, and multiband radar.

A robot with a Class IX sensor system gains the scent ability (see page 228 of *the d20 Modern Roleplaying Game*). It also gains a +4 equipment bonus on Demolitions, Disable Device, Forgery, Listen, Repair, Search, and Spot checks. All other skill checks are made without penalty. The robot also gains a +3 equipment bonus on initiative checks.

Type: Audio, Gustatory, Olfactory, Tactile, Visual.
Purchase DC: 28.

SKILL SOFTWARE

Like constructs, nonheroic robots do not gain skills. They must be programmed with software that gives them the ability or the knowledge to perform certain skills.

Skill software (often called "skillware") is embedded in the robot's central processor or "brain" and can be saved after the

robot is destroyed (see the Robot Resurrection sidebar, page 177). This is not true of skill webs, however (see below).

To write skill software from scratch, a character must have an equal number of ranks in whatever skill the software is designed to emulate. (For example, a character with 3 ranks in the Disable Device skill can write software that confers up to 3 ranks in the Disable Device skill.) The character obtains the necessary components by making a Wealth check against the software's purchase DC. He must then succeed at a Computer Use check (DC 20 + number of skill ranks emulated by the software) after investing 12 hours in the software's construction.

Class Skills: All skills programmed into a robot become class skills for the robot.

SKILL CHIP (PL 5)

A skill chip enables a robot to gain up to 8 ranks in any one of the following skills: Computer Use, Demolitions, Disable Device, Listen, Repair, Search, or Spot. A robot can have multiple skill chips. However, skill chips do not allow a robot to benefit from skill synergy (see Skill Synergy on page 48 of the *d20 Modern Roleplaying Game*).

A skill chip can be erased and reprogrammed with 12 hours of work and a successful Computer Use check (DC 20 + number of skill ranks emulated by the software).

A Techie (see Chapter Six: Advanced Classes in the *d20 Modern Roleplaying Game*) or a Technosavant (see page 31) can reprogram a skill chip in 1 hour and can modify it to hold as many ranks as he has in the emulated skill.

Purchase DC: 4 × number of skill ranks.

LANGUAGE CHIP (PL 6)

This chip allows the robot the read, write, and speak one language as though it has the appropriate Read/Write Language and Speak Language skills.

Purchase DC: 12.

SKILL PROGIT (PL 6)

Sophisticated emulation software encased in a thin but durable plastic casing, a skill progit enables a robot to gain ranks in a single skill. The number of ranks cannot exceed the programmer's ranks in the skill being emulated. A factory-built progit typically holds 4, 8, or 12 ranks of a particular skill. A robot can have multiple skill progits. However, skill progits do not allow a robot to benefit from skill synergy (see Skill Synergy on page 48 of the *d20 Modern Roleplaying Game*).

A skill progit can be erased and reprogrammed with 12 hours of work and a successful Computer Use check (DC 20 + number of skill ranks emulated by the software).

Purchase DC: 3 × number of skill ranks.

SKILL NET (PL 7)

A skill net consists of a series of interlocking programs that allow the robot to acquire ranks in multiple skills. The number of ranks in any given skill cannot exceed the programmer's ranks in the skill being emulated. A factory-built skill net typically holds 4, 8, or 12 ranks in as many as four different skills. A robot can have multiple skill nets. Skill nets allow a robot to benefit from skill synergy (see Skill Synergy on page 48 of the *d20 Modern Roleplaying Game*).

A skill net can be reprogrammed one skill at a time. Replacing one skill with another or increasing the number of ranks of an already existing skill requires 1 hour of work and a successful Computer Use check (DC 20 + number of skill ranks emulated by the software).

HEROIC DROIDS WITH SKILL SOFTWARE OR FEAT SOFTWARE

Players can choose to play biodroid and bioreplica characters. These heroic robots gain skills and feats by gaining experience and advancing in level, as organic characters do.

At the GM's discretion, a heroic robot may choose to receive skill software and feat software. However, a heroic droid installed with skill software of any kind loses all skills gained from class levels and can no longer gain skill points through level advancement. Similarly, a heroic robot installed with feat software loses all feats gained from class levels and class features and cannot gain new feats through level advancement.

Purchase DC: 18 (four skills at 4 ranks each), 21 (four skills at 8 ranks each), or 23 (four skills at 12 ranks each).

SKILL WEB (PL 8)

A skill web allows a robot with ordinary class levels to gain skill points as normal for its class. The skill web expands as the robot advances in level. An integral component of the robot, it cannot be salvaged if the droid is destroyed. Skill webs allow a robot to benefit from skill synergy (see Skill Synergy on page 48 of the *d20 Modern Roleplaying Game*).

A skill web's skills cannot be altered except through level advancement.

Purchase DC: One-half the base purchase DC of the robot's frame.

FEAT SOFTWARE

Nonheroic robots, like constructs, do not gain feats. However, at Progress Level 6 or higher, they can be programmed with software that enables them to emulate feats.

Feat software (often called "featware") is usually embedded in the robot's central processor or "brain" and can be salvaged after the robot is destroyed (see the Robot Resurrection sidebar, page 177). This is not true of feat webs, however (see below).

To write feat software from scratch, a character must possess whatever feats the software is designed to emulate. (For example, a character without the Dodge feat doesn't know enough about dodging opponents to create a program to emulate the feat.) The character obtains the necessary software components by making a Wealth check against the software's purchase DC. He must then succeed at a Computer Use check (DC 30) after investing 12 hours in the software's creation.

Feat Prerequisites: Regardless of the quality of its feat software, a robot cannot emulate a feat if it does not meet the feat's prerequisites. For example, a robot with a Dexterity score lower than 13 gains no benefit from a Dodge feat progit, since the Dodge feat has a Dexterity 13 prerequisite.

FEAT PROGIT (PL 6)

Sophisticated emulation software encased in a thin but durable plastic casing, a feat progit is installed in the robot's central processing unit and enables the robot to gain a single feat.

A robot can have a number of feat progits equal to 1 + one-third its Hit Dice (rounded down).

A feat progit can be erased and reprogrammed with 12 hours of work and a successful Computer Use check (DC 30).

Purchase DC: 20.

FEAT NET (PL 7)

A feat net consists of a series of interlocking programs that allow the robot to emulate multiple feats. A feat net holds as many as four feats.

A robot can have multiple feat nets, but the total number of feats a robot can have installed cannot exceed 1 + one-third the robot's Hit Dice (rounded down).

The biggest advantage of the feat net over the feat progit is that you only make one Wealth check to purchase a feat net, whereas buying individual feat progits requires separate Wealth checks.

A feat net can be reprogrammed one feat at a time. Replacing one feat with another requires 12 hours of work and a successful Computer Use check (DC 30).

Purchase DC: 15 (one feat), 17 (two feats), 19 (three feats), 20 (four feats).

FEAT WEB (PL 8)

A feat web allows a robot with ordinary class levels to gain feats as normal for its class. The feat web expands as the robot advances in level. An integral component of the robot, it cannot be salvaged if the droid is destroyed.

A feat web's feats cannot be altered except through level advancement.

Purchase DC: 10 + one-half the base purchase DC of the robot's frame.

ABILITY UPGRADES

Heroic and nonheroic robots can receive structural and programming upgrades that increase their ability scores. (Heroic robots can also improve their mental ability scores by gaining levels, much as organic characters do; see Robots as Heroes on page 175 for details.)

A robot can receive multiple upgrades to the same ability score.

Robots with armature and biomorph frames have no Intelligence score and therefore cannot receive upgrades to Intelligence. No robot can receive an upgrade to Constitution, since robots do not have Constitution scores.

Upgrades to physical abilities (Strength and Dexterity) always entail a refit or reconstruction and require a factory, workshop, or other facility. Upgrades to mental abilities (Intelligence, Wisdom, and Charisma) are handled by using a computer to reprogram or add new subroutines to the robot's brain, neural network, or central processing unit.

To perform a Strength or Dexterity upgrade from scratch, a character must have access to a workshop or other suitable facility. Acquiring the necessary components for the upgrade requires a Wealth check against the upgrade's purchase DC. After 24 hours spent performing the upgrade, the character must succeed at a Craft (mechanical) check (DC 25). A character without a mechanical tool kit takes a –4 penalty on the skill check.

To perform an Intelligence, Wisdom, or Charisma upgrade, a character must first acquire the necessary system components with a successful Wealth check (against the upgrade's purchase DC). The character must then succeed at a Computer Use check (DC 30) after 1 hour spent reprogramming the robot.

Purchase DC: The cost of the upgrade.

STRENGTH UPGRADE (PL 5)

Parts of the robot's frame, including its joints and hydraulic components, are reinforced or replaced with similar components made of stronger materials. The upgrade provides a +2 bonus to Strength.

Purchase DC: 5 + one-half the base purchase DC of the robot's frame + robot's Strength modifier before the upgrade.

DEXTERITY UPGRADE (PL 6)

The robot receives replacement joints or ligaments that are more flexible, and the robot's tactile sensors are modified to improve manual dexterity. The upgrade provides a +2 bonus to Dexterity.

Purchase DC: 5 + one-half the base purchase DC of the robot's frame + robot's Dexterity modifier before the upgrade.

INTELLIGENCE UPGRADE (PL 6)

Modifications to the robot's artificial intelligence allow it to think more creatively. The upgrade provides a +2 bonus to Intelligence.

Purchase DC: 10 + one-half the base purchase DC of the robot's frame + robot's Intelligence modifier before the upgrade.

CHARISMA UPGRADE (PL 7)

The robot is programmed with character and personality subroutines that enable it to better interpret and simulate humanoid behavior patterns and emotions. The upgrade provides a +2 bonus to Charisma.

Purchase DC: 10 + one-half the base purchase DC of the robot's frame + robot's Charisma modifier before the upgrade.

WISDOM UPGRADE (PL 7)

Adjustments to the robot's sensors improve its perception, while new software enables it to act more intuitively. The upgrade provides a +2 bonus to Wisdom.

Purchase DC: 10 + one-half the base purchase DC of the robot's frame + robot's Wisdom modifier before the upgrade.

ROBOT ACCESSORIES

Even an assembly-line robot needs certain tools to accomplish its tasks. The following section describes miscellaneous accessories designed specifically for robots.

To build a robot accessory from scratch, a character must first acquire the necessary components by making a Wealth check against the accessory's purchase DC. Then the character must succeed at a Craft (mechanical) check (DC 25) after investing 24 hours in its assembly. A character without a mechanical tool kit takes a –4 penalty on the skill check.

A character can install a home-built or factory-built robot accessory with a successful Craft (mechanical) check (DC 15). A character without a mechanical tool kit takes a –4 penalty on the check. A character with access to a workshop or other facility can install a robot accessory in 1 hour; without a facility, the installation takes 6 hours.

Size: A robot accessory, as an object, is usually two size categories smaller than the robot for which it's designed; for example, a tool mount designed for a Huge robot can be considered a Medium-size object. An accessory's size is usually important only for portability and concealment purposes.

Weight: Robot accessories vary in weight depending on the size of the robot for which they're designed. However, they do not add a significant amount of weight to the robot's frame.

Purchase DC: The cost of the accessory.

Restriction: Some robot accessories have a restriction rating and an appropriate black market purchase DC modifier. Remember to apply this modifier to the purchase DC when making a Wealth check to acquire the armor on the black market.

AV RECORDER (PL 5)

This audio and video recorder unit uses the robot's video and audio sensors to record and store up to 8 hours of information.

Purchase DC: 13.

Restriction: None.

AV TRANSMITTER (PL 5)

A remote audio-visual unit consists of a video camera and microphone connected to the robot's visual and audio sensors, with a transmitter to send the information to a computer or a remote control unit (see Remote Control Unit, below). The AV transmitter includes a transmitter with an effective range of 1,000 feet.

This unit does not allow a remote operator to control the robot (but see Robolink, below). It merely allows the operator to see and hear what the robot sees and hears.

Purchase DC: 16.

Restriction: None.

FIRE EXTINGUISHER (PL 5)

This unit, available only to Small or larger robots, ejects enough extinguishing chemicals during a move action to put out a fire in a 10-foot-by-10-foot square. A robot's extinguisher tank holds a number of shots of chemical spray based on the robot's frame size: Small 2, Medium-size 4, Large 8, Huge 16, Gargantuan 32, Colossal 64.

Purchase DC: 5 + one-quarter the base purchase DC of the robot's frame.

Restriction: None.

INTEGRATED CELL PHONE (PL 5)

An integrated cell phone enables the robot to make and receive telephone calls without resorting to the use of its manipulators (which may not be delicate enough to operate a standard cell phone, in any case).

Purchase DC: 11.

Restriction: None.

INTERNAL STORAGE UNIT (PL 5)

The robot has an insulated compartment for storing foreign objects. The compartment can store objects of up to two size categories smaller than the robot. See Table 10–7: Internal Storage Units for compartment weight limits and purchase DCs.

Purchase DC: See below.

Restriction: None.

TABLE 10–7: INTERNAL STORAGE UNITS

Robot's Frame Size	Maximum Weight Limit	Purchase DC
Small	10 lb.	6
Medium	20 lb.	8
Large	40 lb.	10
Huge	120 lb.	13
Gargantuan	360 lb.	17
Colossal	1,000 lb.	22

LOADING MECHANISM (PL 5)

A loading mechanism allows a robot to reload a single handheld weapon as a full-round action. The mechanism can hold enough ammunition to reload the weapon three times. The mechanism works with weapons that use box ammunition, speed-loaders (but not loose bullets), a grenade launcher round, some sort of fuel tank (such as a flamethrower) or power cell.

A robot can have multiple loading mechanisms—one for each weapon it carries.

Purchase DC: 12 (doesn't include ammunition).

Restriction: None.

REMOTE CONTROL UNIT (PL 5)

Referred to colloquially as a "remcon," this handheld, self-powered control stick has a small video screen and audio receiver built into it. It also comes in the form of a mechanical gauntlet worn on the hand.

The remcon allows its operator to control a specific robot from afar. For it to work, the robot must be equipped with an AV transmitter and a robolink adjusted to the same frequency as the remote control unit.

Using a remcon to activate or deactivate a robot is an attack or move action. Using it to make the robot move, attack, or use a skill is a full-round action for the operator.

Purchase DC: 15.

Restriction: None.

ROBOLINK (PL 5)

This unit can only be installed on the robot with no Intelligence score. It allows a remote operator to control a robot's actions from afar. It also enables the operator to shut down and activate the robot. The effective range of the robolink's transmitter is 1,000 feet.

To control a robot equipped with a robolink, the operator requires a remote control unit (see above).

Purchase DC: 16.

Restriction: None.

TOOL MOUNT (PL 5)

Any robot with an armature, biomorph, biodroid, or bioreplica frame can be equipped with a tool mount. Liquid-state robots, due to their amorphous nature, cannot have tool mounts.

This mount is usually attached to the end of a robotic appendage and sports a single tool. A tool mount easily adjusts to house different kinds of tools, but it can hold only one tool at any given time. The robot's internal power source powers the tool, if necessary.

The tool can be up to one size category larger than the robot's size category; for example, a Medium-size robot's tool mount can bear a Large or smaller tool. The tool can be any item in Chapter 3: Gear or any item from Table 4–10: General Equipment of the *d20 Modern Roleplaying Game* (page 113).

Purchase DC: 1 + the purchase DC of the tool.

Restriction: None.

VOCALIZER (PL 5)

This unit enables a robot to speak any language it knows. It must have the appropriate Speak Language skill, either acquired through class levels (for heroic robots) or skill software (for nonheroic robots).

Purchase DC: 10.

Restriction: None.

WEAPON MOUNT (PL 5)

Robots that lack the proper manipulators to grasp weapons are suitable candidates for weapon mounts. Any Diminutive or larger robot with an armature, biomorph, biodroid, or bioreplica frame can be equipped with them. Liquid-state robots, due to their amorphous nature, cannot have weapon mounts.

A weapon mount can be attached to almost any part of a robot's frame. The attached weapon can be one size category larger than the robot's size category; for example, a Medium-size robot can have a Large or smaller mounted weapon. In

Any weapon listed in Chapter 3: Gear or the *d20 Modern Roleplaying Game* can be mounted on the weapon mount. However, a robot-mounted weapon cannot be used as a hand-held weapon, or vice versa.

A robot's size determines the maximum number of weapon mounts it can have and the cost of each weapon mount, as shown in Table 10–8: Robot Weapon Mounts.

A weapon mount has compartments for storing ammunition. However, the purchase DC of the weapon mount does not include either the weapon or the ammunition.

Purchase DC: See Table 10–8: Robot Weapon Mounts, below.

Restriction: None.

TABLE 10–8: ROBOT WEAPON MOUNTS

Robot's Frame Size	Maximum Weapon Mounts	Purchase DC
Diminutive or Tiny	1	4
Small or Medium-size	2	6
Large	3	8
Huge	4	10
Gargantuan	5	12
Colossal	6	14

INTEGRATED VIDEOPHONE (PL 6)

The integrated videophone enables the robot to make and receive videophone calls without resorting to the use of its manipulators (which may not be delicate enough to operate a standard videophone in any case). The view provided by the robot's videophone can be set at the time of installation, but it is commonly the same view afforded by the robot's visual sensors. Resetting the view requires 1 hour and a successful Repair check (DC 15).

Purchase DC: 14.

Restriction: None.

MAGNETIC FEET (PL 6)

The robot comes with electromagnetic grippers that allow it to cling to ferrous surfaces, including iron and steel. The robot using its magnetic feet gains a climb speed of 20 feet and need not make Climb checks to scale ferrous surfaces.

Purchase DC: 12.

Restriction: None.

SELF-DESTRUCT SYSTEM (PL 6)

Designed for robots in military and espionage roles, self-destruct systems ensure that the robot cannot be captured, analyzed, and reprogrammed. Installing a robot self-destruct system requires a Demolitions check (DC 20) instead of a Craft (mechanical) check; if the Demolitions check fails by 10 or more, the system detonates, destroying the robot and possibly harming others nearby.

The default self-destruct system is rigged to detonate when the robot is reduced to 0 hit points. With a second Demolitions check (DC 30), the system can be modified to detonate when the robot has a higher number of hit points remaining (5 hit points, for example).

The self-destruct system obliterates the robot regardless of how many hit points it has left. A robot destroyed by its own self-destruct system has no salvageable parts.

The robot's self-destruction triggers an explosion of shrapnel that deals collateral slashing damage to creatures in squares adjacent to the robot. A successful Reflex save (DC 10 + 1/2 the robot's HD) reduces the damage by half. Table 10–9: Robot Self-Destruct Systems shows the amount of collateral damage (and the system's purchase DC) based on the robot's size.

Purchase DC: See Table 10–9: Robot Self-Destruct Systems.

Restriction: Military (+3).

ROBOT WEAPON RULES

A robot can be armed with manipulators, handheld weapons, mounted weapons, or any combination of the three. However, during any given round of attacks, it must choose whether to attack with its manipulators, handheld weapons, or mounted weapons, as it cannot switch between them during the same turn.

Manipulators are considered natural weapons, and using them does not provoke attacks of opportunity. See Chapter Eight: Friends and Foes of the *d20 Modern Roleplaying Game* (page 225) for natural weapon rules.

A robot armed with handheld weapons follows the normal rules of combat as outlined in Chapter Five: Combat of the *d20 Modern Roleplaying Game*, suffering the usual penalties for two-weapon fighting.

A robot armed with multiple mounted weapons gains one primary attack with a mounted weapon of its choice; the rest of its mounted weapons are treated as secondary attacks (–5 penalty on the attack roll). Using a mounted ranged weapon provokes attacks of opportunity.

TABLE 10–9: ROBOT SELF-DESTRUCT SYSTEMS

Robot Size	Collateral Damage	Purchase DC
Colossal	12d6	27
Gargantuan	9d6	24
Huge	6d6	21
Large	4d6	19
Medium-size	2d6	17
Small	1d6	16
Tiny	—	15
Diminutive	—	15
Fine	—	15

SURVIVOR ARRAY (PL 6)

Robots are often used to explore environments inhospitable to organic creatures. The survivor array enables the robot to better traverse harsh terrain and withstand hostile conditions.

A survivor array includes the following units:

- Topographical and astronomical guidance systems that grant a +10 equipment bonus on Navigate checks.
- A gyroscopic unit that improves the robot's base speed by +10 feet.
- A pressure-sealed, energy-resistant frame that allows the robot to function normally in low-gravity, high-gravity, and zero-gravity conditions, prevents oxidation and corrosion, and provides resistance to acid 10, cold 10, electricity 10, and fire 10.
- A nightvision amplifier that grants the robot darkvision out to a range of 60 feet or extends its normal darkvision range by +60 feet.

Purchase DC: 15 + one-half the base purchase DC of the robot's frame.

Restriction: Licensed (+1).

HOLO SCREEN (PL 7)

A holo screen unit projects a holographic image around the robot, making it appear as something else of roughly similar proportions occupying the same amount of space. For instance, it could make a Gargantuan robot look like a massive outcropping of rock or make a Fine robot look like a housefly.

Although the holographic projection appears real, physical objects can pass through it without difficulty. If the robot moves, the holographic image moves as well. Attacks made against the robot are treated as though it had 20% concealment, since the projected image may not perfectly match the robot's true proportions.

A holo screen is powered by the robot's internal power source.

Purchase DC: 28.

Restriction: Licensed (+1).

INERTIAL INHIBITOR (PL 7)

The inertial inhibitor generates a thin magnetic field that radiates out from the robot, slowing the velocity of potentially damaging weapons and projectiles. The robot gains damage reduction 5/energy (the inertial inhibitor does not protect against attacks that deal acid, cold, electricity, fire, or sonic/concussion damage).

The inertial inhibitor feeds on of the robot's internal power source.

Purchase DC: 29.

Restriction: Military (+3).

POLYVOX (PL 7)

This unit translates any language spoken within range of the robot's audio sensors into a language familiar to the robot (or binary code, if the robot has no Speak Language skills). A polyvox does not grant the ability to speak languages the robot does not know.

Purchase DC: 17.

Restriction: None.

SELF-REPAIR UNIT (PL 7)

A self-repair unit enables a robot to repair itself by replacing damaged parts with cannibalized or replicated ones. A robot with a self-repair unit can spend 1 hour repairing itself; this automatically restores 1d10 points of damage (no Repair check necessary).

A robot cannot use this unit to repair another robot.

Purchase DC: 25.

Restriction: Licensed (+1).

PHOTON SCREEN (PL 8)

Using a series of light reflectors molded to the robot's frame, this unit bends light around the robot, rendering it invisible. Any items carried by the robot also become invisible.

An invisible robot gains a +40 bonus on Hide checks if immobile, or a +20 bonus if moving. Pinpointing the location of an invisible robot that isn't attempting to hide requires a Spot check (DC 40 if the robot is immobile or DC 20 if the robot is moving).

An invisible robot gains 50% concealment against attacks from creatures that correctly pinpoint its fighting space. See Table 5–5: Attack Roll Modifiers in the *d20 Modern Roleplaying Game* for other effects of invisibility on combat.

The photon screen is powered by the robot's internal power source.

Purchase DC: 33.

Restriction: Restricted (+2).

ROBOT REPAIR UNIT (PL 8)

The RRU enables a robot to repair itself or another robot by replacing damaged parts with replicated new ones. In the latter case, the robot making the repairs must be adjacent to the damaged robot.

The robot must spend a full-round action to repair itself or another robot; this automatically restores 1d10 points of damage (no Repair check necessary).

Purchase DC: 28.

Restriction: Licensed (+1).

SAMPLE ROBOTS

The following sample nonheroic robots have been built using the rules in this chapter.

"SPOT" SECURITY ROBOT (PL 6)

This robot looks like a man-sized, mechanical guard dog with four powerful legs, wicked jaws, and resilium armor covering its body. It growls and barks at intruders with the aid of a vocalizer. "Spot" functions as a robotic watchdog and can only be mistaken for an actual dog at distances of 100 feet or more.

Purchase DC: 27.

Restriction: Licensed (+1).

"Spot" Security Robot: CR 1; Medium-size construct; HD 1d10+10; hp 15; Mas —; Init +0; Spd 30 ft.; Defense 17 (+1 Dex, +6 equipment), touch 11, flat-footed 16; BAB +0; Grp +2; Atk +2 melee (1d4+2, jaws) or +1 ranged; FS 5 ft. by 5 ft.; Reach 5 ft.; SQ construct traits; AL owner; SV Fort +0, Ref +1, Will +0; AP 0; Rep +0; Str 14, Dex 12, Con —, Int —, Wis 10, Cha 1.

Skills: Hide +5, Jump +6, Listen +6, Move Silently +5, Spot +6.

Feats: —.

The "Spot" security robot has the following systems and accessories:

Frame: Biomorph.

Locomotion: Multiple legs (4).

Manipulators: Jaws.

Armor: Resilium armor.

Sensors: Class IV sensor system.

Skill Software: Hide skill progit (4 ranks), Jump skill progit (4 ranks), Listen skill progit (4 ranks), Move Silently skill progit (4 ranks), Spot skill progit (4 ranks).

Ability Upgrade: Dexterity upgrade (+2).

Accessory: Vocalizer.

APE POLICE ROBOT (PL 6)

The Armed Police Escort (APE) robot is designed to help police deal with civil disobedience and unrest in the urban jungle. This robot resembles a hulking, apelike man with thick arms and legs, clad head-to-toe in interlocking duralloy plates. The robot's hands can be used for grappling or carrying items. It usually carries an OICW assault rifle. In addition, it has a mini-grenade launcher (with a compartment for concussion grenades) mounted in its left forearm and a laser pistol mounted in its right forearm. The APE robot cannot use its mounted weapons if it is grappling.

Purchase DC: 34.

Restriction: Military (+3).

APE Police Robot: CR 5; Large construct; HD 6d10+20; hp 55; Mas —; Init –1; Spd 20 ft.; Defense 17 (–1 size, +8 equipment), touch 9, flat-footed 17; BAB +4; Grp +13; Atk +8 melee (1d4+5 nonlethal, 2 hands) or +3 ranged (2d8, OICW assault rifle); or +3 ranged (2d8, laser pistol); or +3 ranged (4d6 nonlethal, M79 grenade launcher with concussion grenade); or +3 ranged (2d8, OICW assault rifle or laser pistol) and –2 ranged (4d6 nonlethal, mini-grenade launcher with concussion grenade); FS 10 ft. by 10 ft.; Reach 10 ft.; SQ construct traits, critical systems, darkvision 60 ft.; AL police agency; SV Fort +2, Ref +2, Will +3; AP 0; Rep +0; Str 20, Dex 11, Con —, Int 10, Wis 12, Cha 5.

Skills: Climb +9, Hide –4, Listen +11, Search +4, Spot +13.

Feats: Exotic Firearms Proficiency (grenade launchers), Personal Firearms Proficiency.

Equipment: OICW assault rifle with 4 30-round magazines, laser pistol (mounted), mini-grenade launcher (mounted) with 8 concussion grenades.

The APE police robot has the following systems and accessories:

Frame: Biodroid.

Locomotion: Legs (2, speed-enhanced).

Manipulators: Hands (2).

Armor: Duralloy armor.

Sensors: Class V sensor system (with ladar).

Skill Software: Climb skill progit (4 ranks), Listen skill progit (8 ranks), Search skill progit (4 ranks), Spot skill progit (8 ranks).

Feat Software: Exotic Firearms Proficiency (grenade launchers) progit, Personal Firearms Proficiency progit.

Ability Upgrades: Dexterity upgrade (+2), Wisdom upgrade (+2).

Accessories: Magnetic feet, weapon mounts (2).

"NUYU" DOPPELGANGER ROBOT (PL 7)

Each doppelganger robot is modeled after a specific person. "Nuyu" bioreplicas are often used as doubles for politicians and movie stars during high-risk public appearances. Government agencies also use them as spies and infiltrators. A "Nuyu" is usually programmed with enough knowledge of its biological counterpart to maintain the charade for a period of a few hours or days.

Purchase DC: 32.

Restriction: Restricted (+2).

"Nuyu" Replacement Robot: CR 1; Medium-size construct; HD 1d10+10; hp 15; Mas —; Init +2 (+2 equipment); Spd 30 ft.; Defense 10, touch 10, flat-footed 10; BAB +0; Grp +1; Atk +1 melee (1d3+1 nonlethal, 2 advanced hands) or +0 ranged; FS 5 ft. by 5 ft.; Reach 5 ft.; SQ construct traits, critical systems, darkvision 120 ft., doubled range increments, lifelike appearance; AL varies; SV Fort +0, Ref +0, Will +0; AP 0; Rep +0; Str 12, Dex 11, Con —, Int 10, Wis 10, Cha 12.

Skills: Bluff +5, Computer Use +4, Diplomacy +5, Disable Device +4, Disguise +5, Drive +4, Gather Information +5, Hide +4, Knowledge (current events) +4, Listen +6, Move Silently +4, Repair +4, Search +2, Sense Motive +4, Sleight of Hand +4, Spot +6, Survival +4.

Feats: Personal Firearms Proficiency.

Equipment: Determined by the GM.

The "Nuyu" doppelganger robot has the following systems and accessories:

Frame: Bioreplica.

Locomotion: Legs (2, speed-enhanced).

Manipulators: Advanced hands (2).

Sensors: Class VII sensor system.

Skill Software: Language chips (English, Japanese), skill net (Bluff 4 ranks, Diplomacy 4 ranks, Disguise 4 ranks, Gather Information 4 ranks), skill net (Computer Use 4 ranks, Disable Device 4 ranks, Knowledge [current events] 4 ranks, Repair), skill net (Drive 4 ranks, Hide 4 ranks, Move Silently 4 ranks, Sleight of Hand 4 ranks), skill net (Listen 4 ranks, Sense Motive 4 ranks, Spot 4 ranks, Survival 4 ranks).

A ROBOT'S TOTAL PURCHASE DC

The rules in this chapter are written so that a character can buy the necessary components to build a robot from scratch. A robot's components (frame, means of locomotion, manipulators, armor, sensors, software, ability upgrades, accessories, and weapons) are sold separately and thus have separate purchase DCs.

To calculate the total purchase DC of a robot with preinstalled components, use Table 7–16: Purchase DCs (page 145) and follow these three steps:

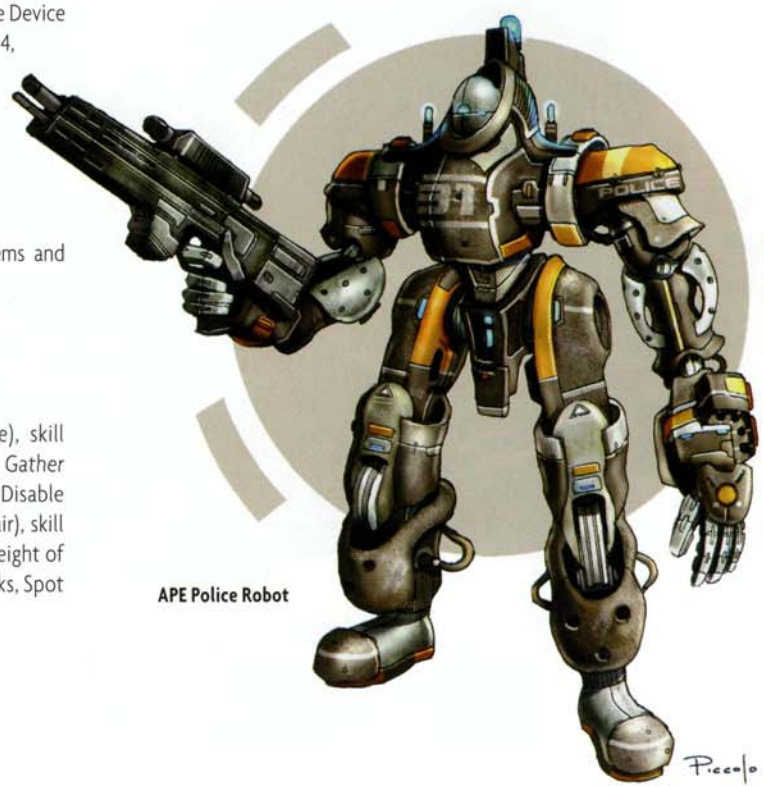
1. Determine the Item Cost (in dollars) of each component, based on its purchase DC.
2. Total the various Item Costs to get the total cost of the robot (in dollars).
3. Use Table 7–16: Purchase DCs to convert the total cost of the robot back into a single purchase DC.

For example, a character wants to buy a Large biomorph frame (purchase DC 28) equipped with multiple legs (purchase DC 14), two claws (purchase DC 17 per claw), light alloy plating (purchase DC 19), a Class III sensor system (purchase DC 17), a Dexterity upgrade (purchase DC 18), and an internal storage unit (purchase DC 10). Using Table 7–16, the player converts each purchase DC into an Item Cost, adds the Item Costs together, and determines that the total cost is $25,870. He then converts this dollar sum back into a purchase DC. According to the table, a robot that costs $25,870 has a purchase DC of 29.

Feat Software: Personal Firearms Proficiency progit.

Ability Upgrade: Charisma upgrade (+2).

Accessories: Integrated cell phone, self-destruct system, self-repair unit, vocalizer.



APE Police Robot

CHAPTER ELEVEN:

CYBERNETICS



Cybersurgery

When flesh fails—and sometimes even before then—cybernetics take over. Prosthetic limbs and replacement organs powered by batteries and controlled by electrical impulses are modern-day precursors to sophisticated cybernetic hardware designed to improve or augment the recipient's body and mind.

Whereas early cybernetic technology consists largely of implanted identification chips and dedicated minicomputers that monitor and regulate bodily processes, the future of cybernetics includes everything from interchangeable skill chips to total body replacement. With cybernetics, we see the evolution of the cyborg—the ultimate fusion of biology and physics, of man and machine.

EVOLUTION OF CYBERNETICS

As with all forms of technology, advancements in cybernetics can be tracked by Progress Level.

Progress Level 5: Cybernetics is still in its formative stage. Most prosthetic units are of the nonpowered variety, but medical associations have approved certain electronic regulators for life-threatening conditions. The artificial heart is the most recognized example. Other common examples include pacemakers, artificial kidneys, and pancreas monitors (for high-risk diabetics). Nearly all PL 5 cybernetic attachments are simply designed to keep their recipients alive and reasonably healthy.

Elective cybernetics begins at this stage with the work of university professor Kevin Warwick, who develops methods of linking computer microchips to the human nervous system. His "cyborg chip" becomes the foundation for all future cybernetic components.

Progress Level 6: This era sees the first use of independently powered cybernetics, including servolimbs and subcutaneous cellular telephones. These begin mostly in military applications but soon become available to the public. Household pets all over the world are implanted with subcutaneous identity chips—as are important government figures and their families—after the technology proves safe and effective on prison inmates.

As cybernetics is still new and can have negative side effects, its adoption is not universal. Most people still prefer mundane

equipment, which is generally cheaper, safer, and less troublesome to repair, replace, or upgrade. Cybernetics becomes the preferred choice only when mundane equipment is impractical or unavailable—or when the recipient is fixated on self-improvement.

Medical plans eventually come to offer at least baseline prosthetics to compensate for disabling injuries, such as the loss or partial loss of a limb, though such plans do not cover elective cybernetic surgery. Their concern is overall health—not "cosmetic" enhancement. For those who want more than just replacements, a new kind of clinic appears, offering cybernetic enhancements.

At this Progress Level, the first cybernetic regulation laws are passed—largely instigated by a few harshly publicized accidents involving cyborgs. These laws give rise to numerous black-market cybernetic clinics that install cybernetics without performing the required background checks.

Progress Level 7: By this era, cybernetics has become a mostly safe science. Flaws in earlier designs have been corrected. Cybernetics becomes more of a status symbol, and luminous skin grafts become the fashion accessory of choice. In some societies, newborn children are implanted with identity chips as an anti-kidnapping measure. Military applications include replacement eyes with heads-up targeting and GPS displays.

Insurance regulations relax considerably toward cybernetic replacements at Progress Level 7; enhancements are perfectly acceptable, though only as part of a prosthetic, rather than as elective cyber-surgery. Still, most cyborgs are members of military or law-enforcement organizations—or mercenaries.

Progress Level 8: Cyborgs are a common sight. In some societies, medical insurance frowns on noncybernetic replacements, as mechanical body parts are less expensive than flesh. Cybernetic technology has improved so much, in fact, that some cyborgs are virtually indistinguishable from living beings—except that they never appear to age.

CYBERNETIC ATTACHMENTS

Two kinds of cybernetic attachments exist in *d20 Future*: replacements and enhancements.

Replacements: Replacements are prosthetic or artificial units intended to replace lost limbs and damaged organs. Common replacements provide no benefits other than duplicating the essential functions of their biological counterparts, and they present little strain on the beneficiary's overall wellbeing. In appearance, a cybernetic replacement can be recognizably artificial or virtually indistinguishable from the real thing.

Enhancements: Enhancements bestow new abilities or improve the recipient in some fashion. Enhancements include skeletal reinforcement, subcutaneous communications hardware, and weapon mounts. Some enhancements have visible external components, while others are hidden beneath the skin. Enhancements put more of a drain on the body's resources, and recipients frequently suffer debilitating physical or mental side effects.

CONSTRUCTION AND REPAIR

Cybernetic attachments are complex instruments with both electrical and mechanical components. Consequently, a character must have the Craft Cybernetics feat (see page 12) to build a cybernetic attachment.

Repairing a damaged or nonfunctional cybernetic attachment requires 10 hours of work and a successful Repair check (DC 25). A character needs both an electrical tool kit and a mechanical tool kit to facilitate repairs. Without one or the another, a character takes a –4 penalty on the check; without both kits, the penalty increases to –8.

INSTALLATION AND REMOVAL

Installing or removing a cybernetic attachment, regardless of whether it's a replacement or enhancement, requires a successful Treat Injury check. A character with the Cybernetic Surgery feat suffers no penalty on the check (see the feat's description on page 12).

Removing a cybernetic attachment without proper surgery causes lasting physical trauma to the patient's body, dealing 1d4 points of permanent Constitution drain.

NUMBER OF ATTACHMENTS

Only living creatures can have cybernetic attachments. In addition, a living creature can have a maximum number of cybernetic attachments equal to 1 + the creature's Constitution modifier (minimum 0).

For example, a creature with a Constitution of 14 (+2 modifier) can have a maximum of three cybernetic attachments, while a creature with a Constitution of 9 (–1 modifier) can bear none.

A creature may have more cybernetic attachments installed on its body can it can bear. However, the creature gains 1 negative level per cybernetic attachment that exceeds its maximum allowed. For each negative level, the creature takes a –1 penalty on all skill checks and ability checks, attack rolls, and saving throws, and loses one effective level or Hit Die whenever level is used in a die roll or calculation. Further, a character with psionic powers loses the ability to manifest one power of the highest level she can manifest (player's choice), while a character with spellcasting ability loses the ability to cast one spell of the highest level he can cast. This loss persists until the negative level is removed.

Negative levels caused by having too many cybernetic attachments remain until the offending attachments are removed.

BENEFITS AND DRAWBACKS

Cybernetic attachments provide countless benefits to their recipients. For example, cybernetic eyes can bestow darkvision, improve the accuracy of the recipient's ranged attacks, or emit pencil-thin laser beams. A cybernetic brain implant can improve the recipient's response time in a crisis, protect against mind-influencing attacks, or increase the flow of adrenaline throughout the body. The possibilities of cybernetic technology are endless.

Although the benefits make cybernetics very alluring, the drawbacks are equally discouraging:

ELECTRICITY VULNERABILITY

A creature with one or more cybernetic attachments takes 50% more damage from any attack that deals electricity damage. This vulnerability to electricity can be offset by an anti-shock implant (see Cybernetic Enhancements, below).

NEGATIVE LEVELS

Whenever a creature exceeds its maximum number of cybernetic attachments, it gains negative levels until the excess attachments are removed (see Number of Attachments, above).

SUSCEPTIBILITY TO ATTACK

External cybernetic attachments are subject to attacks as if they were objects worn by their recipients; see the rules for attacking objects on pages 149–150 of the *d20 Modern Roleplaying Game*.

MASSIVE DAMAGE EFFECTS

Massive damage wreaks havoc with cybernetic attachments. Whenever a creature with cybernetic attachments fails a Fortitude save against massive damage, the GM should roll percentile dice and consult Table 11–1: Massive Damage Effects to determine what happens.

TABLE 11–1: MASSIVE DAMAGE EFFECTS

d% Roll	Effect of Failed Fortitude Save
01–30	Normal Effect
31–60	Attachment Disabled
61–80	Normal Effect and Attachment Disabled
81–100	Attachment Damaged and Side Effect

Normal Effect: The character immediately drops to –1 hit points and is dying (see Dying on page 141 of the *d20 Modern Roleplaying Game*).

Attachment Disabled: One cybernetic attachment (determined randomly or chosen by the GM) ceases to function until repaired (see Construction and Repair, above). The character suffers the effects of the disability—as noted in the description of the cybernetic attachment—for as long as the attachment remains disabled.

Attachment Damaged: One cybernetic attachment (determined randomly or chosen by the GM) continues to function but develops an unpleasant side effect that persists until the attachment is repaired (see Construction and Repair, above).

Side Effect: The character suffers a debilitating side effect as the result of a damaged attachment. Various side effects are presented on Table 11–2: Side Effects; the GM may select one or roll randomly.

REPLACEMENTS

The *d20 Modern Roleplaying Game* does not include rules for losing limbs or organs, so the likelihood of a character needing a replacement limb and organ in the course of a *d20 Future* campaign is slim. However, to tell a particular story, a GM and player may agree to give a character a prosthetic replacement of some kind, perhaps to remind the character of some defining—if traumatic—past experience.

The most basic replacement limbs and organs don't bestow any special benefits, but they suffer the usual drawbacks (see Benefits and Drawbacks, above). Some replacements of higher PL are built to counter certain drawbacks, as noted. They don't add measurably to the recipient's weight.

If a player agrees to create a 1st-level hero with a prosthetic limb or artificial organ that provides no inherent benefits, the GM may (at his or her discretion) reward that character with an extra action point per level.

Each replacement description includes the following information:

Benefit: What the cybernetic replacement allows its recipient to do.

Type: Replacements can be external or internal. External replacements are subject to sunder attacks; internal replacements are not.

Hardness/Hit Points: The hardness and hit points of the replacement. Internal replacements don't have hardness.

Base Purchase DC: The purchase DC of the replacement (or the components to build it), at its specified Progress Level. Cybernetic attachments are cheaper to buy at higher Progress Levels; for each raised step in Progress Level, reduce the purchase DC by 2.

Restriction: The level of license required to purchase the replacement legally, and an appropriate black market purchase DC modifier.

ARTIFICIAL ORGAN (PL 5)

An artificial organ fully replaces a defective or destroyed biological organ, such as a heart, lung, eye, or ear.

Benefit: The artificial organ duplicates the function of its biological counterpart. It provides no special game benefits.

Type: Internal.

Hardness/Hit Points: –/2.

Base Purchase DC: 19.

Restriction: None.

PROSTHETIC ARM (PL 5)

A prosthetic arm fully replaces a lost or destroyed biological arm. The prosthetic arm may begin at the shoulder, elbow, or wrist.

Benefit: The prosthetic arm duplicates the function of its biological counterpart. It provides no special game benefits.

Type: External.

Hardness/Hit Points: 3/5.

Base Purchase DC: 17.

Restriction: None.

TABLE 11–2: SIDE EFFECTS

d% Roll	Side Effect
01–08	*Blurred Vision:* Character suffers a 20% miss chance on all attacks.
09–17	*Constant Trembling:* Character takes a –2 penalty on Dexterity-based skill checks.
18–25	*Cybernetic Rejection:* Character suffers 1d4 points of Constitution damage per day.
26–34	*Dizziness:* Character takes a –1 penalty on attack rolls, saving throws, ability checks, and skill checks.
35–42	*Impaired Hearing:* Static distortion imposes a –2 penalty on all Listen checks.
43–50	*Impaired Vision:* Distorted images impose a –2 penalty on Spot checks.
51–59	*Insomnia:* Character can only sleep for minutes at a time and gains insufficient rest to heal naturally.
60–67	*Muscle Cramps:* Character moves at half speed.
68–76	*Muscle Fatigue:* Character takes a –2 penalty on Strength-based skill checks.
77–84	*Power Surge:* Character is shaken for 1 round if wounded; a successful Fortitude save (DC 12) negates.
85–93	*Psychosis:* Character suffers 1d4 points of Charisma damage per day, lapsing into a coma if the score drops to 0.
94–100	*Sensory Overload:* Character is stunned for 1 round if wounded; a successful Fortitude save (DC 15) negates.

PROSTHETIC LEG (PL 5)

A prosthetic leg fully replaces a lost or destroyed biological leg. The prosthetic leg may begin at the thigh, knee, or ankle.

Benefit: The prosthetic leg duplicates the function of its biological counterpart. It provides no special game benefits.

Type: External.
Hardness/Hit Points: 3/7.
Base Purchase DC: 17.
Restriction: None.

ARTIFICIAL ORGAN UPGRADE (PL 6)

This upgraded version of the PL 5 artificial organ not only replaces a defective or destroyed biological organ but is also more resilient than its technological predecessor.

Benefit: The artificial organ upgrade duplicates the function of its biological counterpart and cannot be disabled if the recipient takes massive damage (see Massive Damage Effects, page 194).

Type: Internal.
Hardness/Hit Points: –/4.
Base Purchase DC: 21.
Restriction: None.

PROSTHETIC ARM UPGRADE (PL 6)

This upgraded version of the PL 5 prosthetic arm not only replaces a lost or destroyed arm but is also more resilient than its technological predecessor.

Benefit: The prosthetic arm upgrade duplicates the function of its biological counterpart but has a greater hardness and more hit points than the basic PL 5 prosthesis.

Type: External.
Hardness/Hit Points: 5/10.
Base Purchase DC: 19.
Restriction: None.

PROSTHETIC LEG UPGRADE (PL 6)

This upgraded version of the PL 5 prosthetic leg not only replaces a lost or destroyed leg but is also more resilient than its technological predecessor.

Benefit: The prosthetic arm upgrade duplicates the function of its biological counterpart but has a greater hardness and more hit points than the basic PL 5 prosthesis.

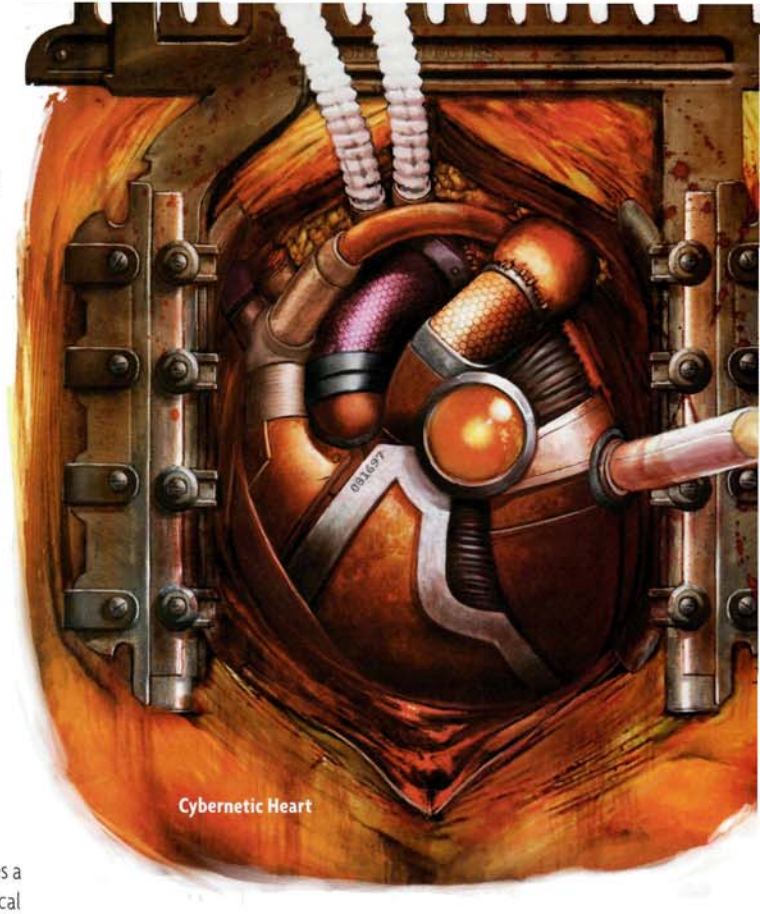
Type: External.
Hardness/Hit Points: 5/15.
Base Purchase DC: 19.
Restriction: None.

ADVANCED ARTIFICIAL ORGAN (PL 7)

This advanced version of the PL 5 artificial organ and PL 6 upgrade not only replaces a defective or destroyed biological organ but is also more resilient and less impairing than its technological predecessors.

Benefit: The advanced artificial organ duplicates the function of its biological counterpart and cannot be disabled if the recipient takes massive damage (see Massive Damage Effects, page 194). In addition, the advanced organ does not count toward the total number of cybernetic attachments the recipient can have before taking negative levels (see Number of Attachments, page 193).

Type: Internal.
Hardness/Hit Points: –/4.
Base Purchase DC: 24.
Restriction: None.



Cybernetic Heart

ADVANCED PROSTHETIC ARM (PL 7)

This upgraded version of the PL 5 prosthetic arm and PL 6 upgrade not only replaces a lost or destroyed arm but is also more resilient and less impairing than its technological predecessors.

Benefit: The advanced prosthesis duplicates the function of its biological counterpart. In addition, this advanced prosthesis does not count toward the total number of cybernetic attachments the recipient can have before taking negative levels (see Number of Attachments, page 193).

Type: External.
Hardness/Hit Points: 5/10.
Base Purchase DC: 22.
Restriction: None.

ADVANCED PROSTHETIC LEG (PL 7)

This upgraded version of the PL 5 prosthetic leg and PL 6 upgrade not only replaces a lost or destroyed leg but is also more resilient and less impairing than its technological predecessors.

Benefit: The advanced prosthesis duplicates the function of its biological counterpart. In addition, this advanced prosthesis does not count toward the total number of cybernetic attachments the recipient can have before taking negative levels (see Number of Attachments, page 193).

Type: External.
Hardness/Hit Points: 5/15.
Base Purchase DC: 22.
Restriction: None.

ENHANCEMENTS

Cybernetic enhancements are available starting at Progress Level 6. Unlike standard replacements, they bestow new abilities upon their recipients. Unless otherwise noted, enhancements don't add measurably to a recipient's weight.

Each enhancement description includes the following information:

Benefit: What the cybernetic enhancement allows its recipient to do.

Type: Enhancements can be external or internal. External enhancements are subject to sunder attacks; internal enhancements are not.

Hardness/Hit Points: The hardness and hit points of the enhancement. Internal enhancements don't have hardness.

Base Purchase DC: The purchase DC of the enhancement (or the components to build it), at its specified Progress Level. Cybernetic attachments are cheaper to buy at higher Progress Levels; for each raised step in Progress Level, reduce the purchase DC by 2.

Restriction: The level of license required to purchase the enhancement legally, and an appropriate black market purchase DC modifier.

ANTI-SHOCK IMPLANT (PL 6)

This tiny implant, embedded near the recipient's brain stem, protects itself and other cybernetic hardware against electricity damage.

Benefit: The implant negates the recipient's special vulnerability to electricity (see Benefits and Drawbacks, above).

Type: Internal.
Hardness/Hit Points: –/1.
Base Purchase DC: 15.
Restriction: None.

EXTERNAL WEAPON MOUNT (PL 6)

The recipient's prosthetic arm ends in a weapon instead of a hand.

Benefit: The recipient has a melee or ranged weapon attached to a prosthetic arm. Attempts to disarm the recipient of the attached weapon automatically fail, though the weapon can still be attacked (like any other weapon) in an attempt to destroy it.

Type: External.
Hardness/Hit Points: 10/5 (mount only).
Base Purchase DC: Melee weapon mount 15, ranged weapon mount 17 (the purchase DC does not include the prosthetic arm or weapon).
Restriction: Military (+3).

IDENTITY CHIP (PL 6)

Identity chips provide identification without requiring visual recognition—high-tech ID cards that function even when the wearer is unrecognizable.

Benefit: An identity chip functions as both legal ID and a credit card. The recipient can make Wealth checks even when separated from his funds.

Type: Internal.
Hardness/Hit Points: –/1.
Base Purchase DC: 5.
Restriction: None.

INJECTOR UNIT (PL 6)

This unit, attached the recipient's forearm or thigh, incorporates three medical hypo-syringes. Upon command, the unit can inject any or all of the medicinal substances into the recipient's bloodstream.

Benefit: The injector unit has three built-in hypos, and each hypo holds a single dose of one of the following medicinal chemicals: antitox (PL 6), boost (PL 6), neutrad (PL 6), sporekill (PL 6), or biocort (PL 7). As a free action during his turn, the recipient can contract his muscles to inject himself with any or all of these hypos, gaining the benefits immediately. A drained hypo can be removed and replaced as a full-round action. See Chapter 3: Gear for the effects and purchase DCs of these various substances.

Type: External.
Hardness/Hit Points: 2/5.
Base Purchase DC: 15 (medical hypos must be purchased separately).
Restriction: Licensed (+1).

NIGHTVISION OPTICS (PL 6)

The recipient's eyes are replaced with ocular implants that enable the character to see better in the dark. All of the recipient's eyes must be replaced to gain any benefit.

Benefit: The recipient gains darkvision out to a range of 60 feet.

Type: Internal.
Hardness/Hit Points: –/2 (per eye).
Base Purchase DC: 19.
Restriction: None.

SKILL IMPLANT (PL 6)

This small brain implant enables its recipient to perform a specific skill more adroitly.

Benefit: The recipient gains a +2 competence bonus on checks made with one class skill of his choice.

Different skills require different implants, and a skill implant cannot be modified to grant a bonus to another skill (for example, a Computer Use skill implant cannot be turned into a Listen skill implant).

A recipient may have multiple skill implants, but each is considered a separate cybernetic attachment.

Type: Internal.
Hardness/Hit Points: –/1.
Base Purchase DC: 20.
Restriction: None.

STABILIZER (PL 6)

A stabilizer releases chemical coagulants into a dying recipient's bloodstream to prevent excess blood loss, effectively stabilizing him. A stabilizer is usually installed near the recipient's heart.

Benefit: If reduced to negative hit points, the recipient automatically stabilizes (see Dying on page 141 of the *d20 Modern Roleplaying Game*).

Type: Internal.
Hardness/Hit Points: –/3.
Base Purchase DC: 22.
Restriction: None.

SUBCUTANEOUS BODY ARMOR (PL 6)

Subcutaneous body armor consists of small plates of flexible armor implanted under the recipient's skin.

Benefit: The character gains a natural armor bonus to Defense. The bonus depends on the density of the armor: Light +2, Medium +5, Heavy +8.

Type: Internal.
Hardness/Hit Points: –/varies. The armor has one-quarter the maximum hit points of the recipient.
Base Purchase DC: Light 15, Medium 20, or Heavy 25.
Restriction: Military (+3).

SUBCUTANEOUS CELL PHONE (PL 6)

The recipient has a small transceiver installed underneath the skin of her throat. The transceiver is connected to a tiny speaker located in the recipient's ear.

Benefit: The recipient may carry on conversations using the subcutaneous cell phone without raising her voice above a whisper; Listen checks made to hear the recipient suffer a –4 penalty. The tiny speaker implanted in the recipient's ear enables her to hear the other side of the conversation, but others cannot.

Type: Internal.
Hardness/Hit Points: –/2.
Base Purchase DC: 16.
Restriction: None.

TELESCOPIC OPTICS (PL 6)

The recipient's eyes are replaced with ocular implants that simulate the effects of binoculars, enabling the recipient to perceive distant objects more easily. All of the recipient's eyes must be replaced to gain any benefit.

Benefit: Telescopic optics reduce the range penalty for Spot checks to –1 for every 30 feet of distance (instead of –1 for every 10 feet).

Type: Internal.
Hardness/Hit Points: –/2 (per eye).
Base Purchase DC: 15.
Restriction: None.

VOICE STRESS ANALYZER (PL 6)

Sensors attached to the recipient's optic nerves and inner ear analyze minute physical indicators from living beings (including increased pulse galvanic skin response) and enable the recipient to better determine the emotional states of others.

Benefit: The recipient gains a +4 equipment bonus on all Sense Motive checks.

Type: Internal.
Hardness/Hit Points: –/4.
Base Purchase DC: 17.
Restriction: None.

ANTI-FLARE IMPLANTS (PL 7)

The recipient's corneas are replaced with artificial ones equipped with flare suppressors that react instantly to bright flashes of light.

Benefit: Blinding effects produced by bright lights have no harmful or debilitating effect on the recipient.

Type: Internal.
Hardness/Hit Points: –/1 (per eye).
Base Purchase DC: 14.
Restriction: None.

ANTI-STUN IMPLANT (PL 7)

This implant, embedded near the spine, shields the recipient's nervous system against stunning attacks.

Benefit: The recipient cannot be stunned.
Type: Internal.
Hardness/Hit Points: –/4.
Base Purchase DC: 24.
Restriction: Military (+3).

BODY REPAIR WEAVE (PL 7)

A delicate weave of subdermal biowires stimulates and repairs the body's damaged tissue.

Benefit: The recipient heals naturally at twice the normal rate (see the *d20 Modern Roleplaying Game*, page 142).

Type: Internal.
Hardness/Hit Points: –/4.
Base Purchase DC: 21.
Restriction: Licensed (+1).

DATA ARCHIVE (PL 7)

A data archive is a microcomputer implanted in the recipient's skull. It contains skill-related information stored on a series of biological data chips, or biochips.

Benefit: The recipient treats all skills as class skills. Furthermore, the recipient gains access to an information database that grants a +4 equipment bonus on all Knowledge checks.

Type: Internal.
Hardness/Hit Points: –/2.
Base Purchase DC: 27.
Restriction: None.

FEAT IMPLANT (PL 7)

Thanks to a chip implanted in the recipient's brain or a series of implants wired to the recipient's nervous system, the recipient gains special knowledge or some extraordinary ability.

Benefit: The feat implant gives the recipient a feat. The recipient must meet all of the feat's prerequisites to gain its benefits. If the feat implant is destroyed, the granted feat is lost as well.

A feat implant cannot duplicate a metamagic or psionic feat.

Type: Internal.
Hardness/Hit Points: –/5.
Base Purchase DC: 25.
Restriction: Military (+3).

FORTIFIED SKELETON (PL 7)

The recipient's skeleton is fortified with high-impact polymers, increasing his ability to shrug off physical damage.

Benefit: The recipient gains damage reduction 4/–.
Type: Internal.
Hardness/Hit Points: –/varies. The skeletal reinforcement has one-quarter the maximum hit points of the recipient.
Base Purchase DC: 32.
Restriction: Military (+3).

INITIATIVE IMPLANT (PL 7)

The initiative implant consists of a series of wires threaded around the recipient's spinal cord and attached to the recipient's nervous system. The implant stimulates faster response times.

Benefit: The recipient gains a +2 equipment bonus on initiative checks.

Type: Internal.
Hardness/Hit Points: –/10.
Base Purchase DC: 20.
Restriction: Military (+3).

INTERNAL WEAPON MOUNT (PL 7)

The recipient has a subcutaneous weapon embedded in her body, usually in a prosthetic forearm or hand. The weapon extends from the prosthesis and is visible when in use.

Benefit: The recipient has a melee or ranged weapon hidden under her skin. Attempts to disarm the recipient of the attached weapon automatically fail, and the weapon itself cannot be

attacked unless it is extended. Extending or retracting the weapon is a free action.

Spotting a subcutaneous weapon requires a successful Spot check opposed by the recipient's Sleight of Hand check. The weapon's size applies a modifier to the Sleight of Hand check (see Table 4–3: Concealing Weapons and Objects on page 95 of the *d20 Modern Roleplaying Game*).

Type: Internal.

Hardness/Hit Points: 10/5 (mount only).

Base Purchase DC: Melee weapon mount 17, ranged weapon mount 19 (the purchase DC does not include the prosthesis or weapon).

Restriction: Military (+3).

LASER OPTICS (PL 7)

The recipient's eyes are replaced with ocular implants capable of firing thin laser beams.

Benefit: Using laser optics is an attack action that does not provoke attacks of opportunity. A "laser eye" deals 2d6 points of fire damage, threatens a critical hit on a natural 20, and has a range increment of 20 feet. Each additional eye adds +2 to the damage roll (thus, a pair of laser eyes would deal 2d6+2 points of fire damage).

A creature equipped with multiple laser eyes must fire them simultaneously at the same target.

Type: Internal.

Hardness/Hit Points: –/2 (per eye).

Base Purchase DC: Single 25, pair 28.

Restriction: Military (+3).

LUMINOUS SKIN (PL 7)

Special skin grafts create luminous displays on the recipient's flesh. Most recipients use it purely for decoration, but the same technology can provide a built-in chronometer.

Benefit: The recipient can control the brightness of the luminescence as a free action, negating it entirely if desired. As its most intense, luminous skin can illuminate squares occupied by or adjacent to the recipient. The chronometer serves the same function as a wristwatch, including date, time, and alarm functions.

Type: Internal.

Hardness/Hit Points: –/– (luminous skin ceases to function when the recipient is killed).

Base Purchase DC: 4 (6 for chronometer version).

Restriction: None.

MICROCOMPUTER (PL 7)

The recipient has a miniature computer attached to his nervous system, usually at the base of the skull.

Benefit: The recipient may attempt Computer Use checks as a move action, rather than a full-round action. The microcomputer reduces by half the time required to operate remotes. A data port in the back of the unit allows for the insertion of a standard interface cable (purchase DC 5), allowing the recipient to transfer data without the benefit of a modem.

Type: Internal.

Hardness/Hit Points: –/4.

Base Purchase DC: 35 (36 with integrated cellular modem).

Restriction: Restricted (+2).

MINDSCREEN IMPLANT (PL 7)

A small implant in the recipient's brain protects him against mental attacks.

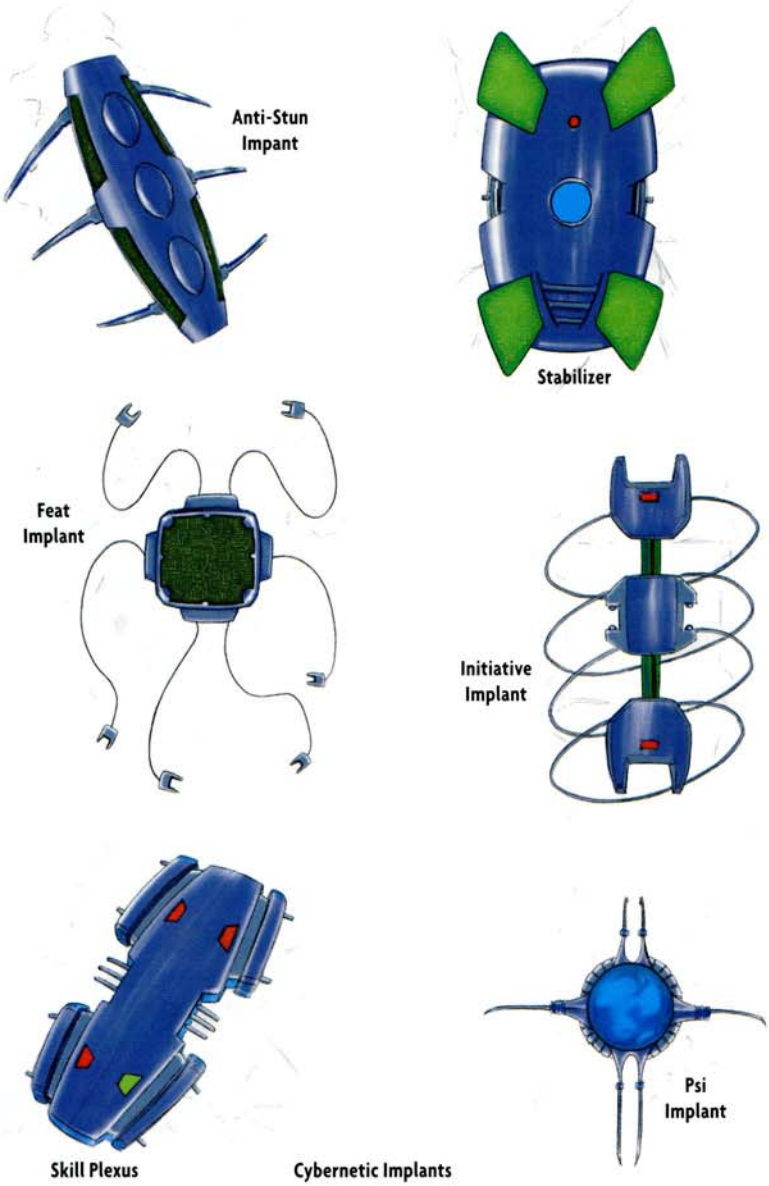
Benefit: The recipient gains a +2 equipment bonus on saving throws against mind-affecting attacks.

Type: Internal.

Hardness/Hit Points: –/2.

Base Purchase DC: 28.

Restriction: Military (+3).



Cybernetic Implants

PROSTHETIC ENHANCER (PL 7)

This implant attaches to a prosthetic arm or leg, making it stronger.

Benefit: If attached to a prosthetic leg, the prosthetic enhancer increases the recipient's base speed by +5 feet. In addition, any unarmed attack made with an enhanced prosthetic leg deals an additional 1 point of damage.

If attached to a prosthetic arm, the prosthetic enhancer grants a +2 bonus on Strength- and Dexterity-based ability checks and skill checks. In addition, any unarmed attack made with an enhanced prosthetic arm deals an additional 1 point of damage.

A prosthetic enhancer does not count toward the total number of cybernetic attachments the recipient can have before taking negative levels (see Number of Attachments, page 193).

Type: Internal.
Hardness/Hit Points: –/2.
Base Purchase DC: 22.
Restriction: None.

RAGE IMPLANT (PL 7)

This brain implant dramatically increases the amount of adrenaline and testosterone the recipient's body produces, temporarily boosting his strength and durability.

Benefit: The recipient can activate the implant as a free action once per day. Upon doing so, he temporarily gains a +4 bonus to Strength, a +4 bonus to Constitution, and a +2 morale bonus on Will saves, but he takes a –2 penalty to Defense.

The increase in Constitution increases the recipient's hit points by 2 per level, but these hit points go away at the end of the rage when his Constitution score drops back to normal. While raging, the recipient cannot use any Charisma-, Dexterity-, or Intelligence-based skills (except for Balance, Drive, Escape Artist, Intimidate, Pilot, or Ride), the Concentration skill, any abilities that require patience and concentration (including spellcasting and manifesting psionic powers), or any items that must be activated to function.

The rage lasts for a number of rounds equal to 3 + the recipient's (newly acquired) Constitution modifier. The recipient may prematurely end his rage.

At the end of the rage, the recipient loses the rage modifiers and restrictions and becomes fatigued for the remaining duration of the current encounter.

The increased Constitution triggered by the rage implant in now way obviates the negative levels bestowed for having too many cybernetic attachments.

Type: Internal.
Hardness/Hit Points: –/3.
Base Purchase DC: 24.
Restriction: Restricted (+2).

SKILL PLEXUS (PL 7)

This unit, implanted in the recipient's brain, allows multiple skill implants to function as a single cybernetic attachment (see Skill Implant, above).

Benefit: The recipient may have up to four skill implants attached to the skill plexus, and together they are treated as a single cybernetic attachment. However, if the skill plexus is destroyed, all of the attached skill implants are destroyed as well.

Type: Internal.
Hardness/Hit Points: –/4.
Base Purchase DC: 25 (does not include skill implants).
Restriction: None.

TARGETING OPTICS (PL 7)

The recipient's eyes are replaced with ocular implants that use a projected targeting reticle to improve the recipient's aim. All of the recipient's eyes must be replaced to gain any benefit.

Benefit: Targeting optics grant a +1 bonus on all attack rolls made with ranged weapons.

Type: Internal.
Hardness/Hit Points: –/2 (per eye).
Base Purchase DC: 17.
Restriction: Military (+3).

FEAT PLEXUS (PL 8)

This unit, implanted in the recipient's brain, allows multiple feat implants to function as a single cybernetic attachment (see Feat Implant, above).

Benefit: The recipient may have up to four feat implants attached to the feat plexus, and together they are treated as a single cybernetic attachment. However, if the feat plexus is destroyed, all of the attached feat implants are destroyed as well.

Type: Internal.
Hardness/Hit Points: –/4.
Base Purchase DC: 25 (does not include feat implants).
Restriction: Military (+3).

INVISIWARE (PL 8)

This technology enables its recipient to turn invisible for a short time. Invisiware uses crystalline refractors grafted to the skin and powered by rechargeable solar battery units protruding from various points on the recipient's body (usually the spine).

Benefit: By using invisiware to bend light around its body, a creature can turn invisible. An invisible creature gains a +40 bonus on Hide checks if immobile, or a +20 bonus if moving. Pinpointing the location of an invisible creature that isn't attempting to hide requires a Spot check (DC 40 if the creature is immobile or DC 20 if it is moving).

While invisible, the creature gains 50% concealment against attacks from other creatures that correctly pinpoint its fighting space. See Table 5–5: Attack Roll Modifiers in the *d20 Modern Roleplaying Game* for other effects of invisibility on combat.

Activating or deactivating invisiware is a free action. However, the technology consumes a great deal of the battery power; after 10 rounds (1 minute) of use, the solar batteries must be recharged for 1 hour, during which time the invisiware cannot be activated.

Type: External.
Hardness/Hit Points: 4/20.
Base Purchase DC: 35.
Restriction: Military (+3).

PSI IMPLANT (PL 8)

This brain implant stimulates neuron activity in underdeveloped regions of the recipient's brain, unlocking latent psionic abilities.

Benefit: The recipient gains the Wild Talent feat (described on page 362 of the *d20 Modern Roleplaying Game*).

Type: Internal.
Hardness/Hit Points: –/2.
Base Purchase DC: 31.
Restriction: Military (+3).

CHAPTER TWELVE:

MUTATIONS



Mutant Attack

The evolution of humanity materializes thematically in many science fiction settings, and comic-book heroes such as the X-Men, Spider-Man, and the Incredible Hulk fit neatly into many near-future and far-future campaigns. A mutation, as it's defined in this chapter, represents a fundamental change in the genetic structure of a creature. While a mutation can assume many forms, it typically signifies an abnormal trait or ability not common to the species. Mutations can be pronounced or unnoticeable. They may grant extraordinary abilities or effect subtle to grotesque changes in a creature's physiology. Mutations may appear only at birth or manifest as consequences of radiation exposure or some horrible physical trauma.

This chapter explains how mutations work in the *d20 Future* game and presents various theories for the origin of mutants. GMs unsure of how to include mutations in their *d20 Future* campaigns should review the entire chapter before allowing players to select mutations for their characters.

MUTANTS IN THE CAMPAIGN

Why include mutants and mutations in your *d20 Future* campaign? In short, mutations allow players to customize their characters in strange new ways, thereby giving them new abilities and roleplaying avenues to explore. The addition of mutant characters also provides adventure hooks for GMs interested in tackling the themes of individuality, isolation, and intolerance.

HOW ARE MUTANTS PERCEIVED?

Once a GM decides that mutations are appropriate for her *d20 Future* campaign, she must determine how mutant characters are perceived within the greater community. Mutations may be viewed as a form of punishment for humanity's hubris or folly—"just desserts" for misguided genetic experiments, nuclear holocaust, or toxic urban pollution. Regardless of their origins, mutants are typically

viewed as either the "next step in humanity's stride toward immortality" or "the debased offspring of scientists who enjoy playing God." Debates rage over scientific endeavors designed to propel humanity into its next stage of evolution. Caught in the middle of these debates are the mutants themselves, seen as paragons of scientific achievement or the abominable byproducts of "mad science." Many feel that the human ego will lead the world to its own destruction. Mutants crystallize this concept: In some minds, they represent what happens when scientific advancement does not temper itself with caution. In a post-apocalyptic world, mutants can serve as painful reminders of human arrogance and hubris.

WHERE DO MUTANTS COME FROM?

Once a GM has decided to include mutants in the campaign, she must determine where mutations come from. Do they come from just one place or one source? How common are mutants in the setting, and is this a consequence of the means by which they are created? Answering these questions before the campaign begins will certainly help the players ascertain the role of mutations in the game.

Deciding on the method(s) by which mutants are created can be as simple or as complex as the GM wishes. One campaign setting might reinforce the theme of human divergence, with humans evolving different mutations depending on their planet of origin. Another campaign setting might feature genetically enhanced super-soldiers created solely in government genetics facilities. The setting itself may dictate the logical source for mutations and make the task of determining a mutant's origins much easier. Some GMs may wish to incorporate multiple sources for mutations, from fabulously expensive gene therapy treatment centers to streetcorner chop-shops where characters can enter, drop down a wad of cash, and walk out with the latest designer mutations.

Here are some possible sources of mutations for use in any *d20 Future* campaign.

RADIATION

The concept of radiation as a source of mutation may derive from radiation's unpredictable effects on creatures. In a world bombarded by radiation, mutations among indigenous inhabitants seem likely. If radiation can make a character's hair fall out or his eyes glow in the dark, why can't it induce more radical changes?

The term "fall-out" describes single incidents of radiation creating mutations. This may occur when a radioactive item is lost in transit and mutates a creature that comes into contact with it, or it could be that a creature gets too close to a leaking nuclear reactor core. Unlike widespread mutations common in post-apocalyptic campaigns, fall-out as a source of mutation can appear in almost any campaign. It requires no special technology (as the radiation can come from a naturally occurring element) and also requires no intentional tampering. There is no built-in history with fall-out.

EXPERIMENTATION

In a controlled environment, science and technology can induce mutations. Lab experiments and technological research may result in the creation of mutants, and frequently the mutations that scientists induce are carefully planned to achieve a desired result. Although experimentation typically results in controlled mutations, lab accidents or simple human error can yield unexpected results.

MUTAGENIC COMPOUNDS

Mutagenic compounds are controllable chemicals that induce mutation, usually by contact. They can range from toxic sludge to ability-enhancing serums. Using a mutagenic compound to induce mutation is safer than bombarding the subject with radiation; it decreases the chances of radiation sickness and yields far more predictable results.

REAL-WORLD MUTATIONS

While the mutations in this chapter address the "fiction" in "science fiction," real-world mutation is far less enchanting. Radiation and mutagenic compounds don't transform characters into comic-book superheroes; they cause radiation burns, sickness, and death. Real mutation occurs slowly over eons, with minute changes occurring over thousands of generations rather than an instantaneously.

BIOWARE

Bioware science involves taking genetic material from one creature and grafting it to another, thereby altering the genetic structure of a recipient permanently. For example, grafting wings from one creature onto the body of another can be considered a mutation, particularly if the creature's DNA is also modified so that its offspring will have wings as well.

NATURAL SELECTION

The least glamorous source of mutation, natural selection is also the most common and most believable. Over millennia, creatures change and grow to better survive in their changing environment, while weak specimens are weeded out. Even the most minor adaptation—a slight change in height or build, for example—might be considered a mutation. One explanation for why a creature might suddenly manifest a severe mutation hinges on the theory that natural evolution sometimes "leaps forward," inducing a drastic change designed to help the mutated creature survive.

MAGIC AND PSIONICS

Included here for completeness are magic and psionics, which can transform a creature in wondrous if peculiar ways, mirroring the effects of certain mutations. (The ability to cast spells or manifest psionic powers may also be regarded as a mutation.) Magic is less a staple of science fiction than psionics, and rules for both appear in Chapter 10: FX Abilities of the *d20 Modern Roleplaying Game*.

HOW PREVALENT ARE MUTANTS?

As part of the campaign-creation process, a GM must determine the prevalence of mutants in the setting. Consider the following options when deciding on how common mutants are in society and the places where they are typically found.

MUTANTS NEAR

Mutants have either integrated or insinuated into society. In this type of setting, your next-door neighbors could be mutants—although you might not know it by looking at them.

A common theme in many science fiction horror settings involves the "hidden enemy"—a sinister evil or dangerous predator lurking nearby, posing as human or some other unassuming creature. Conversely, the setting might feature widespread mutants. Imagine a town overrun with acid-spewing cannibals or cities populated by three-eyed humans with scaly flesh.

A post-apocalyptic setting seems a particularly good place to introduce widespread mutant races. Most post-apocalyptic settings feature ruined cities, vast swaths of uninhabitable land, and various irradiated locales where mutants are likely to flourish.

TABLE 12–1: MUTATIONS

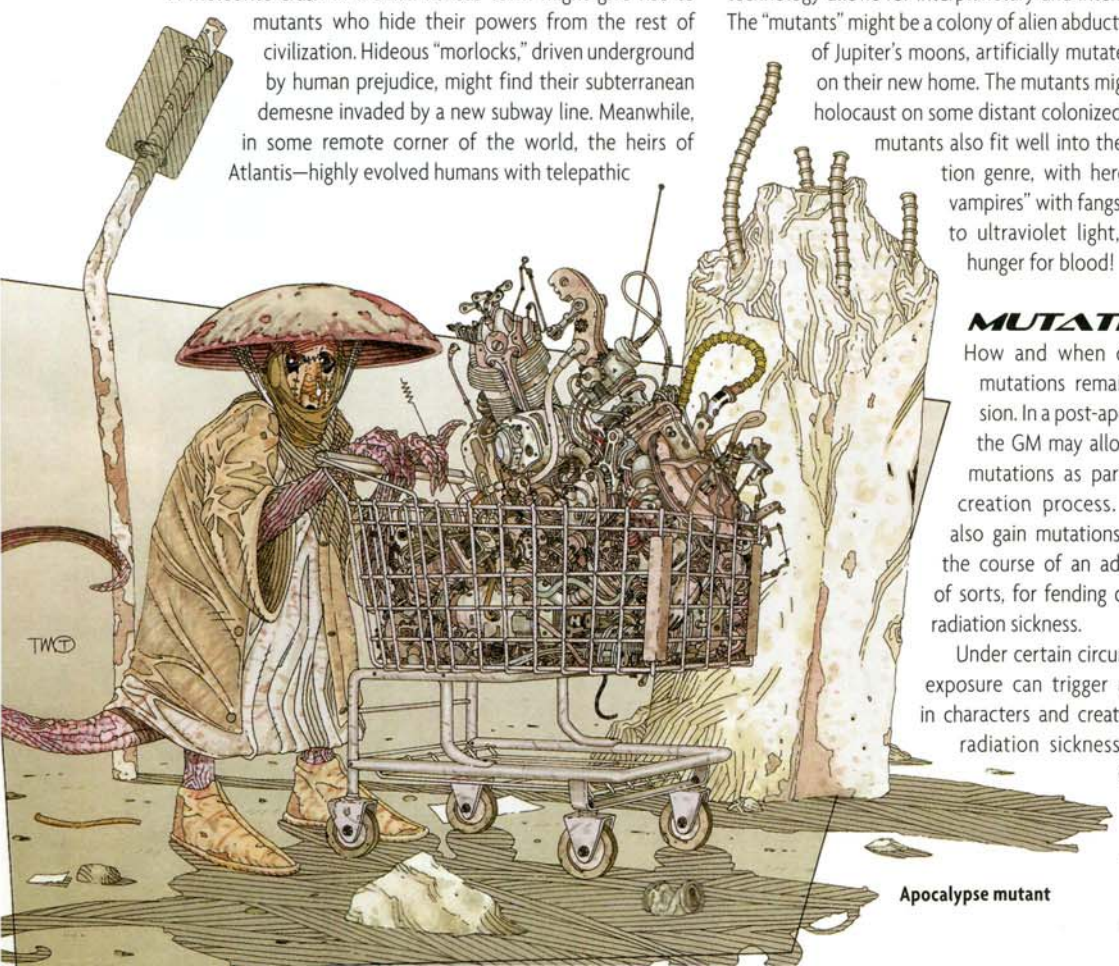
d%	Mutation	Type	MP Cost
01–02	Extra Digits	Cosmetic	0
03–04	Fins	Cosmetic	0
05–06	Forked Tongue	Cosmetic	0
07–08	Horns	Cosmetic	0
09–10	Scaly Skin	Cosmetic	0
11–12	Thin Fur Coat	Cosmetic	0
13–14	Unnatural Eyes	Cosmetic	0
15–16	Unnatural Hair	Cosmetic	0
17–18	Unnatural Skin	Cosmetic	0
19–20	Unnatural Voice	Cosmetic	0
21–22	Acidic Saliva	Minor	1
23–24	Adrenaline Jolt	Minor	3
25–26	Claws	Minor	1
27–28	Darkvision	Minor	3
29–30	Energy Diffusion	Minor	2
31–32	Fangs	Minor	1
33–34	Force Barrier	Minor	3
35–36	Gills	Minor	2
37–38	Great Horns	Minor	1
39–40	Hypersensitivity	Minor	3
41–42	Leaper	Minor	1
43–44	Scaly Armor	Minor	3
45–46	Scent	Minor	2
47–48	Second Wind	Minor	2
49–50	Smokescreen	Minor	1
51–52	Tail	Minor	1
53–54	Thick Fur Coat	Minor	1
55–56	Ultra Immune System	Minor	2
57–58	Wall Crawler	Minor	2
59–60	Webbed Digits	Minor	1
61–62	Echolocator	Major	5
63–64	Elasticity	Major	5
65–66	Energy Absorption	Major	4
67–68	Enlarged Form	Major	6
69–70	Exoskeleton	Major	5
71–72	Extra Arms	Major	6
73–74	Gazing Eye	Major	4
75–76	Pheromone Attraction	Major	6
77–78	Prehensile Tail	Major	4
79–80	Prickly Pear	Major	4
81–82	Radioactive	Major	5
83–84	Skeletal Reinforcement	Major	5
85–86	Stinger	Major	4
87–88	Telekinetic Mind	Major	5
89–90	Telepathy	Major	5
91–92	Tentacle	Major	6
93–94	Venomous Bite	Major	4
95–96	Vexing Voice	Major	4
97–98	Wings	Major	6
99–100	X-Ray Vision	Major	6

MUTANTS FAR

The notion that mutants exist in remote regions of Earth or the less-explored corners of the galaxy can provide a fascinating twist for exploration-themed campaigns.

A meteorite crash in a small Kansas town might give rise to mutants who hide their powers from the rest of civilization. Hideous "morlocks," driven underground by human prejudice, might find their subterranean demesne invaded by a new subway line. Meanwhile, in some remote corner of the world, the heirs of Atlantis—highly evolved humans with telepathic abilities—secretly conspire to conquer Earth and enslave the rest of its human inhabitants.

Science fiction also plays with the theme of mutants lurking in the depths of space, particularly at higher Progress Levels (when technology allows for interplanetary and interstellar space travel). The "mutants" might be a colony of alien abductees stranded on one of Jupiter's moons, artificially mutated to better survive on their new home. The mutants might be survivors of a holocaust on some distant colonized world. Deep-space mutants also fit well into the horror science fiction genre, with heroes battling "space vampires" with fangs, an extreme allergy to ultraviolet light, and an insatiable hunger for blood!



Apocalypse mutant

MUTATIONS

How and when characters acquire mutations remains the GM's decision. In a post-apocalyptic campaign, the GM may allow players to select mutations as part of the character creation process. A character may also gain mutations and drawbacks in the course of an adventure—a reward, of sorts, for fending off a nasty bout of radiation sickness.

Under certain circumstances, radiation exposure can trigger random mutations in characters and creatures. The rules for radiation sickness (as presented in Chapter 4: Environments) do not normally allow for this possibility;

however, a GM who allows mutations in her campaign might consider introducing them in this fashion. Conversely, if a player doesn't want his character to have mutations, the GM should not force them upon the character. Mutations aren't intended to make a character less fun to play.

Ordinarily, a GM should allow players to select appropriate mutations and drawbacks for their characters using the Mutation Point (MP) system presented below. However, for GM-controlled creatures and supporting characters, the GM can determine mutations randomly. Whenever a creature or supporting character gains a mutation, the GM may roll percentile dice and consult Table 12–1: Mutations below, then select an appropriate number of drawbacks with a total MP value equal to or greater than the MP cost of the randomly determined mutation.

All special qualities granted by mutations are considered extraordinary abilities (as defined in the *d20 Modern Roleplaying Game*, pages 225–226). Using an extraordinary ability is a free action unless noted otherwise.

MUTATION POINTS

Mutation Points (MP) provide a simple method of selecting mutations while preserving game balance. All creatures (including heroes) begin play with 0 MP. A creature gains MP by selecting one or more drawbacks—physical deformities and disabilities that make the creature less effective in play. A creature can then "spend" the MP on one or more beneficial mutations. The total MP spent on beneficial mutations cannot exceed the total MP the creature gains from drawbacks. A creature may still have unspent MP after choosing beneficial mutations, however. These unspent MP can be spent on new mutations at a later time.

For example, a player wants his character to have the Enlarged Form mutation, which costs 6 MP. To compensate, the character must take at least 6 MP worth of drawbacks. The player selects the Ability Decay drawback (3 MP), the Light Sensitivity drawback (1 MP), and the Mindslave drawback (2 MP). The character effectively gains one major mutation at the cost of three drawbacks and is left with 0 MP.

TABLE 12–2: DRAWBACKS

d%	Drawback	MP Value
01–05	Ability Decay [1]	4
06–10	Blood Hunger	1
11–15	Brittle Bones	4
16–20	Combat Fear	4
21–25	Cybernetic Dependency	6
26–30	Festering Sores	2
31–35	Frailty	3
36–40	Heat/Cold Susceptibility	1
41–45	Lethargy	2
46–50	Light Sensitivity	1
51–55	Lost Arm	3
56–60	Mindslave	2
61–65	Neutrad Dependency	5
66–70	Pheromone Repulsion	1
71–75	Poisonous Blood	6
76–80	Rapid Aging	2
81–85	Reduced Speed [1]	3
86–90	Thin Skin	5
91–95	Ultraviolet Allergy	3
96–100	Weak Immune System	1

1 You may take this drawback multiple times. Its effects stack.

MUTATION BONUSES

This chapter introduces a new type of bonus that applies to skill checks, attack rolls, saving throws, and other rolls: the mutation bonus. A mutation bonus stacks with bonuses of other types but does not stack with other mutation bonuses. See page 28 of the *d20 Modern Roleplaying Game* for more information on stacking bonuses.

MUTATION DESCRIPTIONS

This chapter introduces four types of mutations: cosmetic mutations, minor mutations, major mutations, and drawbacks.

Cosmetic Mutations: The simplest and least mechanically complicated mutation is a cosmetic mutation. A cosmetic mutation has no game effect other than to change a creature's appearance in some fashion. Cosmetic mutations cost 0 MP.

Minor Mutations: A minor mutation not only changes a creature's appearance in some fashion but also grants it a beneficial (if minor) special ability or useful feature, such as darkvision or gills. A minor mutation costs 1–3 MP and can usually be offset by a single drawback.

Major Mutations: A major mutation fundamentally changes the genetics and physiology of a particular creature. Moreover, it grants the creature a beneficial special ability or feature it couldn't otherwise possess, such as telekinesis or the ability to fly. A major mutation costs 4 or more MP and must be offset by one or more drawbacks.

Drawbacks: A creature with minor or major mutations also has drawbacks to offset them. Drawbacks are special disabilities or vulnerabilities that negatively affect a creature. Each drawback has an MP value, and a creature can spend these MP on minor and major mutations to offset the negative effects of the drawback.

ABILITY DECAY [DRAWBACK]

Your body or mind suffers from some marked deformity or deterioration.

MP Value: 4.

Drawback: One of your ability scores (your choice) permanently decreases by 2. You cannot apply this drawback to an ability score of 3 or less.

Special: You may take this drawback multiple times. Its effects stack.

ACIDIC SALIVA [MINOR]

Your saliva can burn other creatures like acid.

MP Cost: 1.

Benefit: Your bite attack deals an extra 1d4 points of acid damage with each successful hit.

Special: You must have a natural bite attack to take this mutation. You cannot gain this mutation if you have the Venomous Bite mutation.

ADRENALINE JOLT [MINOR]

You can flood your bloodstream with extreme amounts of adrenaline to temporarily boost your Strength or Dexterity.

MP Cost: 3.

Benefit: Once per day, as a free action, you can temporarily increase either your Strength or your Dexterity by 1d4+1 points. The increase lasts for a number of rounds equal to 3 + your Constitution modifier.

BLOOD HUNGER [DRAWBACK]

You crave the taste of blood. Moreover, you need to drink blood to survive.

MP Cost: 1.

Drawback: You must drain a pint of blood from a living creature once every 24 hours. Doing so is an attack action, and you can only drain blood from a willing, helpless, or dying (but not dead) creature. The bitten creature takes normal damage from the bite attack plus an extra 1d6 points of damage from the blood loss.

If you go 24 hours without consuming blood, you take 1d4 points of Constitution damage. Drinking a pint of blood cures the ability damage caused by blood deprivation in 1d6 rounds. Ability damage caused by blood deprivation cannot be restored through natural healing.

Special: You must have a natural bite attack to take this drawback.

BRITTLE BONES [DRAWBACK]

Your bones weaken such that you can no longer withstand hard or sudden impacts.

MP Value: 4.

Drawbacks: Your massive damage threshold decreases by 3. In addition, you take an additional 1d6 points of damage from a fall.

Special: You cannot take this drawback if you have the Skeletal Reinforcement mutation.

CLAWS [MINOR]

Your hands mutate into sharp claws.

MP Cost: 1.

Benefit: You gain a single claw attack that deals slashing damage dependent on your size: Small 1d4, Medium-size 1d6, Large 1d8. If you get multiple attacks in a round, you can strike with multiple claws. Your claws are treated as natural weapons and do not provoke attacks of opportunity.

Having claws does not adversely affect your manual dexterity.

COMBAT FEAR [DRAWBACK]

Due to a chemical imbalance in your brain, you are gripped by an inexplicable fear whenever you face a dangerous or frightening situation.

MP Value: 4.

Drawback: After initiative is rolled but before you take your first action in combat, make a Will saving throw (DC 15). If you fail the Will save, you are shaken for the rest of the encounter, taking a –2 penalty on attack rolls, saving throws, and skill checks. If the save succeeds, you overcome your moment of fear and negate the ill effects.

CYBERNETIC DEPENDENCY [DRAWBACK]

Radiation exposure causes your body tissues to degenerate. You rely on a cybernetic implant to repair damage to your body.

MP Value: 6.

Drawback: You need a body repair weave (see Chapter 11: Cybernetics, page 197) to heal naturally. For you, the body repair weave does not confer its usual benefit (improved natural healing). If the implant is destroyed, you cannot heal damage naturally until it is replaced or repaired.

Special: This drawback is available only in Progress Level 7 or higher campaigns.

DARKVISION [MINOR]

You gain darkvision.

MP Cost: 3.

Benefit: You can see in total darkness out to a range of 60 feet. Darkvision is black and white only but is otherwise like normal sight.

ECHOLOCATOR [MAJOR]

You develop the ability to absorb sound waves and translate them into mental images that accurately portray the surrounding environment. This ability is similar to a bat's ability to operate and hunt in total darkness via echolocation.

MP Cost: 5.

Benefit: You gain the blindsight ability (see the *d20 Modern Roleplaying Game*, page 226) out to a range of 60 feet.

ELASTICITY [MAJOR]

You can bend and twist your body in unnatural ways and squeeze through very tight spaces.

MP Cost: 4.

Benefit: You gain a +10 mutation bonus on Escape Artist checks. Moreover, you can squeeze through an opening or passage one-tenth as wide and tall as your height, in inches. For example, a 6-foot-tall character (72 inches) can squeeze through a 7-inch-wide, 7-inch-tall opening or passage. A creature using this mutation to move through a tight space moves at one-quarter normal speed.

ENERGY ABSORPTION [MAJOR]

You can absorb impressive amounts of harmful energy.

MP Cost: 4.

Benefit: You gain resistance 10 to two types of energy or resistance 20 to one type of energy, chosen from the following list: acid, cold, electricity, fire, or sonic/concussion.

ENERGY DIFFUSION [MINOR]

Your body's ability to withstand energy damage increases.

MP Cost: 2.

Benefit: You gain resistance 5 to two types of energy or resistance 10 to one type of energy, chosen from the following list: acid, cold, electricity, fire, or sonic/concussion.

ENLARGED FORM [MAJOR]

You grow, becoming an freakishly large specimen of your kind.

MP Cost: 6.

Benefits: You become as large as your size category allows (8 feet tall for Medium-size characters, 4 feet tall for Small characters). However, you function in many ways as if you were one size category larger. Whenever you are subject to a size modifier or special size modifier for an opposed check (such as during grapple checks, bull rush attempts, and trip attempts), you are treated as one size larger when it is advantageous to you. You are also considered to be one size larger when determining whether special attacks based on size (such as improved grab or swallow whole) can affect you. You can use weapons designed for a creature one size larger without penalty (for example, a Medium-size character with this mutation can wield a Large weapon one-handed).

This mutation does not change your face or reach.

EXOSKELETON [MAJOR]

A thick exoskeleton forms over your skin. The exoskeleton usually consists of interlocking plates of bone or chitin covering 90% or more of your body.

MP Cost: 5.

Benefit: You gain a +3 natural armor bonus to Defense, or your existing natural armor bonus improves by 3.

Special: A creature with fur, scales, or the Scaly Armor mutation cannot gain this mutation.

EXTRA ARMS [MAJOR]

You grow an additional pair of arms. The extra arms look and behave exactly like your other arms.

MP Cost: 6.

Benefit: As a creature with more than two arms, you gain a +4 mutation bonus on Climb checks and grapple checks. For the purposes of combat, both extra arms are treated as "off hands" (that is, you still have only one primary hand).

Special: If you have three or more natural claw attacks, you meet the prerequisites for the Multiattack feat (see the *d20 Modern Roleplaying Game*, page 229). This mutation does not give you Multiattack as a bonus feat, however.

EXTRA DIGITS [COSMETIC]

You gain an extra digit on each hand and foot. The extra fingers or toes, although fully functional, do not confer any special benefit, nor do they hinder you in any way.

MP Cost: 0.

Benefit: None.

FANGS [MINOR]

Your teeth mutate into vicious fangs.

MP Cost: 1.

Benefit: You gain a vicious bite attack that deals piercing damage dependent on your size: Small 1d4, Medium-size 1d6, Large 1d8. If you get multiple attacks in a round, you can bite multiple times. Your bite is treated as a natural weapon and does not provoke attacks of opportunity.

Special: This mutation can be used in conjunction with the Acidic Saliva or Venomous Bite mutation.

FESTERING SORES [DRAWBACK]

Your skin is covered with painful, festering sores.

MP Value: 2.

Drawback: The festering sores are more aggravating than harmful, but they make it especially hard to wear armor. When you wear any type of armor, decrease the armor's maximum Dexterity bonus by –2 and increase its armor penalty by +4.

FINS [COSMETIC]

Your body sprouts fishlike fins. A fin might begin on the top of your head and go all the way down your spine. Others might appear on your forearms or calves, or they might sprout from your shoulders or ears. The fins confer no special abilities.

MP Cost: 0.

Benefit: None.

FORCE BARRIER [MINOR]

You can generate an electromagnetic force field around yourself to deflect or absorb incoming attacks.

MP Cost: 3.

Benefit: As a free action, you can generate an invisible electromagnetic barrier around yourself that provides damage reduction 3/– against incoming weapon attacks and force effects. The barrier lasts a number of rounds equal to your current Constitution modifier (minimum 1 round). You can create the force field three times per day.

HIDING PHYSICAL DEFORMITIES

Many of the mutations in this chapter come with physical deformities. Some mutations are easy to hide, while others are harder to conceal.

Any mutation that alters a creature's physical appearance imposes a penalty on the creature's Disguise checks. For creatures trying to conceal multiple physical deformities or alterations, the penalties stack. A cosmetic mutation imposes a –1 penalty on Disguise checks, while a minor or major mutation imposes a –2 penalty on Disguise checks. Drawbacks do not apply penalties to Disguise checks.

For example, a character with the Forked Tongue (cosmetic –1), Great Horns (minor –2), and Scaly Armor (minor –2) mutations takes a –5 penalty on Disguise checks made to conceal her mutations.

Special: Portable electronic devices such as cell phones, sensor comps, and headsets temporarily cease to function if held or worn by you while the electromagnetic force barrier is in effect.

FORKED TONGUE [COSMETIC]

You gain a forked tongue like that of a snake. Your new tongue might be a different color and longer than your old one.

MP Cost: 0.

Benefit: None.

FRAILTY [DRAWBACK]

Your body is particularly vulnerable to the ravages of poison, disease, radiation, and other ailments. You also have trouble stabilizing when severely wounded.

MP Value: 3.

Drawback: You take a –2 penalty on all Fortitude saves, including saves made to stabilize at negative hit points.

Special: You cannot take this mutation if you have the Great Fortitude feat.

GAZING EYE [MAJOR]

You grow an extra eye in the middle of your forehead. In addition to improving your visual acuity, the "weird eye" gives you a special gaze attack that makes other creatures tremble.

MP Cost: 4.

Benefits: The extra eye grants a +2 mutation bonus on Search and Spot checks.

As a free action, you can use the extra eye to make a special gaze attack against one creature within 20 feet. The creature must succeed on a Will save (DC 10 + one-half your level + your Charisma modifier) or be shaken for 2d6 rounds. This gaze attack is a mind-affecting compulsion, and any creature that successfully saves against your gaze attack cannot be affected again for 24 hours. The gazing eye has no effect on other creatures with gazing eyes.

GILLS [MINOR]

You grow a set of gills that can draw the oxygen out of water. The gills appear on your neck, chest, or back (near your windpipe or lungs).

MP Cost: 2.

Benefit: You can breathe both air and water. You can operate underwater indefinitely, with no fear of drowning.

GREAT HORNS [MINOR]

You sprout horns capable of damaging or goring a target. The horns may be curled like a ram's or pointed like a bull's. Conversely, you may grow a single horn in the middle of the forehead, like that of a rhinoceros, or a large rack of antlers, like that of an moose.

MP Cost: 1.

Benefit: You gain a single gore attack that deals bludgeoning damage (curled ram horns or moose antlers) or piercing damage (pointed bull horns or one great rhino horn). The amount of damage depends on your size: Small 1d4, Medium-size 1d6, Large 1d8. If you get multiple attacks in a round, you can gore multiple times. Your horns are treated as natural weapons and do not provoke attacks of opportunity.

HEAT/COLD SUSCEPTIBILITY [DRAWBACK]

Your body does not react well to particularly hot or cold temperatures.

MP Value: 1.

Drawback: You take double damage from prolonged exposure to extreme heat or cold (see the *d20 Modern Roleplaying Game*, page 213, for Heat and Cold rules).

HORNS [COSMETIC]

Two or more tiny horns sprout from your head, shoulders, or arms. These blunt-tipped nubs are too small to serve any use in combat.

MP Cost: 0.

Benefit: None.

HYPERSENSITIVITY [MINOR]

Your are particularly (some might say unnaturally) sensitive to your surroundings.

MP Cost: 3.

Benefit: You gain a +2 mutation bonus on Listen, Search, and Spot checks. You also gain Blind-Fight as a bonus feat.

LEAPER [MINOR]

You gain the ability to leap incredible distances.

MP Cost: 1.

Benefit: You gain a +10 mutation bonus on all Jump checks.

LETHARGY [DRAWBACK]

Thanks to slow electrical impulses along your central nervous system, you have trouble reacting quickly to danger.

MP Value: 2.

Drawback: You take a –2 penalty on all Reflex saves.

Special: You cannot take this mutation if you have the Lightning Reflexes feat.

LIGHT SENSITIVITY [DRAWBACK]

Your eyes cannot adjust to bright light.

MP Value: 1.

Drawbacks: Abrupt exposure to bright light (such as sunlight) blinds you for 1 round. On subsequent rounds, you take a –1 penalty on attack rolls, Search checks, and Spot checks as long as you remain in the affected area.

LOST ARM [DRAWBACK]

One of your arms withers or gets eaten away, leaving behind a stump.

MP Value: 3.

Drawback: You lose one arm of your choice. You cannot effectively wield weapons that require two hands. In addition, you take a –2 penalty on Climb checks, Swim checks, and grapple checks.

Special: You can replace your lost arm with a cybernetic replacement arm, assuming such technology is available and you can afford it (see Chapter 11: Cybernetics).

MINDSLAVE [DRAWBACK]

You have certain mental deficiencies that make it harder to resist mind-influencing effects.

MP Value: 2.

Drawback: You take a –2 penalty on all Will saves.

Special: You cannot take this mutation if you have the Iron Will feat.

NEUTRAD DEPENDENCY [DRAWBACK]

You rely on a medical compound called neutrad to survive.

MP Value: 6.

Drawback: If you go 24 hours without taking a dose of neutrad (see Chapter 3: Gear, page 69), you must make a successful Fortitude save (DC 15) or take 1 point of Strength damage and 1 point of Constitution damage. Taking a dose of neutrad cures the ability damage caused by neutrad deprivation in 1d6 rounds. Ability damage caused by neutrad deprivation cannot be restored through natural healing.

Special: This drawback can be taken only in Progress Level 6 or higher campaigns (when neutrad is available).

PHEROMONE ATTRACTION [MAJOR]

You can regulate the production of pheromones in your body and release them at will, altering the moods of other nearby creatures.

MP Cost: 6.

Benefits: You gain a +4 mutation bonus on all Bluff, Diplomacy, Handle Animal, and Intimidate checks made against creatures within 30 feet of you.

Special: You cannot take this mutation if you have the Pheromonal Repulsion drawback.

PHEROMONE REPULSION [DRAWBACK]

You release pheromones that other creatures find repulsive.

MP Value: 1.

Drawbacks: You take a –4 penalty on all Diplomacy and Handle Animal checks made against creatures within 30 feet of you.

Special: You cannot take this drawback if you have the Pheromone Attraction mutation.

POISONOUS BLOOD [DRAWBACK]

Your blood is poisonous to your own body. You must take regular doses of antitox to resist the poison's effects.

MP Value: 6.

Drawback: If you go 24 hours without taking a dose of antitox (see Chapter 3: Gear, page 69), you must make a successful Fortitude save (DC 15) or take 1d4 points of Constitution damage. Taking a dose of antitox cures the ability damage caused by antitox deprivation in 1d6 rounds. Ability damage caused by antitox deprivation cannot be restored through natural healing.

Special: This drawback can be taken only in Progress Level 6 or higher campaigns (when antitox is available).

PREHENSILE TAIL [MAJOR]

You grow a tail that can grasp and hold objects.

MP Cost: 4.

Benefits: A prehensile tail grants a +2 mutation bonus on Balance checks. It can also grasp and manipulate a simple object up to one size category smaller than the creature's size category. For example, a Medium-size creature can use its prehensile tail to grasp and manipulate an object of up to Small size. A prehensile tail cannot be used to operate a piece of equipment that requires opposable digits or fine motor control (such as a cell phone).

A creature can "hang" from its prehensile tail indefinitely by wrapping it around a larger object, thereby freeing up its other limbs. The prehensile tail isn't dexterous or strong enough to fire ranged weapons or make melee attacks, however.

Special: A creature that already has a tail cannot gain this mutation.

PRICKLY PEAR [MAJOR]

Bony spurs or chitinous spikes protrude from your joints, giving you a jagged profile and making you dangerous to grapple.

MP Cost: 4.

Benefits: You deal 1d4 points of piercing damage to any creature you are grappling or any creature that grapples you. Furthermore, you deal 1d4 points of piercing damage per round to any creature that swallows you using the swallow whole ability.

RADIOACTIVE [MAJOR]

You are immune to some radiation and can emit bursts of harmful radiation from your body.

MP Cost: 5.

Benefits: You are immune to mild, low, and moderate degrees of radiation exposure (see Radiation Sickness in Chapter 4: Environments for more information). In addition, your body acts as a radiation battery, storing the energy for later use. Once per day as a free action, you may release a 60-foot-radius burst of radiation centered on you. All creatures within the burst radius are exposed to a moderate degree of radiation (Fortitude DC 18, incubation period 3d6 hours, initial and secondary damage 1d6–1 Con).

RAPID AGING [DRAWBACK]

You age at an increased rate due to the strain your mutations place on your cells. You appear many years older than your actual age.

MP Value: 2.

Drawback: Double your actual age to get your effective age. Your effective age determines your ability score penalties, as shown on Table 13–2: Maximum Ages and Aging Effects (in Chapter 13: Xenobiology). You do not gain any of the benefits of aging (increased mental ability scores).

REDUCED SPEED [DRAWBACK]

You are unable to move as quickly as normal due to various mutations and deformities.

MP Value: 3.

Drawback: Reduce your speed by 5 feet. This speed decrease also applies to any natural burrow, climb, fly, or swim speed you might have.

Special: You may take this drawback multiple times. Its effects stack.

SCALY ARMOR [MINOR]

Thick, overlapping scales cover your body. The scales are hard but dry to the touch.

MP Cost: 3.

Benefit: You gain a +2 natural armor bonus to Defense, or your existing natural armor bonus improves by 2.

Special: A creature with fur, chitin, or the Exoskeleton mutation cannot gain this mutation.

SCALY SKIN [COSMETIC]

Your flesh becomes thicker and less porous, giving rise to a thin layer of scales covering your flesh. The scales are typically smooth and dry, like those of a snake, and can vary in color and pattern. The scales may not cover your entire body, instead appearing in patches on your face, neck, torso, and limbs.

MP Cost: 0.

Benefit: None.

Special: A creature with fur, scales, or chitin cannot gain this mutation.

SCENT [MINOR]

You can detect approaching enemies, sniff out hidden foes, and track by sense of smell. You can also identify familiar odors the way humans do familiar sights.

MP Cost: 2.

Benefit: You gain the scent special ability (see the *d20 Modern Roleplaying Game*, page 228).

SECOND WIND [MINOR]

You can shrug off minor wounds with ease.

MP Cost: 2.

Benefit: Once per day, as a free action, you can heal yourself of a number of points of damage equal to your Constitution modifier (minimum 1).

SKELETAL REINFORCEMENT [MAJOR]

Your bones become more resilient, allowing you withstand greater amounts of punishment.

MP Cost: 5.

Benefits: Your massive damage threshold increases by +3. In addition, the damage you take from a fall is reduced by one die.

Special: This mutation stacks with the Improved Damage Threshold feat. You cannot take this mutation if you have the Brittle Bones drawback.

SMOKESCREEN [MINOR]

You expel chemicals through your pores to create an inky-black cloud of smoke, engulfing yourself and the surrounding area.

MP Cost: 1.

Benefit: Once per day, as a free action, you can produce a 20-foot-radius cloud of smoke centered on yourself. The cloud is stationary once created. The inky-black smoke obscures all sight, including darkvision, beyond 5 feet. A creature 5 feet away has one-half concealment (20% miss chance). Creatures farther away have total concealment (50% miss chance, and the attacker cannot use sight to locate the target).

This ability functions underwater. A moderate wind or current disperses the cloud in 4 rounds. A strong wind or current disperses the cloud in 1 round.

STINGER [MAJOR]

A poisonous stinger erupts from some part of your body—usually a needlelike barb protruding from an arm or leg joint, or a scorpionlike stinger on the end of a tail or similar appendage.

MP Cost: 4.

Benefit: Your sharp stinger deals piercing damage dependent on your size: Small 1d4, Medium-size 1d6, Large 1d8. If you get multiple attacks in a round, you can sting multiple times. The stinger is treated

as a natural weapon and does not provoke attacks of opportunity. In addition, the stinger injects poison into the target, with effects similar to puffer poison (see Table 2–5: Poisons on page 54 of the *d20 Modern Roleplaying Game*).

Special: This mutation can be used in conjunction with the Tail mutation, but the tail cannot be used as a bludgeoning weapon during the same round the stinger is used.

TAIL [MINOR]

You grow a thick tail. The tail may be fur-covered, slender and whip-like like a rat's, or scaly like a lizard's. Although the tail improves your balance and can serve as a weapon, it cannot be used for gripping objects.

MP Cost: 1.

Benefits: The tail provides a +2 mutation bonus on all Balance checks. In addition, you gain a single tail slam attack that deals bludgeoning damage dependent on your size: Small 1d4, Medium-size 1d6, Large 1d8. If you get multiple attacks in a round, you can strike multiple times with your tail. Your tail is treated as a natural weapon and does not provoke attacks of opportunity.

Special: A creature that already has a tail or the Prehensile Tail mutation cannot gain this mutation. This mutation can be used in conjunction with the Stinger mutation.

TELEKINETIC MIND [MAJOR]

You can perform minor telekinetic feats.

MP Cost: 5.

Benefit: As a move action, you can move an unattended object weighing up to 5 pounds up to 15 feet in any direction. Using this ability does not provoke attacks of opportunity. You must be able to see the object you are affecting, however. You must concentrate on the object to move it telekinetically. If your concentration is broken while you are levitating the object (see the Concentration skill description on page 53 of the *d20 Modern Roleplaying Game*), the object falls.

This ability can be used at will.

TELEPATHY [MAJOR]

You gain limited telepathic ability.

MP Cost: 5.

Benefit: As a free action, you can forge a telepathic link with another living creature within 100 feet of you. The creature with which you form the link must have an Intelligence score of 6 or higher, and it must be a willing participant in the link. You can communicate telepathically through the link even if you do not share a common language, but no special control or influence is established as a result of the link. If you and the linked creature move more than 100 feet apart, the telepathic link severs instantly.

You can telepathically link with only one creature at a time during any given round, but the ability can be used at will.

TENTACLE [MAJOR]

A single tentacle grows from your side or back. The tentacle might resemble an octopus's suckered tentacle or a simple, scaly pseudopod.

MP Cost: 6.

Benefits: The tentacle grants a +4 mutation bonus on grapple checks. It can also grasp and manipulate a simple object of your size category or smaller. For example, a Medium-size creature can use the tentacle to grasp and manipulate a Medium-size or smaller object. The tentacle cannot be used to operate a piece of equipment that requires opposable digits or fine motor control (such as a cell phone).

You can "hang" from your tentacle indefinitely by wrapping it around a larger object, thereby freeing up your other limbs. The tentacle isn't dexterous enough to fire ranged weapons, but it can be used to make a slam attack. The tentacle's slam attack deals an amount of bludgeoning damage dependent on your size: Small 1d4, Medium-size 1d6, Large 1d8. If you get multiple attacks in a round, you can strike with the tentacle multiple times. The tentacle is treated as a natural weapon with a 10-foot reach, and attacks made with it do not provoke attacks of opportunity.

THICK FUR COAT [MINOR]

You grow a thick, protective layer of fur over your body.

MP Cost: 1.

Benefits: You gain a +4 mutation bonus on Fortitude saves against extreme cold temperatures (see the *d20 Modern Roleplaying Game*, page 213).

Special: A creature with fur, scales, or chitin cannot gain this mutation.

THIN FUR COAT [COSMETIC]

You grow a thin coat of brown or golden-brown fur, similar to that of a small mammal.

MP Cost: 0.

Benefit: *None.*

Special: A creature with fur, scales, or chitin cannot gain this mutation.

THIN SKIN [DRAWBACK]

You are more susceptible to harm.

MP Value: 5.

Drawback: You take 1 additional point of damage each time you are wounded.



Wall Crawler Mutation

ULTRA IMMUNE SYSTEM [MINOR]

You develop a powerful immune system capable of repelling many poisons, diseases, and radiation sickness.

MP Cost: 2.

Benefit: You gain Ultra Immune System as a bonus feat (see page 15), even if you don't meet the feat's prerequisite. The bonus you gain on Fortitude saves against poisons, diseases, and radiation is treated as a mutation bonus.

ULTRAVIOLET ALLERGY [DRAWBACK]

Ultraviolet light burns your flesh and causes it to ignite.

MP Value: 3.

Drawback: Ultraviolet light (including direct sunlight) burns you for 2d6 points of fire damage per round and causes any light, flammable clothing you are wearing to ignite (see the *d20 Modern Roleplaying Game*, page 213, for rules about catching on fire).

UNNATURAL EYES [COSMETIC]

The color of your eyes changes drastically. The color, whatever it may be, is unnatural and atypical of your species. Perhaps your eyes turn dead black, maybe they change color to suit your mood, or perhaps they glow faintly in the dark.

MP Cost: 0.

Benefit: None.

UNNATURAL HAIR [COSMETIC]

Your hair or fur color changes drastically to a shade that is uncommon for your species. You may have fur or hair that is multicolored, streaked, splotched, or slightly luminescent. Your hair or fur may also change color with your mood.

MP Cost: 0.

Benefit: None.

UNNATURAL SKIN [COSMETIC]

The color of your skin or exoskeleton changes drastically, assuming a hue or texture that is both unnatural and atypical of your species. Your skin might be a single color, splotched, or patterned in some freakishly unnatural way. Your skin might gain dynamic pigments that change color based on outside stimuli, such as exposure to ultraviolet light.

MP Cost: 0.

Benefit: None.

UNNATURAL VOICE [COSMETIC]

Your voice changes in some marked fashion. It might change pitch or become more lyrical, raspy, whispery, or guttural.

MP Cost: 0.

Benefit: None.

VENOMOUS BITE [MAJOR]

Your natural bite attack injects poison into your victim's bloodstream.

MP Cost: 4.

Benefit: Any creature you successfully hit with your bite attack must make a successful Fortitude save (DC 10 + one-half your level + your Constitution modifier) to negate the effects (initial and secondary damage 1d4 Con).

Special: You must have a natural bite attack to gain the benefit of this mutation. You cannot take this mutation if you have the Acidic Saliva mutation.

VEXING VOICE [MAJOR]

You can vex another creature using the peculiar resonance of your voice.

MP Cost: 4.

Benefit: Select any living creature within 30 feet of you as the target; the creature must be able to hear your voice to be affected. Upon hearing your voice, the creature must make a successful Will save (DC 10 + one-half your level + your Charisma modifier) or be dazed for 1 round. A successful save negates the effect. This ability is a mind-affecting compulsion usable three times per day. Using this ability is a free action.

WALL CRAWLER [MINOR]

You can walk walls and cling to ceilings like a spider. You have tiny barbs on your hands and feet to facilitate climbing, and your fingers and toes secrete a transparent adhesive that lets you cling to smooth surfaces.

MP Cost: 2.

Benefits: As long as your hands and feet are uncovered, you can climb perfectly smooth, flat, vertical surfaces. In addition, you gain a +4 mutation bonus on all Climb checks. Wearing gloves or footwear reduces the bonus to +2, and wearing both gloves and footwear negates the bonus entirely.

You also gain a +4 mutation bonus on Balance checks when moving across a slippery surface. Wearing any kind of footwear negates this bonus.

WEAK IMMUNE SYSTEM [DRAWBACK]

Your body has difficult preventing infections from entering its system, and thus it is prone to sickness and disease.

MP Value: 1.

Drawback: You take a –2 penalty on all Fortitude saves against poison, disease, and radiation sickness.

Special: You cannot take this drawback if you have the Ultra Immune System feat (see page 15).

WEBBED DIGITS [MINOR]

You grow webbing between your fingers or toes and can move more easily through liquids.

MP Cost: 1.

Benefit: You gain a +4 mutation bonus on all Swim checks. Having webbed digits does not interfere with your ability to grasp or manipulate objects.

WINGS [MAJOR]

You sprout a pair of birdlike or batlike wings.

MP Cost: 6.

Benefit: Your wings grant a natural fly speed of 60 feet (average maneuverability).

X-RAY VISION [MAJOR]

You can see into and through solid matter.

MP Cost: 6.

Benefit: X-ray vision allows you to see through 1 foot of brick or stone, 1 inch of metal or composite alloy, and up to 3 feet of wood, plaster, or dirt. Thicker substances or a thin sheet of lead blocks your vision. X-ray vision has a maximum range of 20 feet and allows you to see as if you were looking at something in normal light, even if there is no illumination.

CHAPTER THIRTEEN:

XENOBIOLOGY



Space Troll KK

Xenobiology is the study of alien life forms, with particular emphasis on the analysis of their ecology and physiology. Xenobiologists observe and catalog sentient and nonsentient life throughout the universe, primarily to expand their own species' knowledge and understanding. Pharmaceutical and governmental agencies rely on xenobiologists to exploit and harvest newly discovered life forms, particularly those whose physiology might drive medical research or weapons programs.

This chapter isn't so much a study of alien life forms as a presentation of various sentient and nonsentient creatures that might appear in a *d20 Future* campaign. In general, this chapter is most useful to campaigns in which aliens or space exploration figure prominently.

This chapter refers to specific terms relating to aliens. For clarity's sake, these terms are defined here.

Alien: A subjective term for any organism not native to the observer's homeworld. An alien can be sentient or nonsentient. The term usually describes a creature that hasn't been encountered or cataloged before.

Alien Weapon: A device designed for a specific alien species. Alien weapons are so peculiar in design that members of other species require the Alien Weapons Proficiency feat (see page 11) to use them correctly.

Xenomorph: Another, more scientific-sounding word for "alien."

Xenotype: Another word for a creature's type. Xenotypes include aberrations, humanoids, oozes, plants, and undead.

XENOBIOLOGICAL HAZARDS

In addition to facing dangerous creatures and harsh environmental conditions, space explorers must occasionally contend with xenobiological hazards—nonsentient forms of life that are, by their very nature, menacing and dangerous without being openly adversarial.

Xenobiological hazards are treated more like traps than creatures. They have Challenge Ratings (CRs), and heroes earn experience points for surviving or overcoming them. A xenobiological hazard might be a pool of corrosive slime or a patch of mold that feeds on the warmth of nearby life forms. It's not deliberately predatory, just dangerous by nature.

Two kinds of xenobiological hazards are described here.

ENDOTHERMIC MOLD (CR 2)

Endothermic mold feeds on warmth, siphoning heat from anything around it. A patch of endothermic mold is red-brown in color and 5 feet in diameter, and the temperature is always cold in a 30-foot radius around it. Living creatures within 5 feet take 3d6 points of nonlethal cold damage. Fire brought within 5 feet of the mold causes it to instantly double in size.

A 5-foot patch of endothermic mold is destroyed if it takes 5 or more points of cold damage.

SPACE SLIME (CR 4)

This sticky, translucent green slime devours flesh and organic materials on contact. Wet and sticky, it clings to walls, ceilings, and floors in patches, growing and spreading as it consumes organic matter. It drops from walls and ceilings when it detects movement (and possible food) below.

A single 5-foot square of space slime deals 1d6 points of Constitution damage per round while it devours flesh. On the first round of contact, the slime can be scraped off a creature (most likely destroying the scraping device), but after that it must be frozen, burned, or cut away (dealing damage to the victim as well). Against wood or metal, space slime deals 2d6 points of damage per round, ignoring metal's hardness but not that of wood. It does not harm stone.

An injection of sporekill (see Chapter 3: Gear) or 10 or more points of cold or fire damage destroys a 5-foot patch of space slime.

MONSTROUS XENOMORPHS

Terrifying alien monsters—from the acid-dripping creature in *Alien* to the ravenous star doppelganger in *The Thing*—are staples of science fiction. Entire *d20 Future* campaigns can be built around the simple prospect of placing the heroes in conflict with monstrous adversaries.

Monstrous xenomorphs can be sentient or nonsentient, malevolent or benign. Compare the alien conquerors of *Independence Day* to the harmless alien of *E.T.* or the indiscriminate and amorphous threat of *The Blob*. The rules for creating challenging alien monsters already exist in Chapter Eight: Friends and Foes of the *d20 Modern Roleplaying Game* (pages 216–230). A Gamemaster looking for exciting xenomorphs to fill a night's adventure need look no further than the *d20 Modern* core rulebook and other *d20 Modern* supplements.

D20 MODERN ROLEPLAYING GAME

The following creatures, described in Chapter Eight: Friends and Foes of the *d20 Modern Roleplaying Game*, are ideally suited for *d20 Future* campaigns:

- Displacer beast
- Illithid
- Monstrous flytrap
- Monstrous spider
- Moreau
- Puppeteer
- Replacement
- Terrestrial effluvium

D20 MENACE MANUAL

The following creatures, described in Chapter One: Creatures of the *d20 Menace Manual*, are tailor-written for *d20 Future* campaigns:

- Alien probe
- Bodak
- Crawfordsville monster
- Dimensional horror
- Etoile
- Fire wisp
- Fraal*
- Gardhyi
- Grimlock
- Half-fraal
- Infester
- Intellect devourer
- Kinori
- Kroath
- Malleable creature
- Montauk monster
- Mothfolk
- Neothelid
- Night terror
- N'sss
- Rod
- Sand slave
- Sesheyan*
- Star doppelganger
- Thought eater
- Toxic sludge
- Udoroot
- Zeikune

*This creature is also covered under Heroic Alien Species, page 213.

EXPLORING THE MONSTER MANUAL

The *Dungeons & Dragons® Monster Manual* describes dozens—if not hundreds—of creatures that can be imported into a *d20 Future* campaign. Gamemasters should not discount this resource when searching for creatures to populate a *d20 Future* adventure. Turning a D&D monster into a *d20 Future* creature should require only minor modifications—turning the ethereal marauder into a dimensional marauder, for instance.

Here's a list of *Monster Manual* critters that lend themselves well to *d20 Future* encounters.

- Aboleth
- Achaierai
- Ankheg
- Behir
- Black pudding
- Bulette
- Carrion crawler
- Choker
- Chuul
- Darkmantle
- Delver
- Destrachan
- Digester
- Dire animals
- Doppelganger
- Drow
- Dryad
- Elemental
- Ethereal filcher
- Ethereal marauder
- Ettercap
- Ettin
- Formian
- Frost worm
- Giant ant
- Giant bombardier beetle
- Giant fire beetle
- Giant praying mantis
- Giant stag beetle
- Giant wasp
- Gibbering mouther
- Girallon
- Githyanki
- Gray ooze
- Gray render
- Grick
- Harpy
- Hell hound
- Howler
- Invisible stalker
- Krenshar
- Kuo-toa
- Locathah
- Magmin
- Mimic
- Monstrous centipede
- Monstrous scorpion
- Naga
- Ochre jelly
- Ogre
- Otyugh
- Phantom fungus
- Phasm
- Phase spider
- Purple worm
- Rast
- Remorhaz
- Roper
- Rust monster
- Sahuagin
- Salamander
- Shambling mound
- Shocker lizard
- Shrieker
- Skum
- Slaad
- Spider eater
- Stirge
- Swarm
- Tendriculos
- Thoqqua
- Troglodyte
- Umber hulk
- Vampire
- Vampire spawn
- Vargouille
- Violet fungus
- Will-o'-wisp
- Wyvern
- Xill
- Xorn
- Yrthak

A D&D monster can be adjusted further by applying either the extraterrestrial template or the space creature template (both presented in this chapter).

URBAN ARCANA CAMPAIGN SETTING

The following creatures, described in Chapter Seven: Creatures of the *Urban Arcana Campaign Setting*, fit easily into *d20 Future* campaigns:

- Grendelspawn
- Roach thrall
- Toxyderm
- Urban wendigo

CREATURE TEMPLATES

This section presents two new creature templates suitable for *d20 Future* campaigns: the extraterrestrial template and the space creature template.

EXTRATERRESTRIAL (TEMPLATE)

The term "extraterrestrial" is used to describe creatures from other worlds. Extraterrestrials capable of space travel can be encountered almost anywhere. Some present themselves as friendly explorers, while others are interested primarily in conquest or colonization. Others are simply predators that make their way from one world to another.

TEMPLATE TRAITS

"Extraterrestrial" is an inherited template that can be added to any living creature (referred to hereafter as the "base creature"). The creature retains its original type. It uses the base creature's statistics and special abilities except as noted here.

Challenge Rating: Same as base creature, with modifiers as noted under Special Qualities, below. If the total CR modifier is a fraction, round up or down to the nearest whole number; for example, an extraterrestrial that gains a breath weapon (+2/3 CR), improved natural armor (+1/3 CR), and power resistance (+1/3 CR) has a total CR modifier of +1.

Speed: The extraterrestrial can replace one of the base creature's modes of movement for another, gaining the ability to burrow, climb, fly, or swim.

Burrow: The extraterrestrial can burrow at a speed equal to one-half its base land speed.

Climb: The extraterrestrial can climb at a speed equal to its base land speed. It also gains a +8 species bonus on Climb checks.

Fly: The extraterrestrial has wings and can fly at twice the speed of its base land speed (poor maneuverability).

Swim: The extraterrestrial can swim at a speed equal to its base land speed. It also gains a +8 species bonus on Swim checks.

Special Qualities: An extraterrestrial retains all the special qualities of the base creature. It may also gain one or more special qualities, chosen from the following list:

Special Quality	CR Modifier
Acidic blood	+1/3
Blindsight	+1/3
Breath weapon	+2/3
Damage reduction 5/–	+2/3
Death cloud	+2/3
Energy resistance 10	+1/3
Fast healing 5	+2/3
Improved natural armor	+1/3
Poisonous bite	+2/3
Power resistance	+1/3
Psionics	+1/3
Scent	+1/3

Acidic Blood (Ex): The extraterrestrial has acidic blood. Each time it takes damage, it deals acid damage to all adjacent creatures and objects as it splatters its blood on them. The amount of damage equals 1d6 per 3 Hit Dice of the creature (rounded down), to a maximum of 5d6 points. A successful Reflex save (DC 15) halves the damage. Acidic blood increases the creature's CR by +1/3.

Blindsight (Ex): See the *d20 Modern Roleplaying Game*, page 226, for a description of this ability. Blindsight increases the creature's CR by +1/3.

Breath Weapon (Su): Once every 1d4 rounds, the extraterrestrial can breathe a 30-foot cone of cold or fire, or a 60-foot line of acid or electricity. The breath weapon deals damage of the appropriate energy type to all opponents within the effect, and the amount of damage is equal to 1d6 per Hit Dice of the creature, to a maximum of 15d6 points. Targets who make a successful Reflex save (DC 10 + 1/2 creature's HD + creature's Con modifier) take half damage. A breath weapon increases the creature's CR by +2/3.

Damage Reduction (Ex): The extraterrestrial gains damage reduction 5/–. Damage reduction increases the creature's CR by +2/3.

Death Cloud (Ex): When it dies, the extraterrestrial expels a cloud of poisonous gas that fills its fighting space and all squares within 10 feet. Any creature in the cloud must succeed in a Fortitude save (DC 10 + 1/2 the dead creature's Hit Dice + the dead creature's Con modifier) to negate the initial and secondary effects (1d6 points of Constitution damage each). The death cloud increases the creature's CR by +2/3.

Energy Resistance (Ex): The extraterrestrial gains resistance 10 to one type of energy (acid, cold, electricity, fire, or sonic/concussion). Energy resistance increases the creature's CR by +1/3.

Fast Healing (Ex): The extraterrestrial has fast healing 5. See the *d20 Modern Roleplaying Game*, page 227, for a description of this ability. Fast healing increases the creature's CR by +2/3.

Improved Natural Armor (Ex): Increase the base creature's natural armor by +3. This increases the creature's CR by +1/3.

Poisonous Bite (Ex): The extraterrestrial's bite attack is poisonous. (Only creatures with a natural bite attack can gain this ability.) A successful Fortitude save (DC 10 + 1/2 the creature's Hit Dice + the creature's Con modifier) negates the effect. The poison's damage can vary, as shown below; either roll randomly or choose the type that best suits the creature. A poisonous bite increases the creature's CR by +2/3.

Roll d%	Initial Damage	Secondary Damage
01–17	1d6 Str	1d6 Str
18–34	1d6 Dex	1d6 Dex
35–50	1d4 Con	1d4 Con
51–67	2d4 Wis	2d4 Wis
68–84	2d4 Cha	2d4 Cha
85–100	None	Paralysis 1d6 hours

Power Resistance (Ex): The extraterrestrial gains power resistance equal to its Hit Dice. See the *d20 Modern Roleplaying Game*, page 227, for a description of this ability. Power resistance increases the creature's CR by +1/3.

Psionics (Sp): The extraterrestrial gains the use of one psionic power of 2nd level or lower. It can use this power three times per day. This ability increases the creature's CR by +1/3.

Scent (Ex): See the *d20 Modern Roleplaying Game*, page 226, for a description of this ability. This ability increases the creature's CR by +1/3.

Feats: An extraterrestrial may replace one of the base creature's feats with the Planetary Adaptation feat (see page 13). If the base creature has no feats, it does not gain Planetary Adaptation as a bonus feat.

SAMPLE EXTRATERRESTRIAL

Using a Large monstrous spider as the base creature, the extraterrestrial presented below has the following additional special qualities: acidic blood (+1/3 CR), damage reduction 5/– (+2/3 CR), and scent (+1/3 CR). This particular specimen, a fierce subterranean hunter, also trades its natural climb speed for a burrow speed.

Extraterrestrial Large Monstrous Spider: CR 3; Large vermin; HD 4d8+4; hp 22; Mas 12; Init +3; Spd 30 ft. (40 ft. for hunting spider), burrow 15 ft. (20 ft. for hunting spider); Defense 14, touch 12, flat-footed 11 (–1 size, +3 Dex, +2 natural); BAB +3; Grap +9; Atk +4 melee (1d8+3 plus poison, bite); Full Atk +4 melee (1d8+3 plus poison, bite); FS 10 ft. by 10 ft.; Reach 10 ft.; SQ acidic blood (1d6), DR 5/–, darkvision 60 ft., immune to mind-affecting attacks, poison, webs, resistance to massive damage, scent; AL none; SV Fort +5, Ref +4, Will +1; AP 0; Rep +0; Str 15, Dex 17, Con 12, Int —, Wis 10, Cha 2.

Skills: Climb +5, Hide +5, Jump +2 (+8 for hunting spiders), Move Silently +9, Spot +12.

Feats: —.

Poison (Ex): Bite; Fortitude save (DC 17) negates; initial and secondary 1d6 Str.

Webs (Ex): Escape Artist DC 26, break DC 28, hp 12 per 5-foot section.



Extraterrestrial spider

SPACE CREATURE (TEMPLATE)

A space creature is a xenomorph that either lives in the cold vacuum of space or can survive there indefinitely. Space creatures often hibernate in comets and asteroids. Others wander outer space in search of food, occasionally taking up residence on planets where food is abundant (assuming they can find a safe way to the surface). Space creatures even threaten astronauts and idle starships from time to time. Not all space creatures are motivated by hunger or sheer malice; other likely motives include natural curiosity or a desire for companionship. Space is, after all, a vast and lonely place.

TEMPLATE TRAITS

"Space creature" is an inherited template that can be added to any creature (referred to hereafter as the "base creature"). The creature retains its original type. It uses the base creature's statistics and special abilities except as noted here.

Challenge Rating: Same as base creature +1.

Speed: In space and other zero-gravity environments, a space creature gains a fly speed equal to its base speed (perfect maneuverability).

Special Qualities: A space creature retains all the special qualities of the base creature. It also gains the following special qualities:

Energy Resistance (Ex): A space creature gains cold resistance 20 and fire resistance 20.

Darkvision (Ex): The space creature gains darkvision out to a range of 120 feet. Darkvision is black and white only, but is otherwise the same as normal sight.

Radiation Resistance (Ex): A space creature gains a +8 species bonus on saves to resist any kind of radiation poisoning.

Vacuum Survival (Ex): A space creature creates its own oxygen supply or doesn't need to breathe at all. It can exist in zero-atmosphere environments.

Ability Modifiers: Apply the following modifiers to a space creature's ability scores: –2 Str, +2 Con.

Bonus Feats: A space creature gains the bonus feat Zero-G Training (see page 15).

SAMPLE SPACE CREATURE

The space troll uses the standard troll (see page 260 of the *d20 Modern Roleplaying Game*) as the base creature.

Space trolls visit death upon unwary space stations; after killing all aboard, they usually wait around just long enough for a rescue team to arrive.

Space Troll: CR 6; Large giant; HD 6d8+42; hp 69; Mas 25; Init +2; Spd 30 ft., fly 30 ft. (perfect) in space; Defense 18, touch 11, flat-footed 15 (–1 size, +2 Dex, +7 natural); BAB +4; Grap +13; Atk +8 melee (1d6+5, claw); Full Atk +8 melee (1d6+5, 2 claws), +6 melee (1d6+2, bite) or +5 ranged; FS 10 ft. by 10 ft.; Reach 10 ft.; SQ cold and fire resistance 20, darkvision 120 ft., radiation resistance, regeneration 5 (cannot regenerate acid or fire damage), rend 2d6+7, vacuum survival; AL chaos, evil; SV Fort +12, Ref +4, Will +1; AP 0; Rep +0; Str 21, Dex 14, Con 25, Int 6, Wis 9, Cha 6.

Skills: Listen +5, Speak Giant, Spot +5.

Feats: Alertness, Multiattack, Simple Weapons Proficiency, Zero-G Training (bonus).

HEROIC ALIEN SPECIES

While humans dominate the galaxy in many *d20 Future* campaigns, futuristic campaigns also afford players the chance to create and play interesting nonhuman heroes.

The rest of this chapter describes eight nonhuman species that can intersect with humanity at virtually any Progress Level. More

importantly, all of them can be played as heroic characters (with the GM's permission, of course).

SPECIES PROGRESS LEVELS

Played as written, the alien species presented in this chapter have societies set at different Progress Levels. For example, the technologically primitive sesheyans have only recently emerged from their prehistory and entered the aboriginal stage of development. Conversely, fraal began charting star systems centuries before humans learned how to sail wooden ships across the open seas of Earth.

Ultimately, the Gamemaster decides the Progress Level of any given alien society, based on the needs of the campaign. If the campaign demands that sesheyans have starships with fusion drives (PL 6), the GM may advance the species accordingly. If the GM wants to create a planet of vrusk living in an early Industrial Age (PL 4), she may do so freely. More often than not, differences in Progress Level have no bearing on how a mixed group of heroes interact with each other, since they are joined at the same Progress Level regardless of how far technologically their respective species have advanced. A sesheyan hero can still use a computer or fire a laser pistol, even if other members of his species find such technology baffling.

Table 13–1: Species Progress Levels gives the default PLs for the nonhuman species presented in this chapter, as compared to the baseline human society in the same time period. Using the table's default settings, we can see that by the time humans enter the Fusion Age (PL 6), fraal society has reached the Energy Age (PL 8), while sesheyan society is still trapped in the Stone Age (PL 0). Again, the level of technology available to heroes (regardless of their species) depends on the GM's campaign and where the heroes are in relation to others of their kind. Just because most fraal have access to PL 8 technology doesn't necessarily mean that fraal heroes have access to the same!

For more information on the different Progress Levels, see the Introduction.

TABLE 13–1: SPECIES PROGRESS LEVELS

Species	Default Progress Level
Aleerin	As baseline human PL
Dralasite	As baseline human PL
Fraal	As baseline human PL + 2
Sesheyan	As baseline human PL – 6
T'sa	As baseline human PL + 1
Vrusk	As baseline human PL
Weren	As baseline human PL – 3
Yazirian	As baseline human PL – 1

ALIEN HOMEWORLDS

One of the first questions players with nonhuman heroes need to answer is, "Where do I come from?" The GM might already have the answer based on the nature of her campaign. Before allowing nonhuman characters into the campaign, the GM should consider where the human and nonhuman races live in relation to each other.

Here is a list of default homeworlds for the alien species presented in this chapter, although the GM is free to create different planets of origin for these species as she sees fit.

Aleerin: The Aleerin homeworld, Aleer, is a moderately industrialized Earthlike globe in the Vax Aleer system. The planet has seen more than its fair share of wars, and between its sprawling cities stretch vast regions of utter devastation that serve as vivid reminders of the aleerins' violent past.

Dralasite: Dralasites evolved on the ice-ringed world of Terledrom in the Fromeltar system. A stormy world, Terledrom is veiled in perpetual mist, and many dralasite cities are carved into the walls of great river-canyons that scar the planet's surface.

Fraal: Yrvuun, the fraal homeworld, was destroyed when its star went supernova. The fraal escaped the calamity aboard enormous colony ships that are now scattered throughout the galaxy.

Sesheyan: The sesheyans call their world Sheya, which means "hunting land" in their language. The planet's sun, a red dwarf star called Vechlar ("eye of flame"), burns hot in Sheya's sky. Sesheyans live in villages scattered beneath the thick, protective canopies of the planet's rain forests, which are separated by soaring mountain ranges.

T'sa: By the time humans discover faster-than-light travel, the t'sa have already built a stellar empire, at the center of which sits their homeworld of Ki'inroh, in the T'saka system. Like most t'sa worlds, Ki'inroh is busy, over-populated, heavily industrialized, hot, smoggy, and nearly depleted of natural resources.

Vrusk: When most vrusk think of home, they imagine the honeycombed mountains of K'zah-Kit, their homeworld, in the K'aken-Kar system. In addition to hollowed-out mountains holding city-sized warrens, K'zah-Kit features tremendous surface winds and vast white deserts speckled with bizarre, wind-worn rock formations.

Weren: The homeworld of the weren, Kurg, is the third planet in the Taragwa system. Enormous ice caps and thousands of miles of bitterly cold tundra dominate the world. Most civilized weren live in a narrow temperate belt along the equator, although primitive clans of weren hunters still prowl the icy wastelands.

Yazirian: Yazirians hail from the planet Hakosoar, in the Scree Fron system. Hakosoar has two small, bright moons called Infi and Inti, named after the legendary yazirian brother and sister who conceived

TABLE 13–2: ALIEN WEAPONS

Weapon	Damage	Critical	Damage Type	Range Increment	Rate of Fire	Magazine	Size	Weight	Purchase DC	Restriction
Progress Level 2: Middle Ages										
Weren dire axe [1]	2d8	×3	Slashing	—	—	—	Huge	22 lb.	11	—
Progress Level 3: Age of Reason										
Flintlock musket [2]	2d6	20	Ballistic	20 ft.	Single	1 int.	Large	14 lb.	15	—
Progress Level 7: Gravity Age										
Fraal mass pistol [3]	2d6	19–20	Energy	10 ft.	S	4 box	Tiny	2 lb.	32	Res (+2)
Fraal neural pistol [3]	special [4]	—	Energy	20 ft.	S	5 box	Tiny	0.5 lb.	29	Res (+2)

1 This weapon requires the Archaic Weapons Proficiency feat to use proficiently.

2 This weapon requires the Personal Firearms Proficiency feat to use proficiently.

3 This weapon requires the Alien Weapons Proficiency feat (see page 11) to use proficiently.

4 See the weapon's description (under Fraal Weapons) for more information.

TABLE 13–3: MAXIMUM AGES AND AGING EFFECTS

	Maximum Age						Progress Level Increase		
Species	Child [1]	Young Adult	Adult	Middle Age [2]	Old [3]	Venerable [4]	PL 6 [5]	PL 7 [5]	PL 8+ [5]
Aleerin	9 years	15 years	40 years	70 years	110 years	140 years	+10 years	+20 years	+30 years
Dralasite	8 years	15 years	45 years	80 years	95 years	120 years	+5 years	+10 years	+15 years
Fraal	5 years	10 years	30 years	50 years	75 years	100 years	+10 years	+20 years	+30 years
Human	11 years	15 years	40 years	60 years	80 years	120 years	+10 years	+20 years	+30 years
Sesheyan	6 years	12 years	36 years	50 years	75 years	90 years	+5 years	+10 years	+15 years
T'sa	5 years	10 years	30 years	50 years	75 years	90 years	+5 years	+10 years	+15 years
Vrusk	10 years	14 years	40 years	60 years	90 years	125 years	+10 years	+20 years	+30 years
Weren	10 years	20 years	40 years	70 years	110 years	150 years	+10 years	+20 years	+30 years
Yazirian	11 years	15 years	40 years	60 years	80 years	120 years	+10 years	+20 years	+30 years

1 At child age, –3 to Str and Con; –1 to Dex, Int, Wis, and Cha.
2 At middle age, –1 to Str, Dex, and Con; +1 to Int, Wis, and Cha.
3 At old age, –2 to Str, Dex, and Con; +2 to Int, Wis, and Cha.
4 At venerable age, –3 to Str, Dex, and Con; +3 to Int, Wis, and Cha.
5 Increase the middle age, old age, and venerable age maximums by this amount.

the entire race. Amid the boughs of Hakosoar's ancient, twisted forests hang many yazirian clan-homes, communities, and temples.

ALIEN EQUIPMENT

Unless noted otherwise, a weapon, tool, or other device intended for a specific nonhuman species works the same way as a similar human-built device. It also has the same purchase DC. Thus, an aleerin-made laser pistol or mechanical tool kit functions like its human-made counterpart, and vice versa, and they are priced the same.

Notable exceptions to the rule above include the following:

Alien Weapons: Some weapons are engineered specifically for members of one species and one species alone. Unlike exotic weapons, alien weapons have strange configurations and firing mechanisms that other races find perplexing or difficult to handle. Unless a character belongs to the proper species or has the Alien Weapons Proficiency feat, he takes a –4 penalty on attack rolls made with an alien weapon.

Alien Armor: Some alien species have special restrictions on the types of armor they can wear based on their unique physiology. In many cases, they can only wear armor designed specifically for their species. Special armor restrictions are noted under each alien's Species Traits.

AGE

Most players create heroes within the young adult or adult range, although one can play a younger or older character if the campaign permits. A hero must be at least the minimum age for the GM's campaign and the character's starting occupation.

As a character ages, her physical ability scores decrease and her mental ability scores increase, as detailed on Table 13–2: Maximum Ages and Aging Effects. The effects of each aging step are cumulative. At Progress Level 6 and higher, advancements in medical science extend a species' life span, as shown in the Progress Level Increase columns of Table 13–2.

HEIGHT AND WEIGHT

A player or GM may use Table 13–3 to determine the height and weight of a character of a particular species. Table 13–3 provides a range of heights and weights for typical heroes and gives average height and weight figures for each gender (where appropriate).

The die roll given in the Height Modifier column determines the character's extra height beyond the base height. That same number multiplied by the die roll modifier in the Weight Modifier column determines the character's extra weight beyond the base weight.

For example, Iyttik the female vrusk has a height of 4 feet 6 inches plus 2d6 inches. Iyttik's player rolls 2d6 and gets 8, making Iyttik 5 feet 2 inches tall. Iyttik's player then multiplies the 8 by 2d6. Iyttik's player rolls 2d6 and gets 6, so he adds 48 (8 × 6) to the base weight of 130 pounds. Iyttik weighs 178 pounds.

SKILL POINTS FOR NONHUMANS

Nonhumans who take levels of a character class do not gain as many skill points as a human character of the same class. Nonhumans get 4 fewer skill points at 1st level than a human character and 1 fewer skill point each level thereafter.

TABLE 13–4: HEIGHT AND WEIGHT

Species and Gender	Base Height	Height Modifier	Base Weight	Weight Modifier
Aleerin				
Male	5 ft. 4 in.	+2d8 in.	125 lb.	×2d6 lb.
Female	5 ft. 0 in.	+2d8 in.	90 lb.	×2d6 lb.
Dralasite	3 ft. 10 in.	+2d4 in.	70 lb.	×2d4 lb.
Fraal				
Male	2 ft. 10 in.	+2d4 in.	25 lb.	×2d4 lb.
Female	2 ft. 8 in.	+2d4 in.	20 lb.	×2d4 lb.
Human				
Male	5 ft. 0 in.	+2d10 in.	120 lb.	×2d4 lb.
Female	4 ft. 7 in.	+2d10 in.	85 lb.	×2d4 lb.
Sesheyan				
Male	4 ft. 10 in.	+2d6 in.	60 lb.	×2d4 lb.
Female	4 ft. 8 in.	+2d6 in.	45 lb.	×2d4 lb.
T'sa				
Male	2 ft. 10 in.	+2d4 in.	30 lb.	×2d4 lb.
Female	2 ft. 8 in.	+2d4 in.	25 lb.	×2d4 lb.
Vrusk				
Male	4 ft. 8 in.	+2d6 in.	140 lb.	×2d6 lb.
Female	4 ft. 6 in.	+2d6 in.	130 lb.	×2d6 lb.
Weren				
Male	7 ft. 3 in.	+3d6 in.	300 lb.	×3d6 lb.
Female	7 ft. 0 in.	+3d6 in.	275 lb.	×3d6 lb.
Yazirian				
Male	5 ft. 3 in.	+2d8 in.	90 lb.	×2d4 lb.
Female	5 ft. 3 in.	+2d8 in.	95 lb.	×2d4 lb.

ALEERIN

"We agree."

An aleerin can be easily mistaken for a human at a distance or in poor lighting, for he bears the general shape and size of a human. Closer inspection, however, reveals veins of circuitry that weave with the aleerin's flesh and blood to form a totally synthesized body. An aleerin's hair consists of combined protein strands and filaments of cable and wire. Even the aleerin's skeleton has been reinforced with super-strong synthetic materials, and bony protective plates cover the bioorganic flesh at the shoulders and across the chest. The aleerins' appearance has led to humans calling them "mechalus" (singular and plural), and the aleerins don't seem to mind.

Aleerins are slightly heavier than humans, on average, but their builds are less varied. The average aleerin stands approximately 6 feet tall and weighs 175 to 200 pounds. Aleerins tend to have well-proportioned, athletic frames. Their lustrous turquoise eyes are opaque and have no visible pupils.

Aleerins share an affinity for computers. While they can easily employ standard computer interfaces, aleerins have the ability to personally connect with computer systems. Filaments can extend from an aleerin's fingers, snake into a computer, and form a solid link between aleerin and machine. This link gives the aleerin speed-of-thought access to the computer system, with more precise control than any manual interface can provide.

Aleerins have ordered minds, which translates into a highly structured society and an equally organized outlook on life. Although they think with the precision and logic of a machine, they are deeply emotional people who work hard to subdue their negative emotions. They possess the same range of emotions as humans, although they downplay hostility or aggression. Aleerins have demonstrated violent tendencies in the past. Their early forays into space placed them at odds with another warlike race, which the aleerins ultimately annihilated. Appalled by this heinous act and jarred by an unexpected emotional backlash, modern aleerins have made a conscious and consistent effort to suppress or regulate their more primal nature.

In a tense or dangerous situation, aleerins are likely to remain calm and rational. They easily suppress their emotions when they deem such action appropriate or necessary. However, in a climate of relaxation and celebration, their emotional pendulum can swing to the other extreme—to other species, it seems as though they are making a special effort to appear cheerful or jubilant. The aleerins do not consider their behavior at such times to be exaggerated. Strong displays of positive emotion, when the situation permits, afford them the chance to demonstrate that they are not merely machines encased in biological bodies.



Aleerin

SPECIES TRAITS

Aleerins share the following species traits:

Type: Humanoid (aleerin).

Size: Medium-size. Aleerins have no special bonuses or penalties due to their size.

Ability Modifiers: +2 Constitution, –2 Wisdom, –2 Charisma. Aleerins are more resilient but less perceptive and personable than humans.

Speed: 30 feet.

Computer Link (Ex): As a move action, an aleerin can link with any computer he can reach, using short filaments that extend from his fingertips. Once the physical link is achieved, the aleerin can use the computer to accomplish complex computer-related tasks more quickly than normal. A task that normally requires 1 or more minutes to complete on the computer takes a full-round action instead, while a task that normally requires 1 or more hours takes 1 minute instead. The DC of the skill check increases by 5, however, as the aleerin trades caution for expedience.

An aleerin retains his Dexterity bonus to Defense while linked to a computer. Disconnecting from the computer is a free action, and a linked aleerin who takes an attack action automatically severs the link. The link is also broken the instant the aleerin can no longer reach the computer.

Cybernetic Adaptability (Ex): An aleerin can have an additional number of cybernetic attachments equal to his level. Improper removal of a cybernetic attachment installed on an aleerin causes 1d4 points of temporary Constitution damage (instead of 1d4 points of permanent Constitution drain, as normal). See Chapter 11: Cybernetics for details.

Skill Bonus: Aleerins gain a +2 species bonus on Computer Use checks.

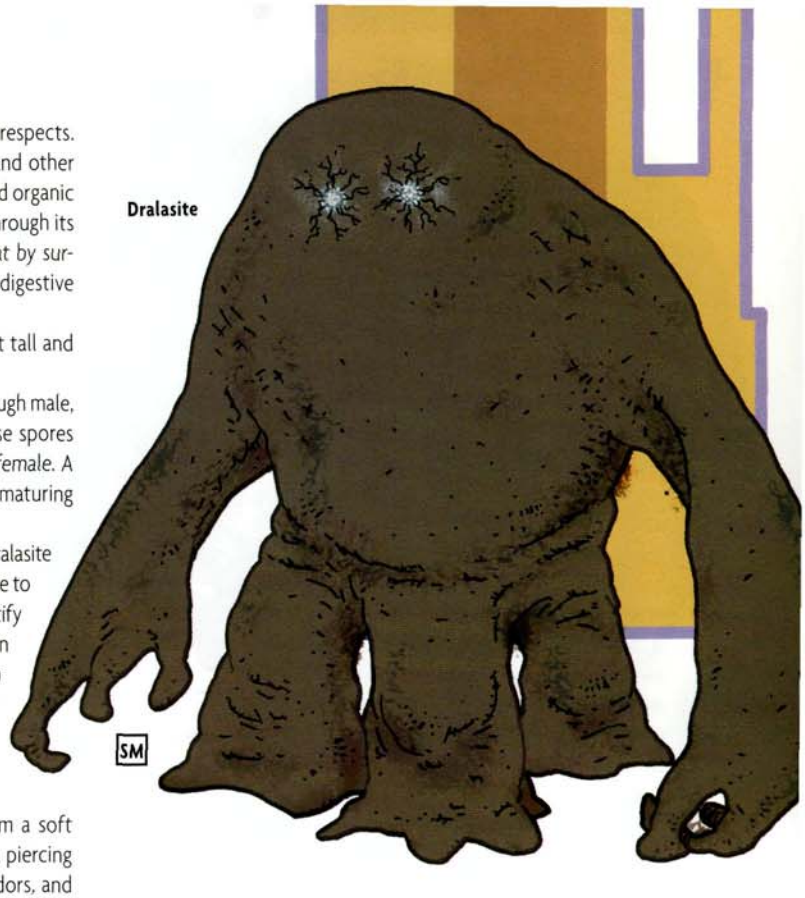
Free Language Skills: Read/Write Aleerin, Speak Aleerin.

Level Adjustment: +0.

DRALASITE

"Perhaps we should pause here and consider our options. Say, did you hear the one about the one-eyed yazirian test pilot?"

A dralasite is a short, rubbery xenomorph that has no bones or hard body parts. Its skin—a flexible, tough, and scratchy membrane—is dull gray and lined with dark veins that meet at the dralasite's two eyespots.



The internal structure of a dralasite is peculiar in many respects. Its central nerve bundle (brain), numerous small hearts, and other internal organs float in a puddinglike mixture of protein and organic fluids. A dralasite breathes by absorbing oxygen directly through its skin, so it has no lungs. Dralasites are omnivorous and eat by surrounding and absorbing their food, so they also have no digestive tract or intestines.

The average dralasite stands between 4 and 4 1/2 feet tall and weighs 80 to 90 pounds.

All dralasites are hermaphroditic, meaning they go through male, female, and neutral stages during their lives. Males release spores into the air, which drift until they become attached to a female. A young dralasite then sprouts from its mother, eventually maturing and dropping off. This process is referred to as "budding."

The most important sense for a dralasite is smell. A dralasite breathes through its skin, and the entire membrane is sensitive to odors. A dralasite's sense of small is so keen that it can identify persons by smell alone and can recognize familiar smells on objects or creatures. The membrane is also sensitive to touch and vibrations, allowing the dralasite to hear and feel. A dralasite sees only in black and white, but otherwise its vision is comparable to that of an average human.

A dralasite has a voice box, but it works like a bellows because it has no lungs. A dralasite's voice can vary from a soft whisper to a thundering roar and from a bass rumble to a piercing screech. Among themselves, dralasites also use shapes, odors, and touch to communicate.

Dralasites are thoughtful, philosophical beings. Their communities are small, and many dralasites prefer to live alone. They care little about wealth, power, or status. They judge themselves by the quality of their ideas and their ability to discuss important ideas wisely. Discussions and debates are among their favorite ways to relax. They delight in sharing old jokes and puns, although their sense of humor is rarely enjoyed as much by other species. Most dralasites consider a shared joke a perfectly simple way to strengthen the bond between friends, and canny dralasites even use jokes to confuse or disarm their enemies.

Dralasites do not wear clothing because it makes breathing difficult and interferes with their sense of smell. They usually carry their equipment on web belts. When they must wear clothing to protect themselves, they use special materials that let air reach their skin.

Although a dralasite has the ability to alter its shape, the pattern of veins and ridges on its skin remains consistent, giving it a permanent "fingerprint" for identification.

SPECIES TRAITS

Dralasites share the following species traits:

Type: Aberration.

Size: Medium-size. Dralasites have no special bonuses or penalties due to their size.

Ability Modifiers: –2 Dexterity, +2 Constitution. Dralasites are resilient but awkward.

Speed: 20 feet. Due to their amorphous form, dralasites move slower than humans and other beings of similar size.

Armor Restrictions: A dralasite cannot wear armor designed for other species. Armor designed for dralasite use is more expensive than normal, taking into account the species' unique physiology; increase the armor's purchase DC by +1.

Darkvision (Ex): Dralasites possess darkvision out to a range of 60 feet. Darkvision is black and white only but otherwise the same as normal sight, and dralasites can function with no light at all.

Elasticity (Ex): A dralasite's stretchable skin is supported by a complex muscle structure. Regardless of its shape, a dralasite's body cannot be thinner than 1 foot and cannot expand beyond a width of 5 feet.

A dralasite can "grow" arms and legs to use for handling objects and walking, and it can reabsorb limbs that are no longer needed. A dralasite can grow a number of limbs equal to 5 + its Dexterity modifier (maximum 8). The dralasite must decide whether a limb becomes an arm or a leg when it is grown. Growing or absorbing a limb is a move action. A limb can be up to 3 feet long and no less than 3 inches thick. "Fingers" for handling items can be up to 3 inches long and no less than 1/2 inch thick.

A dralasite does not gain extra attacks for having extra arms. However, it can use its extra arms to grasp items, including weapons, which then don't need to be drawn or stowed. A dralasite with three or more free arms gains a +4 bonus on grapple checks.

A dralasite with no legs or more than two legs gains a +4 stability bonus on checks to resist bull rush and trip attempts.

Scent (Ex): A dralasite gains the scent ability (see page 228 of the *d20 Modern Roleplaying Game*).

Skill Bonuses: Due to their inscrutable facial expressions and their uncanny knack for reading others, dralasites gain a +2 species bonus on Bluff and Sense Motive checks.

Vulnerability to Gas Attacks: Due to their heightened sense of smell, dralasites take a –4 penalty on Fortitude saving throws made to resist gas attacks.

Free Language Skills: Read/Write Dralasite, Speak Dralasite.

Level Adjustment: +0.

FRAAL

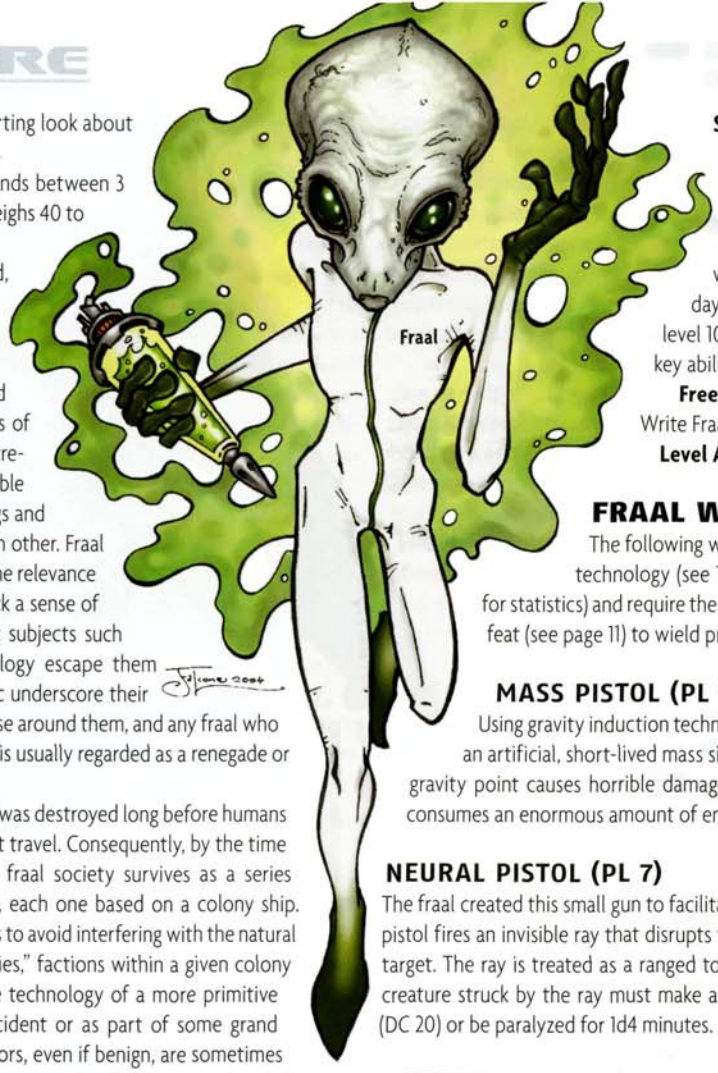
"I don't think you quite understand, but don't worry—I will explain it again."

A fraal (singular and plural) is a small, spindly humanoid with pale, almost luminous skin and a slightly oversized cranium. Two large, opaque black eyes dominate a fraal's slightly elongated face, which also features a small pair of nostrils, tiny ear holes, and a narrow slit for a mouth. To other species, fraal possess a wizened, inscrutable,

and somewhat disconcerting look about them.

The average fraal stands between 3 and 3 1/2 feet tall and weighs 40 to 50 pounds.

Most fraal are timid, secretive, curious beings who enjoy scientific pursuits, particularly space exploration and xenobiology. As members of a psionically gifted yet secretive race, they take incredible pains to hide their feelings and emotions, even from each other. Fraal have difficulty grasping the relevance of art and music, they lack a sense of humor, and nonscientific subjects such as philosophy and theology escape them entirely. Science and logic underscore their perceptions of the universe around them, and any fraal who can see past these things is usually regarded as a renegade or lunatic by her peers.



The fraal homeworld was destroyed long before humans achieved faster-than-light travel. Consequently, by the time humans reach the stars, fraal society survives as a series of independent colonies, each one based on a colony ship. Although fraal take strides to avoid interfering with the natural evolution of "lesser species," factions within a given colony occasionally advance the technology of a more primitive civilization, either by accident or as part of some grand experiment. Such endeavors, even if benign, are sometimes met with resistance from species that fail to comprehend the faction's motives.

Fraal find humans especially intriguing. Some marvel at the humans' ability to adapt quickly to changes in their environment, while others find the genetic similarities between the two species fascinating and worth exploring (see the description of half-fraal in the *d20 Menace Manual* for details).

A fraal's vision, hearing, and tactile senses are comparable to those of the average human. However, fraal are cursed with a poor sense of smell and no sense of taste.

Fraal possess innate psionic abilities. All of them can broadcast their thoughts as naturally as humans can speak out loud, but those among them who work directly with humans and other sentient species usually develop their mental powers still further—to astounding degrees, in some cases. Although they favor telepathic communication, fraal can speak when necessary and are quite adept at learning new languages.

SPECIES TRAITS

Fraal share the following species traits:

Type: Humanoid (fraal).

Size: Small. Fraal gain a +1 size bonus to Defense, a +1 size bonus on attack rolls, and a +4 size bonus on Hide checks. They take a –4 penalty on grapple checks. Their lifting and carrying limits are three-quarters of those of a Medium-size character.

Fraal must use two hands to wield a Medium-size weapon, and light weapons for them are Tiny or smaller.

Ability Modifiers: –4 Strength, –4 Constitution, +4 Intelligence, +4 Wisdom, +4 Charisma. Fraal are weak and frail, but their mental abilities far surpass those of most other sentient species.

Speed: 30 feet. Despite their short stature, fraal move with surprising alacrity.

Psionics (Sp): At will—*lesser mindlink*; 3/day—*suggestion*. Manifester level 10th; save DC 10 + the fraal's key ability modifier + power level.

Free Language Skills: Read/Write Fraal, Speak Fraal.

Level Adjustment: +0.

FRAAL WEAPONS

The following weapons are typical of fraal technology (see Table 13–5: Alien Weapons for statistics) and require the Alien Weapons Proficiency feat (see page 11) to wield proficiently.

MASS PISTOL (PL 7)

Using gravity induction technology, this weapon throws an artificial, short-lived mass singularity at its target. This gravity point causes horrible damage but is short-ranged and consumes an enormous amount of energy.

NEURAL PISTOL (PL 7)

The fraal created this small gun to facilitate abductions. The neural pistol fires an invisible ray that disrupts the nervous system of the target. The ray is treated as a ranged touch attack, and any living creature struck by the ray must make a successful Fortitude save (DC 20) or be paralyzed for 1d4 minutes.

SESHEYAN

"Our enemies can't shoot what they can't see. We will swoop upon them like the night."

A sesheyan's alien appearance often startles members of other species, and sesheyans find other species equally "alien" in appearance. A sesheyan has a light yet muscular frame, a bulbous head encircled by eight small eyes, large pointed ears, leathery wings, and a whiplike tail with an expandable fan-shaped tip that provides stability during flight. The wings can be folded tightly against the sesheyan's upper back when not in use. Although sesheyans walk with a hunched, labored gait, they exhibit a gracefulness while airborne that few other flying creatures can match.

The average sesheyan stands between 5 and 6 feet tall and weighs 85 to 100 pounds.

Sesheyans shun bright light, preferring to live in the darkness.

Sesheyans speak their own language and can learn to speak others as well. They have good depth perception and can distinguish all colors in the visual spectrum, although spectral extremes (red and ultraviolet) are the most vibrant and clear. Their hearing is likewise excellent. Their senses of taste, touch, and smell are comparable to those of humans.

Born hunters, sesheyans seem cold and aloof at a glance, yet they hold a profound respect for all life and recognize their place in the natural order. They are naturally stealthy hunters and have keen predatory instincts. Although they can use technology, most of them never become completely comfortable with it, and some deeply religious sesheyans refuse to have anything to do with scientific advances.

Sesheyan heroes often begin their adventuring careers as freed or escaped slaves, taken from their homeworld and forced to adapt

to life on other planets. Conversely, they might be among the small number of their kind who have abandoned their people's superstitious fears of technology and overcome their disinclination toward using high-tech equipment. They'll operate a computer if they have to, but that doesn't mean they have to like it.

SPECIES TRAITS

Sesheyans share the following species traits:

Type: Monstrous humanoid.

Size: Medium-size. Sesheyans have no special bonuses or penalties due to their size.

Ability Modifiers: +2 Dexterity, –2 Charisma. Sesheyans are agile but lack social grace.

Speed: 30 feet, fly 40 feet (good). A sesheyan's fly speed is 40 ft. (average) in light armor and drops to 30 ft. (poor) in medium armor. A sesheyan cannot fly when wearing heavy or powered armor or when carrying a medium or heavy load.

Armor Restrictions: A sesheyan cannot wear armor designed for other species. A sesheyan wearing heavy or powered armor cannot fly.

Control Descent (Ex): As long as a sesheyan is conscious and able to use its wings, it never takes damage from a fall. Instead, it simply takes flight or glides safely to the ground. If the sesheyan cannot use its wings, it takes falling damage as normal.

Darkvision (Ex): A sesheyan has darkvision out to a range of 120 feet. Darkvision is black and white only, but it is otherwise like normal sight, and sesheyans can function with no light at all.

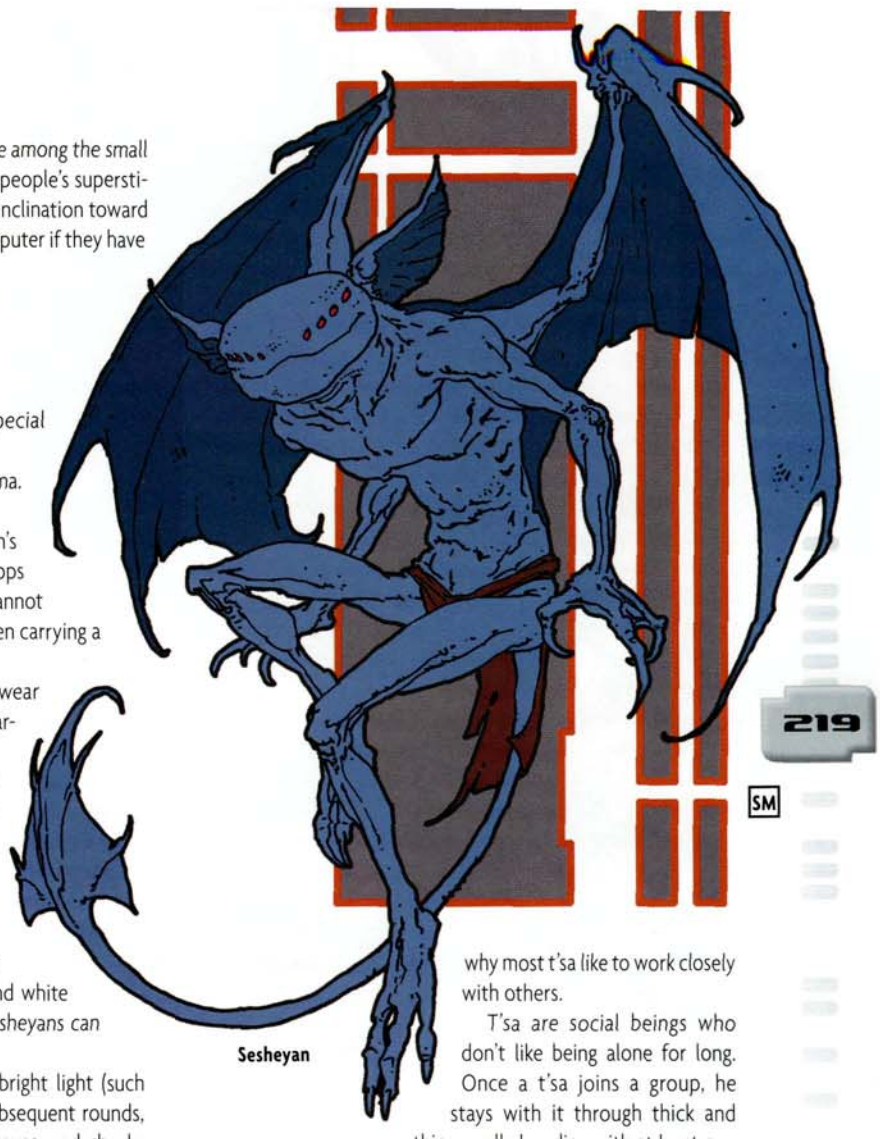
Light Sensitivity (Ex): Abrupt exposure to bright light (such as sunlight) blinds a sesheyan for 1 round. On subsequent rounds, sesheyans take a –1 penalty on all attack rolls, saves, and checks while operating in bright light.

Wearing dark-tinted goggles (purchase DC 6) negates the effects of light blindness.

Technophobic (Ex): Sesheyans are technophobic creatures. They take a –4 species penalty on skill checks that require an understanding of technological items, including Computer Use, Craft (electronic), Craft (mechanical), Demolitions, Disable Device, Drive, Knowledge (technology), Pilot, and Repair checks.

Bonus Feat: Sesheyans gain the bonus feat Stealthy.

Level Adjustment: +0.



Sesheyan

SM

T'SA

"Of course! Graviton wave compression! Tachyons! If only we'd realized!"

Even when standing absolutely still—something that's almost impossible for the creature to do—a t'sa (singular and plural) conveys an impression of speed, sharp reflexes, and constant activity. Standing 3 to 3 1/2 feet tall and weighing 50 pounds on average, a t'sa is lightning-quick, with a fast mind to match his fast body. Sleek, with a reptilian form and the legs of a runner, a t'sa has a fine covering of interlocking brown or russet scales that provide a modicum of natural protection. Most other species find t'sa, with their expressive eyes and childlike exuberance, extremely likeable.

A t'sa has a natural curiosity and an affinity for all things technological. He's a consummate tinkerer, disassembling devices to discover how they work and find ways to improve them. His desire to unravel every secret can sometimes lead a t'sa into trouble, which is why most t'sa like to work closely with others.

T'sa are social beings who don't like being alone for long. Once a t'sa joins a group, he stays with it through thick and thin, usually bonding with at least one member as a lifelong friend.

Everything a t'sa does, he does quickly. He's always on the move, always asking questions, and always seeking answers. Although his intentions are often misunderstood, a t'sa is nonetheless eager to please and to make friends.

T'sa possess acute olfactory and tactile senses, and they love to handle things. Their vision, hearing, and sense of taste are comparable to the average human's.

T'sa society has evolved in leaps and bounds. Scientific breakthroughs and merciless industrialization of their homeworld have enabled t'sa pioneers to quickly fan out among the stars, leading to the rise of several colonies across the great void of space. A t'sa takes changes in stride, rarely dwelling on the past and always looking toward the future with great optimism.

SPECIES TRAITS

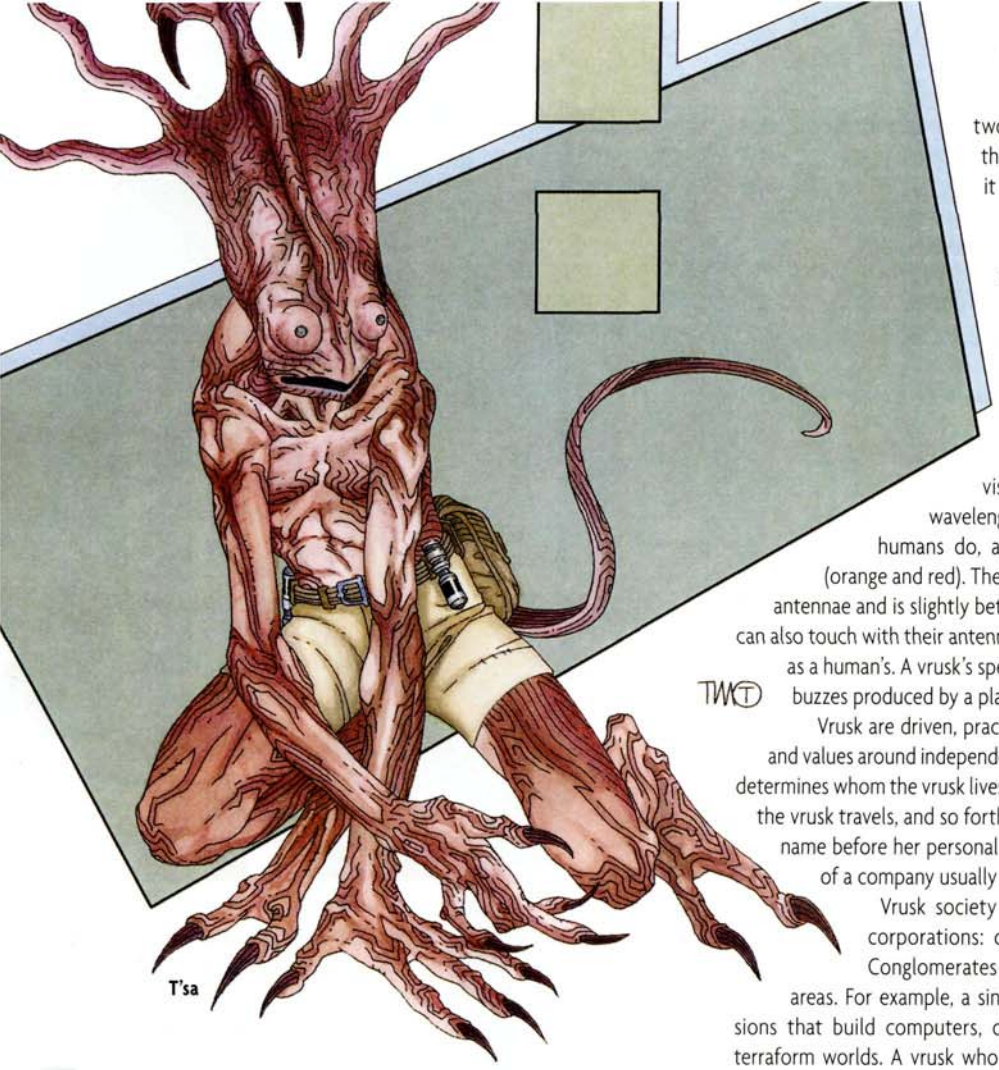
T'sa share the following species traits:

Type: Humanoid (reptilian, t'sa).

Size: Small. T'sa gain a +1 size bonus to Defense, a +1 size bonus on attack rolls, and a +4 size bonus on Hide checks. They take a –4 penalty on grapple checks. Their lifting and carrying limits are three-quarters of those of a Medium-size character.

T'sa must use two hands to wield a Medium-size weapon, and light weapons for them are Tiny or smaller.

Ability Modifiers: –2 Strength, +2 Dexterity, –2 Wisdom, +2 Charisma. T'sa are nimble and charming, but not particularly strong or discreet.



T'sa

Speed: 30 feet. Despite their short stature, t'sa move with surprising alacrity.

Natural Armor: T'sa natural body armor grants a +1 natural armor bonus to Defense.

Skill Bonus: T'sa like to tinker with technology. They gain a +2 species bonus on Disable Device and Repair checks.

Free Language Skills: Read/Write T'sa, Speak T'sa.

Level Adjustment: +0.

VRUSK

"We used to serve House Ektar. Now you can call us—I mean, me—Zivik."

A vrusk (singular and plural) resembles a large insect. Eight legs grow from her abdomen, four on each side. Her somewhat humanoid torso is mounted upright in front of the abdomen, and she has two arms connected at the shoulders. Vrusk hands are circular pads with five fingers spaced evenly around the edge. A vrusk's shoulders are double-jointed, allowing her to rotate her arms in a full circle without straining any muscles. This flexibility also enables a vrusk to reach any point on her abdomen or behind her back easily.

A hard, jointed carapace covers the vrusk's body. The carapace protects the vrusk from bruises, cuts, scratches, and other minor injuries. A young vrusk has a blue carapace with bright orange near the joints. As the vrusk ages, her carapace changes to dull green with yellow joints.

Unlike insects, a vrusk has an internal skeleton supporting her body. Her large eyes are protected by hard, transparent enamel, and four large eating mandibles surround the vrusk's mouth. The two larger mandibles hold food while the small ones tear it apart and place it in the mouth.

Vrusk are omnivores. They have lungs and breathe through many small nostrils under their abdomens; this arrangement makes it difficult for vrusk to swim.

The average vrusk measures 5 feet tall and 5 feet long and weighs 185 to 200 pounds.

Vrusk have excellent color vision, but they see more of the short wavelengths (blue and ultraviolet light) than humans do, and less of the long wavelengths (orange and red). Their sense of smell is centered in their antennae and is slightly better than the average human's. They can also touch with their antennae. Their hearing is about the same as a human's. A vrusk's speech combines mandible clicks with buzzes produced by a plate in her mouth.

Vrusk are driven, practical beings who base their society and values around independent corporations. A vrusk's company determines whom the vrusk lives with, what the vrusk's job is, where the vrusk travels, and so forth. Often, a vrusk gives her company name before her personal name, and any vrusk in the service of a company usually refers to herself as "we."

Vrusk society supports two different types of corporations: conglomerates and trade houses. Conglomerates have business interests in many areas. For example, a single conglomerate might have divisions that build computers, operate farms, train lawyers, and terraform worlds. A vrusk who works for a conglomerate usually works for only one division, and might not even know what other divisions the company owns. Trade houses specialize in one type of business. Because all vrusk working for a trade house do the same work, trade houses usually work together. For instance, a trade house that builds farming equipment would hire accountants from an accounting house to keep their financial records. Byzantine laws regulate business between the myriad vrusk companies; few other than the vrusk can grasp them.

Vrusk adventurers seldom belong to a company. Some are independent operators, some are company employees who were terminated, and some are just too rebellious to tolerate the company rules. Such atypical vrusk are among the few who use the "I" pronoun when referring to themselves. As with their company-bound kin, however, they are driven by a desire for wealth, power, success, and happiness.

SPECIES TRAITS

Vrusk share the following species traits:

Type: Monstrous humanoid.

Size: Medium-size. Vrusk have no special bonuses or penalties due to their size.

Ability Modifiers: –2 Strength, +2 Intelligence, +2 Wisdom. Vrusk are bright and perceptive, but not particularly strong.

Speed: 30 feet.

Natural Armor: A vrusk's hard carapace provides a +3 natural armor bonus to Defense.

Armor and Weapon Restrictions: A vrusk cannot wear armor designed for other species. A vrusk relies on her natural armor for protection, and worn armor must be specially tailored to a vrusk's unique physiology; increase the purchase DC of vrusk armor by +1.

Because of their unusual hand structure, vrusk have trouble wielding weapons not designed specifically for them. A vrusk takes a –4 penalty on attack rolls made with nonvrusk weapons unless she has the Alien Weapons Proficiency feat. A vrusk-made weapon costs the same and has the same statistics as its nonvrusk counterpart.

Darkvision (Ex): Vrusk possess darkvision out to a range of 60 feet. Darkvision is black and white only but otherwise the same as normal sight, and vrusk can function with no light at all.

Stability (Ex): A vrusk's eight legs grant it a +4 stability bonus on checks made to resist bull rush and trip attempts.

Swim Penalty: Vrusk are poor swimmers and take a –4 penalty on Swim checks.

Bonus Feat: The vrusk education system is second to none. A vrusk gains the bonus feat Educated, although one of the chosen Knowledge skills must be Knowledge (business).

Free Language Skills: Read/Write Vrusk, Speak Vrusk.

Level Adjustment: +0.

WEREN

"Of course I care whether I live or die. Did you think that big meant stupid?"

Standing roughly 8 feet tall and weighing in at a hefty 400 pounds, a weren (singular and plural) is hard to miss. Covered in thick fur, he has a powerful form and wicked claws that make him a formidable opponent even when he is not carrying a weapon. A great mane of hair flares from his head. His fur ranges from black to shades of gray, brown, or white—regardless of color, weren fur has a shimmer and an ability to shift slightly in hue, varying with the surrounding lighting. Weren males are slightly larger than the females and have two oversized tusks jutting from their lower jaw; the females do not bear tusks but share the males' powerful builds.

A weren approaches life with amazing intensity. When he embraces a new idea of belief, he becomes a zealot. He professes the tenets of his beliefs with word, deed, and weapon. Though built for battle, a weren also loves to talk and share ideas. Despite their fervor and martial nature, not every discussion leads to a fight, and a weren usually won't fight a weaker creature unless he is left with no choice.

Weren are proud, fierce, honorable warriors, although their eagerness to make peace leads many to become diplomats of one sort or another. They make stalwart companions and bond easily with humans and other species that have learned to temper their primal natures.

A weren's senses are comparable to a human's.

Weren speak a guttural language punctuated by deep growls. They have the capability to speak other humanoid languages as well.

At the time humans develop faster-than-light travel, the weren clans are embroiled in their version of the Renaissance, a time of great learning, debate, and speculation about the nature of life. Before this time, weren clans were locked in deadly, generations-long wars for supremacy. Wise weren now acknowledge that their race's enlightenment could only come after centuries of bloodshed. The past has allowed them to evolve into philosopher-warriors, the absolute dichotomy of gentle scholars and noble savages.

SPECIES TRAITS

Weren share the following species traits:

Type: Giant.

Size: Large. Weren take a –1 size penalty to Defense, a –1 size penalty on attack rolls, and a –4 size penalty on Hide checks. They gain a +4 size bonus on grapple checks. Their lifting and carrying limits are twice those of a Medium-size character.

Weren must use two hands to wield a Huge weapon, and light weapons for them are Medium-size.

Weren occupy a 5-foot-by-5-foot fighting space and have a natural reach of 10 feet.

Ability Modifiers: +4 Strength, –2 Dexterity, +2 Constitution. Weren are incredibly strong and resilient, but they lack agility.

Speed: 30 feet.

Armor and Weapon Restrictions: A weren cannot wear armor designed for other species. Weren armor is larger and costs more than similar armor sized for a Medium-size character; increase the purchase DC of weren armor by +2.

Weren cannot effectively wield Small or smaller weapons.

Claws: A weren has retractable claws that can be used in combat. (Extending or retracting the claws is a free action.) A weren can make one claw attack per round (or more if he has multiple attacks in a round). Each successful claw attack deals 1d6 points of lethal slashing damage plus the weren's Strength modifier. A weren making a claw attack is considered armed and does not provoke attacks of opportunity.

Low-Light Vision (Ex): A weren has low-light vision. He can see twice as far as a human in starlight, moonlight, torchlight, and similar conditions of shadowy illumination. He retains the ability to distinguish color and detail under these conditions.

Natural Camouflage (Ex): A weren's fur shimmers and changes color to match his surroundings. Even in an urban setting, this natural camouflage helps the weren blend



Vrusk

THE WEREN AND THE SASQUATCH

The weren and the sasquatch (described in the *d20 Menace Manual*) are distant relations. The sasquatch is, in fact, a throwback—a weren plucked from its homeworld and isolated from the rest of its kind for generations. One theory holds that the fraal or some other advanced race visited the weren homeworld in the distant past, captured several primitive weren as test subjects or slaves, and later stranded them on faraway planets such as Earth. While the race of weren evolved from warlike brutes into warrior-scholars with a rich culture, the primitive sasquatch remained savage and isolated.

Both the weren and the sasquatch speak the same root language, Weren. However, the vocabulary of the modern weren far exceeds that of its more primitive cousin.

into the background. If the weren doesn't take more than a 5-foot step on his turn, he gains a +4 bonus on his Hide checks. (This bonus offsets the weren's –4 size penalty on Hide checks.)

Free Language Skills: Read/Write Weren, Speak Weren.

Level Adjustment: +1.

PLAYING A WEREN AT 1ST LEVEL

Because of their Large size, great strength, and natural weapons, weren characters have a level adjustment of +1. Consequently, when a weren hero takes his first level in a basic class, he effectively becomes a 2nd-level character. Put another way, he is significantly more powerful than his 1st-level peers.

A player can, with the GM's permission, play a weren as a 1st-level character. To balance the weren with the nonweren heroes in the party, the weren hero must take a –1 penalty on all attack rolls, level checks, ability checks, skill checks, and saving throws until he gains 1,000 XP (that is, enough XP to advance to 2nd level). At that time, the –1 penalties are lifted, the character's XP total automatically resets to 0, and the weren does not gain a new class level. From that point on, however, the weren advances normally. The weren will have one fewer class level than the other heroes, but his Effective Character Level (ECL) will be the same (taking into account the +1 level adjustment).



WEREN WEAPONS

The following weapons are typical of weren technology (see Table 13–5: Alien Weapons for statistics).

WEREN DIRE AXE (PL 2)

Weren warriors favor this massive great axe. A Large creature can wield the weapon with two hands, adding 1.5 times its Strength modifier to damage. The dire axe is too large for Medium-size or smaller characters to wield effectively.

FLINTLOCK MUSKET (PL 3)

The musket is perhaps the most successful of the black powder weapons, firing a .50 to .60 caliber bullet. The weapon is unreliable, however; on a natural roll of 1, the flintlock musket breaks and cannot be fired again until it is repaired. Repairing the musket takes 10 minutes and a successful Repair check (DC 15).

Reloading the weapon is a full-round action.

This weapon requires the Personal Firearms Proficiency feat to use proficiently. A weren character can fire the weapon with one hand.

YAZIRIAN

"You have proven a worthy enemy. Your death will honor us both."

A yazirian is a tall, thin, omnivorous humanoid with gangly limbs and a slender torso. Two large flaps of skin grow on either side of her body, attached to her arms, torso, and legs. When a yazirian raises her arms, this membrane is stretched tight and forms a sort of wing. Under certain conditions, a yazirian can use her wings to glide short distances. The average yazirian stands between 5 1/2 and 6 feet tall and weighs 90 to 120 pounds.

A yazirian's muzzle and high forehead gives it an animallike appearance. Her head is surrounded by a thick mane and collar of hair that varies in color from glossy black to pale yellow. Her skin ranges from gray to light tan. Lacking sweat glands, a yazirian pants to keep cool.

Yazirians have four knuckles (one more than humans) on their fingers and toes. The inside toe is opposed like a thumb, allowing a yazirian to grasp things with her feet. The tips of her fingers and toes end in broad, ribbed pads, giving the yazirian an excellent grip. These characteristics, combined with their animallike appearance, earn yazirians the nickname "monkeys"—an appellation they are not especially fond of.

A yazirian's sense of hearing, smell, and taste are equivalent to a human's. Because yazirians evolved from nocturnal hunters, their eyes have adapted to seeing in dim light. They cannot see in complete darkness, however. Bright light hurts their eyes, so most yazirians wear tinted goggles when working in sunlight or brightly lit areas.

Yazirians speak their own language and have the capability to speak other humanoid languages as well. Their own language combines human-type sounds with snarls and growls.

Yazirian communities are divided into large, loosely organized clans. All of the members of a clan are related to each other. In the distant past, clan ties were very strong. The clans had traditional enemies and allies, and they struggled constantly for territory and power. Since moving into space, yazirians have learned to cooperate with each other and with other species, and the clans have become less important. Despite this, yazirians still have a well-deserved reputation as proud, fierce fighters.

Yazirians have preserved the custom of choosing a life-enemy. A yazirian who chooses a life-enemy dedicates her life to destroying, overcoming, and outdoing that enemy as completely as possible. A yazirian gains honor by striving to defeat her enemies, and a yazirian with powerful enemies is respected and admired by her kin.

Yazirians favor loose-fitting, brightly colored clothing. Dark goggles are worn in the daytime. Yazirians do not like shoes but can wear soft-soled or mittenlike footwear when necessary.

SPECIES TRAITS

Yazirians share the following species traits:

Type: Humanoid (yazirian).

Size: Medium-size. Yazirians have no special bonuses or penalties due to their size.

Ability Modifiers: +2 Dexterity, –2 Intelligence, –2 Charisma. Yazirians are agile, but they are slow to learn and quite abrasive.

Speed: 30 feet.

Armor Restrictions: A yazirian cannot wear armor designed for other species. Furthermore, a yazirian cannot use her wing flaps to glide when wearing heavy or powered armor.

Excellent Grip (Ex): Yazirians gain a +2 species bonus on opposed attack rolls made to disarm a foe or resist a foe's disarm attempt.

Glide (Ex): A yazirian can use her wing flaps to land safely from any height, provided she has room to spread her flaps and slow her descent. A yazirian cannot effectively slow her descent if confined to an area narrower than 30 feet in diameter (such as a 10-foot-wide shaft); in such cases, she falls and takes normal falling damage.

A yazirian applies a +20 bonus on Jump checks when using her wing flaps to assist a long jump; this bonus does not apply to high jumps, however.

A yazirian wearing heavy or powered armor or carrying a medium or heavy load cannot glide.

Life-Enemy (Ex): When a yazirian reaches adolescence, she may choose a life-enemy. Once selected, the life-enemy cannot be changed. This life-enemy may include all members of a particular species (sesheyans, for example) or any creature with a particular allegiance (see Allegiances on page 37 of the *d20 Modern Roleplaying Game*). The yazirian gains a +2 bonus on Bluff, Intimidate, Listen, Sense Motive, Spot, and Survival checks when using these skills against her life-enemy. Likewise, she gets a +2 bonus on weapon damage rolls against such creatures.

A yazirian cannot choose "yazirian" as her life-enemy, although she may choose yazirians of a particular allegiance (including members of a rival clan).

Light Sensitivity (Ex): Abrupt exposure to bright light (such as sunlight) blinds a yazirian for 1 round. On subsequent rounds, the yazirian takes a –1 penalty on all attack rolls, saves, and checks while operating in bright light.

Wearing dark-tinted goggles (purchase DC 6) negates the effects of light blindness.



Yazirian

Low-Light Vision (Ex): A yazirian has low-light vision. She can see twice as far as a human in starlight, moonlight, torchlight, and similar conditions of shadowy illumination. She retains the ability to distinguish color and detail under these conditions.

Rage (Ex): A yazirian can fly into a screaming blood frenzy once per day. In a rage, the yazirian gains phenomenal strength and durability but becomes reckless and less able to defend herself. She temporarily gains a +4 bonus to Strength, a +4 bonus to Constitution, and a +2 morale bonus on Will saves, but she takes a –2 penalty to Defense.

The increase in Constitution increases the yazirian's hit points by 2 points per level, but these hit points go away at the end of the rage when her Constitution score drops back to normal. (These extra hit points are not lost first the way temporary hit points are; see *Temporary Hit Points* on page 142 of the *d20 Modern Roleplaying Game*.) While raging, a yazirian cannot use skills or abilities that require patience or concentration.

The rage lasts for a number of rounds equal to 3 + the yazirian's (newly improved) Constitution modifier. A yazirian may prematurely end her rage voluntarily. At the end of the rage, she loses the rage modifiers and restrictions and becomes fatigued (–2 penalty to Strength, –2 penalty to Dexterity, can't charge or run) for the remainder of the current encounter.

Free Language Skills: Read/Write Yazirian, Speak Yazirian.

Level Adjustment: +0.

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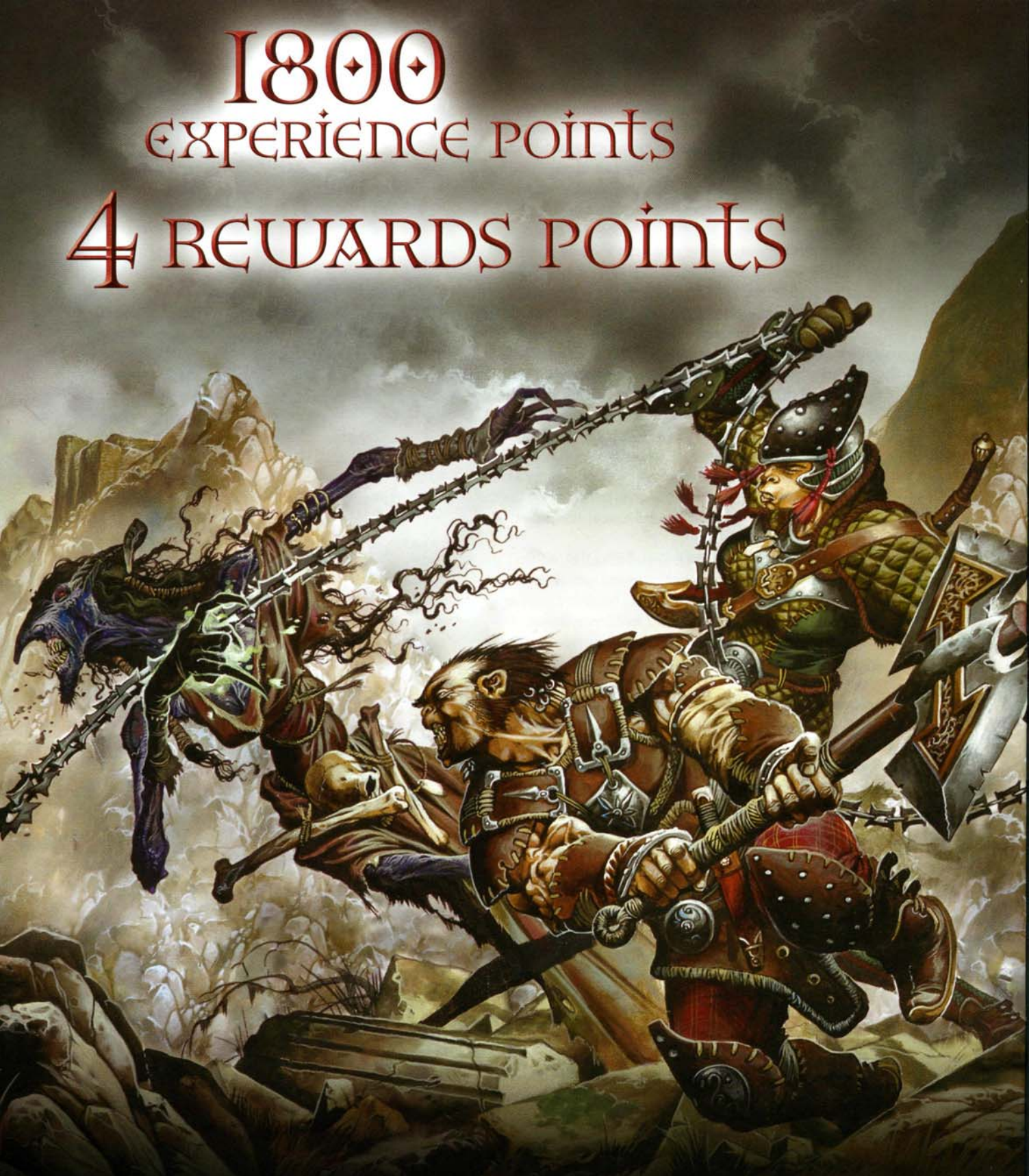

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