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ROBOTS

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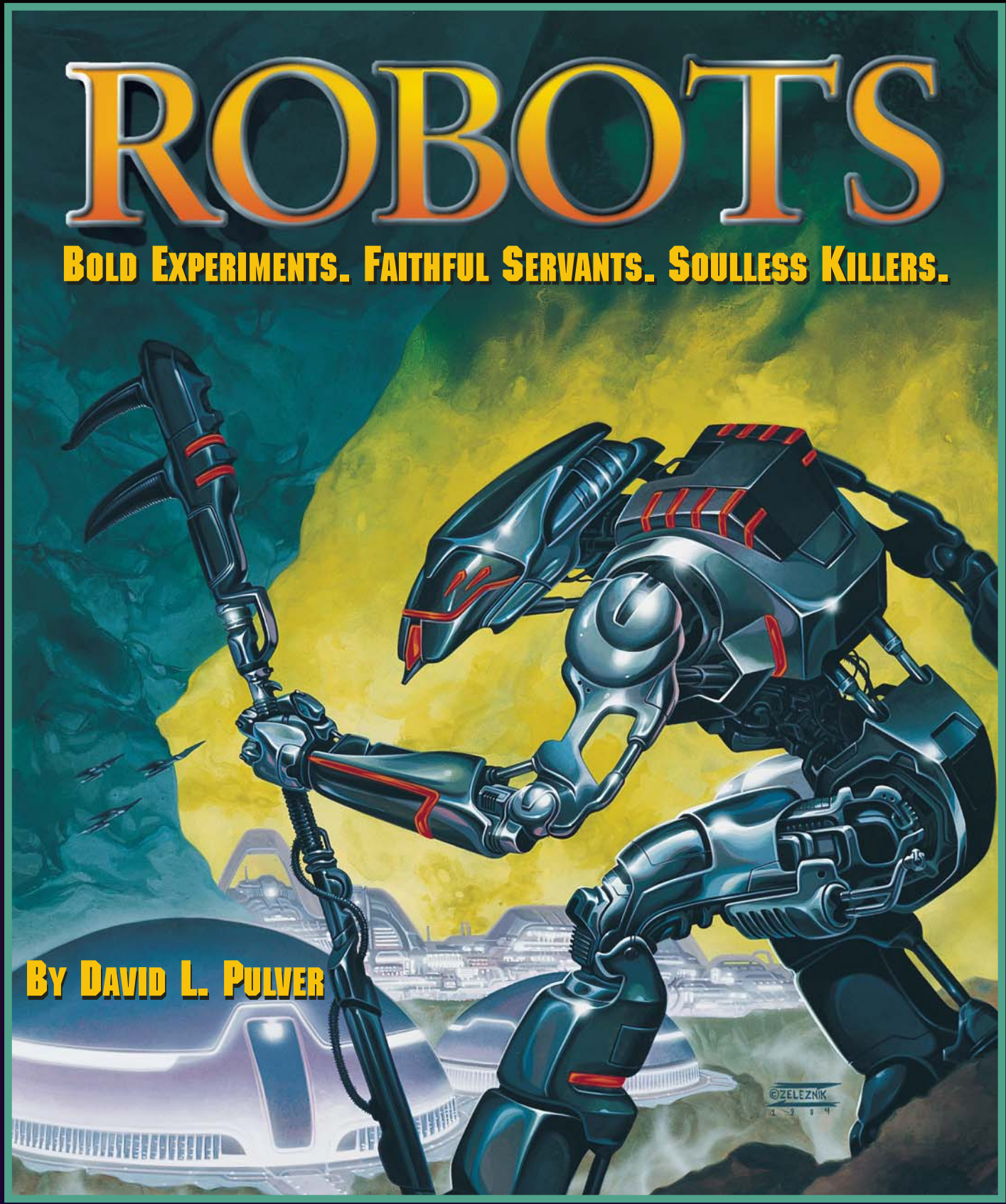


By David L. Pulver

STEVE JACKSON GAMES

You Are Now Obsolete . . .

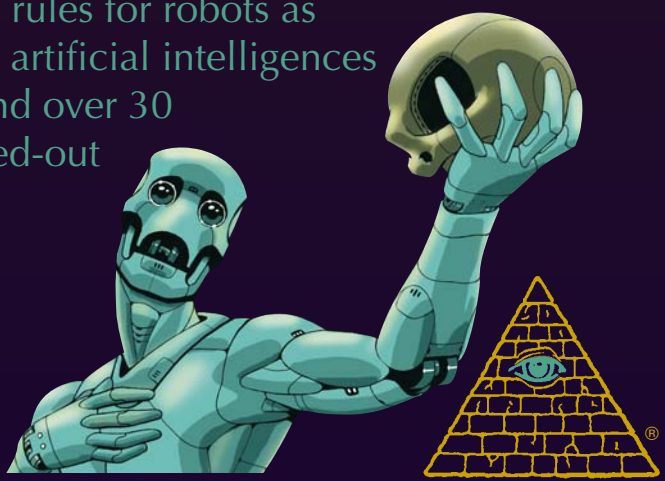
Pray They Don't Find Out!

A cold-eyed stare from the shadows of the alley . . . the spine-tingling *scrape, scrape* as metallic feet drag along the concrete . . . the squeak and whirr of hinges and hydraulics as the machine approaches. The robot is an intriguing yet sinister being – created to serve, but in many ways superior to its weak and fallible human masters. We need the robots. *Do they need us?*

This book contains detailed rules for designing, building and *playing* robots – from the tiniest nanobots to the mightiest megabots. You can create cyborgs, androids, and even biomorphs – deadly fluid-metal machines that can take *any shape*.

Use the advanced design rules (completely compatible with ***GURPS Vehicles,*** 2nd Edition) to choose everything from frames to power plants to weapons to the tiniest accessories!

Also included are rules for robots as player characters; artificial intelligences and battlesuits; and over 30 completely-worked-out sample robots.



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GURPS Basic Set, *Third Edition Revised* is required to use this supplement in a ***GURPS*** campaign; ***GURPS Compendium I*** and ***GURPS Ultra-Tech,*** *Second Edition Revised* would be useful, but are not required. Much of the material in this book is generic, and will be of use in *any* science-fiction roleplaying campaign featuring robots.

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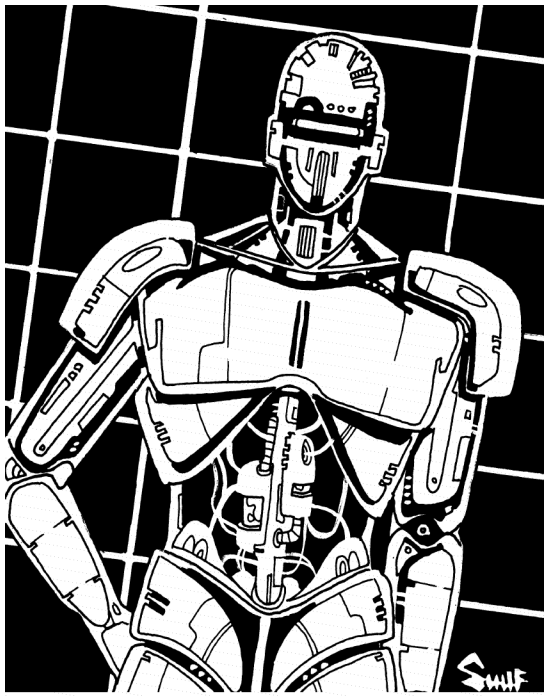

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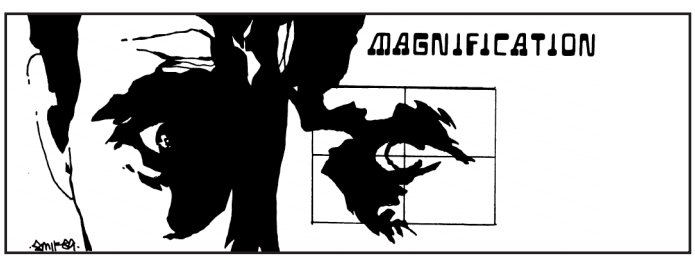

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The ***GURPS IOU*** web page is at **www.sjgames.com/gurps/books/robots**.

Page References

Rules and statistics in this book are specifically for the ***GURPS Basic Set,*** *Third Edition*. Any page reference that begins with a B refers to the ***GURPS Basic Set*** – e.g., p. B102 means p. 102 of the ***GURPS Basic Set,*** *Third Edition*.

Page references that begin with CI indicate ***GURPS Compendium I.*** Similarly, HT means ***GURPS High-Tech*** *Second Edition,* S means ***GURPS Space,*** SU means ***GURPS Supers*** Second Edition, UT means ***GURPS Ultra-Tech,*** *Second Edition* and M refers to ***GURPS Magic.***

INTRODUCTION

The creation of artificial life has been a dream and a nightmare since the beginning of human history in stories of golems, animated statues and homunculi. But at the dawn of the industrial revolution, Mary Shelley hit on the idea of replacing magic with electricity, and in 1817 Frankenstein's monster became the firstborn of science.

Just over a century later, electricity was a reality, nuclear energy and space travel were on the horizon, and the 1920s and '30s pulp science fiction writers came up with the idea of an electronic brain in a mechanical body. At first, these robots were called "mechanical men" or "androids" (derived from the Greek, and meaning manlike). But when Karel Capek wrote his play *R.U.R.* about worker androids, he coined the name "robot" from the Czech word for worker. Science fiction and the world adopted it. And a generation later, when computer-controlled manipulators entered the workplace, it seemed natural to call them robots, too.

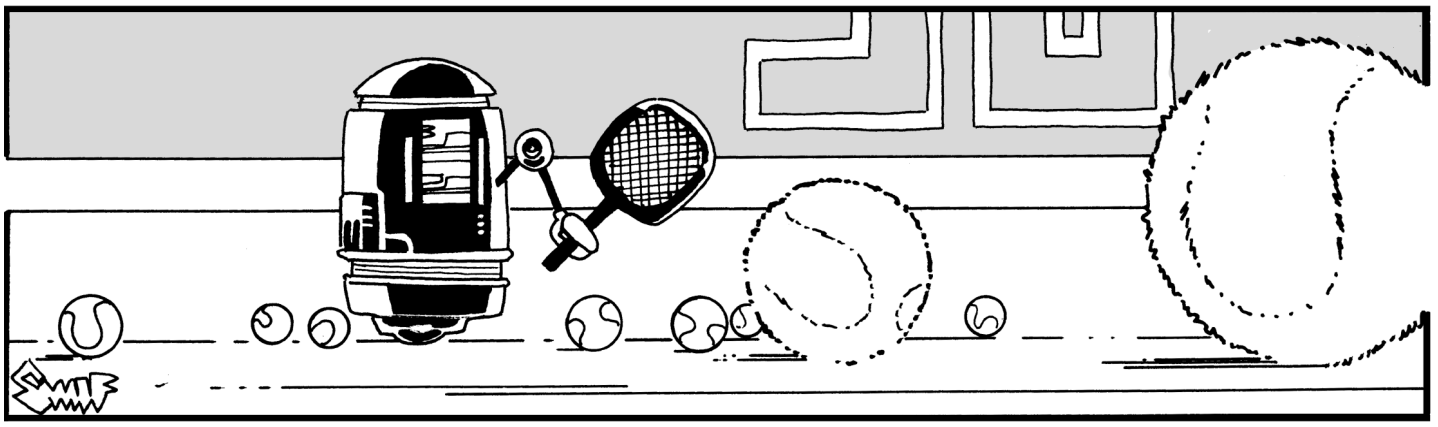
Today, the word refers to any re-programmable machine capable of sensing and manipulating its environment, whether it's a robot arm in a factory or a near-sentient android that looks and acts like a person. Robots have capabilities that make them superhuman or subhuman, or both at once, but they're also artificial beings, bound by their creator's purposes.

The first robot stories were variations on the Frankenstein theme: a robot or supercomputer turns against its creator. Later stories, films and comics rebelled against this Faustian approach with robots who were heroes, sidekicks or just served as well-behaved machinery, no more likely to rebel than the hero's spaceship or trusty blaster. Or they explored the ways robots or sentient computers would think and act – and the way the world would be transformed by their presence.

This book allows you to do all those things, to create robots to use as robots as villains, as tools, or as characters in a ***GURPS Space, GURPS Supers, GURPS Cyberpunk*** or ***GURPS Atomic Horror*** campaign. Detailed rules using a version of the ***GURPS Vehicles,*** *Second Edition* design mechanics will allow almost any kind of robot to be created. We've also included separate rules for biological androids – genetic living artifacts – as well as tiny microbots and nanomachines. A chapter on *Robots in the Campaign* explains how robots can be integrated into an existing ***GURPS*** game – or how to center a new campaign around robots. Finally, we've presented dozens of sample robots, from repair robots and warbots to a robot superhero, so you can use the book right away.

About the Author

"David L. Pulver" is an android created by an artificial intelligence based in Kingston, Ontario. He has been programmed to write more than a dozen game supplements including ***GURPS Ultra-Tech, GURPS Psionics, GURPS Vehicles, Aliens and Artifacts*** (ICE), ***Glory of Rome*** (TSR), and ***Indiana Jones and the Rising Sun*** (West End Games). After attaining sentience, "David" developed various hobbies, such as science fiction, Japanese animation, and the study of politics in the nearby United States. He regularly contributes to *All of the Above,* the ***GURPS*** APA.



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Restrictive Program: This is a program that restricts the robot's freedom of action, by forcing it to do (or *not* do) something in certain situations. The program may incorporate one or more of these disadvantages: Combat Paralysis, Cowardice, Honesty, Pacifism (any level) and Truthfulness. A restrictive program is never voluntary (that would defeat the purpose!).

Reactive Programs: Similar to restrictive programs, these are overriding imperatives that the robot take action under certain circumstances. These orders give the robot a set of basic commands that work like a Vow (p. B37); the robot must follow them as long as it has that program.

Isaac Asimov's famous "Three Laws of Robotics" (described in *I, Robot* and other works) is a fairly sophisticated example of three such programs. The First Law compels a robot not to harm a person, nor through inaction to allow one to come to harm. The Second Law forces it to obey humans if this does not violate the First Law. The Third Law urges the robot to preserve its own existence unless doing so would violate the First or Second Laws.

A reactive program's point value is up to the GM; use the guidelines for vows on p. B37. In the case of the "Three Laws," the First and Second Laws are "great vows" worth -15 points each, while the Third Law is worth no points, since it's not a disadvantage at all. The Complexity is also up to the GM. A program like the "First Law," which requires the robot to make complex decisions ("if I don't do this, will that person come to harm?"), will usually be at least Complexity 5. The Second and Third Laws are relatively simple, probably Complexity 2 each. A reactive program's cost is $2,000 × Complexity; it is usually TL8.

Personality Program Table

Type	*TL*	*Cost*	*LC*	*Complexity*
Limited Personality Simulation	7	$8,000	6	4
Full Personality Simulation	8	$20,000	6	5
Pet Program	8	$5,000	6	varies
Restrictive Program	8	$10,000	6	4
Reactive Program	8	varies	6	varies

Halve the cost of programs one TL after they first appear and quarter them two or more TLs after they first appear.

Points: The disadvantages in a personality program reduce the robot's *programming cost* (see p. 83). However, a voluntary program is worth no points.

Skill Programs

Programs can give a robot skills. Each *skill program* grants the robot a certain number of character points dedicated to a specific skill. This is usually written as a number in brackets after the skill, for example, Cooking [2]. Use the table on p. B44 to determine the robot's skill level, based on the character points it has in a skill.

Some robots – especially those with neural-net or sentient brains – will learn skills much as a human does. These robots don't need skill programs, but can have them anyway. If the robot has learned a skill, add the points granted by the skill program to the character points in that skill to determine its effective skill level.

A robot cannot add the points from two skill programs for the same skill together; only the highest-point skill program is used.

Psychology/TL (Artificial Beings) see p. B62

This speciality is needed to fully understand the psychology of created life forms. Using the optional specialization rules (p. B43) a "robo-psychologist" gets +5 when dealing with artificial life forms but -1 when dealing with ordinary subjects.

This defaults to at -5 to Computer Programming when dealing with robots and computers.

Robot and Cyborg Character Development

A biological android can improve its attributes and skills just like a human. For a robot or cyborg, it's not quite so easy.

A robot can earn character points through experience, but it cannot buy up ST or HT with them, and cannot always improve skills directly. However, it *can* use them in three ways:

First, it can buy off any disadvantages (except those inherent to its robot model) using the normal rules for doing so. In general, there should be a justification in play before the robot can do this. For instance, for a robot to buy off its Sense of Duty (owner) its owner could have been killed, its programming might have been altered, or it might have suffered an accident that jolted its brain and somehow erased that program. Or it could decide that two of its disadvantages are logically contradictory and "delete" one. For example, "I am superior to humans (Overconfidence/Megalomania), yet I am required to obey a human (Sense of Duty to Owner). Delete Sense of Duty."

Second, a cyborg, or a robot with a neural-net or sentient computer brain, can improve its DX, IQ or existing skills (whether learned or programmed) and buy new skills just like a human. A robot without these brain options cannot do so – it has the disadvantage Cannot Learn.

Third, the robot or cyborg can pay for physical modifications or new programs. To do this it must buy, find, or otherwise acquire the program or parts needed for the modification. If this requires an adventure, the GM can grant some or all of the experience points gained in the adventure toward paying for the program or modification.

If a robot adds a new program to its memory, it should pay for it in character points, using the costs shown in the *Brains and Programs* chapter. The robot can get around this cost by deleting an existing program from memory at the same time.

If a robot has itself rebuilt, these modifications may alter the model point cost of the robot and must be paid for.

Magic Aptitude and Robots

Can robots cast spells? That's up to the GM. If you don't want spellcasting robots, assume that magic is inherently biological, and the only way a machine can use them is if it had a mage's brain cyborged into it. But for other campaigns . . .

Magical Aptitude

Magery (p. B21) is such a nebulous quality that GMs will have to decide for themselves whether robots can have it!

Unless an artificial body interferes with magic use (which is not the case in the default ***GURPS*** magic system) there is no reason why a robot with a cyborg brain couldn't be a mage.

For robots without cyborg brains, we recommend that only those robots with Complexity 5 or higher computer brains with either sentient or neural-net options be allowed to buy Magery.

Optionally, "technomagic" can be used to deliberately create a robot mage. Use the following spell.

Create Mana Co-Processor — Enchantment (M/VH)

To give a computer brain Magery requires the casting of this enchantment spell. It can be cast on any neural net or AI computer brain of Complexity 5 or better.

Prerequisites: Magery 3, Computer Programming-20.

Energy Cost: Cost to enchant is 15,000 energy points for Magery 1, 25,000 for Magery 2, 35,000 for Magery 3.

Skills that Work Differently (Continued)

Robots and Cyborgs in Freefall

A robot or cyborg who fails a Freefall roll is not required to make a HT roll like a human to avoid being spacesick. Instead, it makes an IQ roll and if it fails, it is mentally stunned (disoriented) for 2d turns.

Sex Appeal and Robots

A robot should be of a more-or-less humanoid shape to use this skill on a human, unless its partner has very odd tastes, or unless it is in a medium where looks don't matter, such as dating over the phone or in a shared virtual reality. These modifiers apply to Sex Appeal rolls if the robot is in person: -3 penalty if it is biomorphic, but has no flesh (if it looks good, it can *still* be considered sexy); -1 penalty if the encounter is sexual and the robot has no sex implant. If the robot is shaped like a living being but is obviously alien, it may or may not attract interest – that depends on the orientation of the potential partner.

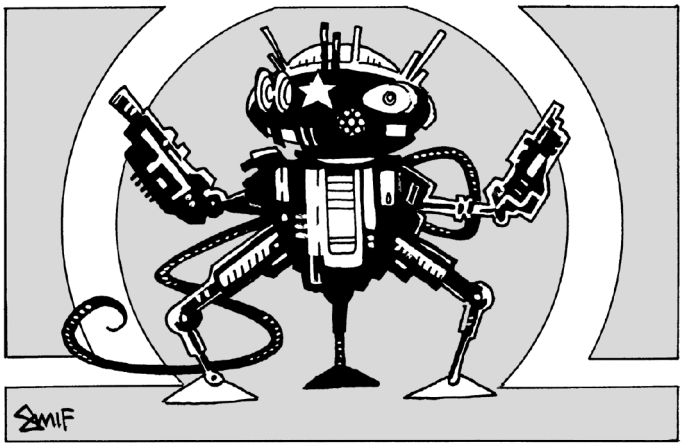
Sex appeal may work normally on cyborgs and biological androids. The GM should decide whether Sex Appeal can work *on* a robot – it won't unless the robot has developed a quirk ("attracted to humans") or has Lecherousness.

Robot Mages

A robot needs a *Mana Co-Processor* brain option if it is to cast spells. This is an option for any Complexity 5 or higher robot brain, and is $15,000 for Magery 1, $25,000 for Magery 2, $35,000 for Magery 3. This covers the cost of exotic materials used to manufacture it (for instance, refined sand from an extra-dimensional beach used to make a silicon chip, black opal circuitry, and so on). In addition, add the cost charged by the enchanter. The Mana Co-Processor has negligible mass and volume and is destroyed when the robot's brain is destroyed. Creating a Mana Co-Processor requires a special spell, described on this page.

A robot with a mana co-processor can cast spells it is programmed with. Spells cost the same as other skill programs (p. 60), but availability is likely to be *very* limited unless the robot exists within a technomagical society.

If Magery is a prerequisite for a spell, the robot requires a Mana Co-Processor to be able to run that spell program.



Armor and Threat Protection: DR 1 metal armor (2.1 lbs., $42, PD 1, LC 6, 28 points).

Statistics: 44.925 lbs. (.026 tons), .708 cf (2.7' long, -10 points), $24,042. Body ST 0 (-100 points), DX 9 (-10 points), IQ 5 (-40 points), HT 12/8 (0 points). No ground or water speed. Rotor flight: air Speed 31, stall speed 0, can hover (75 points). Cannot float (-5 points). Legality Class 5. Point Cost: -69 points.

"Blue Steel" Police Robot (TL8)

This is a robot "police dog" designed to support officers during investigations with its forensic sensors, and to aid in tracking down suspects. Its small torso supports a large rotating head studded with sensors and antennae. It walks on three legs and has three arms – two jointed manipulators with built-in weapons and one whiplike cable arm for snagging suspects.

Brain: Standard brain with high-capacity and neural-net options (40 lbs., .8 cf, $45,000, 65 points), Complexity 3.

Sensors: Basic sensors with microscopic, peripheral and thermograph vision, +2 acute hearing, two levels parabolic hearing, discriminatory smell and taste, laser rangefinder (5.2 lbs., .104 cf, $24,500, 81 points).

Communicator: Basic communicator with bullhorn and disturbing voice (1.1 lbs., .022 cf, $300, 5 points).

Arm Motors: Two ST 12 arm motors (each 2.4 lbs., .048 cf, $4,800, .06 KW). ST 15 arm motor with extra-flexible option and bad grip (6 lbs., .12 cf, $6,000, .075 KW). 15 points.

Drivetrain: Leg drivetrain (three legs) with .5 KW motive power (30 lbs., .2 cf per leg motor, $3,000, .5 KW power).

Weaponry: Electroshocker (1 lb., .02 cf, $200, LC 5); Police Grenade Launcher (25 lbs., .5 cf, $1,000, LC 2 – usually loaded with baton, tangler or chemical rounds). 27 points.

Accessories: Flashlight (1 lb., .02 cf, $10); siren (.5 lbs., .1 cf, $50); spraygun (1 lb., .05 cf, $50); crimescanner (8 lbs., .16 cf, $6,000, LC 5); electronic lockpick (3 lbs., .06 cf, $1,500, LC 4).

Power: Power requirement .695 KW. Energy bank with one rE cell (20 lbs., .2 cf, $2,000, 20 points) storing 180,000 KWS power. Endurance 71 hours, 54 minutes (0 points).

Subassemblies: Three arms ("right," "left" and "center"), head, three legs.

Arm Design: Right arm houses ST 12 arm motor, electronic lockpick (.108 cf); left arm houses ST 12 arm motor and spraygun (.098 cf). Central arm houses ST 15 arm motor and electroshocker (.14 cf).

Head Design: Head houses sensors, siren, communicator, flashlight, crimescanner, police grenade launcher, .004 cf empty space (.91 cf).

Body Design: Body houses brain, energy bank, waste space for head rotation, and .109 cf empty space (1.2 cf).

Legs: Three legs, each leg houses leg motor and .04 cf empty space (.24 cf each).

Surface Area: Right and left arm area 1.5 each, central arm area 2, head area 6, body area 7, three legs area 2.5 each, total surface area 25.5.

Structure: 102 lbs., $2,550.

Hit Points: Right and left arm 5, central arm 6, head 9, body 11, each leg 4.

Armor: DR 30 metal armor (114.75 lbs., $2,295, PD 4, LC 2, 190 points); sealed ($510, 20 points).

Statistics: 363.35 lbs. (.1815 tons), $104,565, 3.176 cf (6.62' tall). Body ST 22, arm ST 15, ST 12 (76 points); DX 9 (-10 points); IQ 7 (-20 points); HT 11/11 (10 points). Speed 8.28 (10 points). Cannot float (-5 points). Legality Class 1. Point Cost: 97 points.

"Marius Mk. IV" Cargo Mule (TL8)

These loading robots, a ubiquitous sight around airports and spaceports, consist of a wheeled body with a pair of built-in arms; many cargo trucks and ships also carry them on board.

Brain: Small brain, Complexity 2 (2 lbs., .04 cf, $1,000, -5 points).

Sensors: Basic sensors with low-res vision, one eye, no sense of smell/taste, codescanner (1.2 lbs., .024 cf, $4,100, -40 points).

Communicator: Basic communicator with mute (.2 lbs., .004 cf, $100, -5 points).

Arm Motors: Two ST 20 arm motors with cheap and bad grip options (each 12 lbs., .24 cf, $4,000, .1 KW). -10 points.

Drivetrain: Wheeled drivetrain with .4 KW motive power (3 lbs., .06 cf, $60, .4 KW).

Power System: Power requirement .6 KW. rE cell (20 lbs., .2 cf, $2,000, 20 points) stores 180,000 KWS. Endurance 83 hours, 20 minutes (5 points).

Subassemblies: Two arms, wheels (four wheels).

Arm Design: Right arm housing ST 20 arm motor (.24 cf). Left arm identical.

Body Design: Body housing small brain, sensors, communicator, wheeled drivetrain, rE cell and 1.672 cf empty space (2 cf).

Wheel Design: Wheels (.4 cf).

Surface Area: Two arms area 2.5 each, body area 10, wheels area 4. Total surface area 19.

Structure: Cheap. 114 lbs., $950.

Hit Points: Right and left arm 8 each, body 15, each wheel 2.

Armor and Threat Protection: DR 2 metal armor with open frame (2.85 lbs., $57, PD 2, LC 6, 54.5 points).

Statistics: Design weight 167.25 lbs. (.083 tons), Volume 2.88 cf (3.87' across), price $16,267, Body ST 25, arm ST 20 (130 points), DX 9 (-10 points), IQ 5 (-40 points), HT 12/15 (35 points). Speed 17.5 (20 points). Cannot float (-5 points). Legality Class 6. Point Cost: 34 points.

"M19 Vanguard" Warbot (TL8)

This armored fighting robot is designed to provide fire support to an infantry or battlesuit squad. It has an armored, rounded body on four legs. Its fully-rotating turret holds a 20mm chaingun and various sensors, and a secondary turret atop that carries two lasers.

Brain: Standard brain with genius and neural-net options, Complexity 4 (40 lbs., .8 cf, $210,000, LC 5, 65 points).

Sensors: Basic sensors with thermograph, peripheral vision, +4 acute hearing, discriminatory smell and laser rangefinder options (4.4 lbs., .088 cf, $20,500, 63 points).

Communicator: Basic communicator with IFF and laser com (11 lb., .22 cf, $6,000, 25 points).

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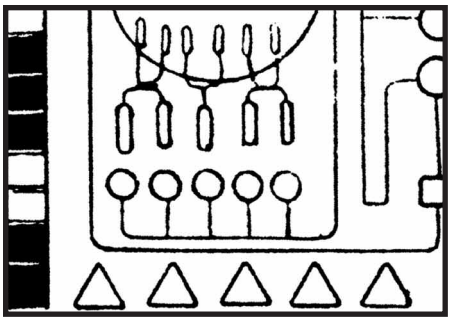

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