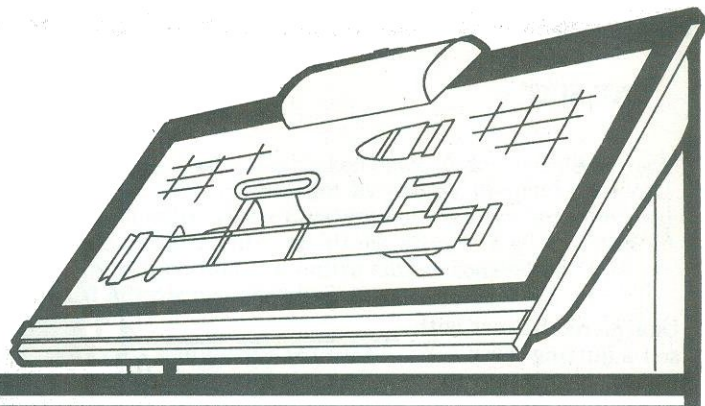


INVENTIVE ORDNANCE



Designation and Design Parameters:

The A-X-E suit is the latest creation by Star Fleet Engineering Command for personal protection in hostile environments. A compromise between older environmental suit designs and personal security armor, the improved A-X-E suit contains many features of both. In engineering parlance, the 'A' stands for armored, the 'X' for negative (or absence), and the 'E' for environment; thus, the armored negative-environmental (vacuum) suit.

The A-X-E suit was designed to provide better protection for contact and surface survey parties of Star Fleet's Galaxy Exploration Command. All too often during expeditions on unexplored worlds, something — or someone — would successfully penetrate an unarmored environmental suit, killing or seriously incapacitating its wearer. With the recent advent and distribution of personal security armor, Star Fleet engineers realized they could now offer an 'all-weather' suit with almost the same degree of safety for those crewmen taking part in high-risk landing parties.

The A-X-E designation further indicates that the device can sustain life in both liquid (i.e., underwater) and poisonous atmospheres, as well as in vacuum or while in the presence of almost all chemical or biological agents. Even so, the A-X-E suit is incapable of withstanding external pressures greater than roughly 10 kilograms per square centimeter (the Terran equivalent of 9.68 standard atmospheres — 142.2 pounds per square inch — or the pressure at an ocean depth of approximately 97 meters). Strongly corrosive atmospheres (including those containing most active sulfur-based compounds) found on many non-Class M worlds will also have an adverse effect on the suit's components, eventually dissolving through with unpleasant consequences.

This suit is often referred to informally as an 'axels,' an acronym for Armored Negative Environmental Life-support System.

Physical Design Features:

As with other environmental suits, the A-X-E suit maintains a self-contained artificial environment, providing air, temperature, and pressure regulation. The suit, equipped with a high-compression atmosphere cylinder and specially-designed high-capacity energy cells, can maintain a constant environment for up to 36 hours.

For the most part, the A-X-E suit is quite different in appearance from an ordinary environmental suit. The unarmored helmet (the suit's weakest point) is of the newer E-suit design, with opaque rear and side panels and a transparent, light-sensitive faceplate. Two small reservoirs containing liquid refreshment are mounted in the helmet, while related life-support attachments are also provided. The suit is equipped with a wrist communicator hooked into the suit's power pack, and is self-sealing, with special triple-thickness gloves and wrist-pieces for handling toxic samples. However, the

similarity between this and other suits ends there.

For personal protection, the front torso of the A-X-E suit is covered with several hundred small, rigid, overlapping plastimetal plates, each approximately five centimeters square by one centimeter thick. In fact, the front bears an uncanny resemblance to Terran chain-mail armor of a millennium earlier. The entire helmet and the innermost layer of these plates, called 'scales', are additionally equipped with an iridium-imbedded energy-damping mesh and belt coil, much like security armor. This suit also has the flexible plastimetal fabric-mesh undersuit, some slight protection from cutting or puncturing weapons (though if the suit itself has been penetrated, chances are its wearer is in serious trouble, regardless).

There is a life functions monitor panel/transponder built into the suit, directly tied via continuous transmission to the orbiting starship's medical computer. If the wearer should lose consciousness for any reason — including from phaser stun — or worse, the transponder immediately sends a signal and coordinates to order a beam-up.

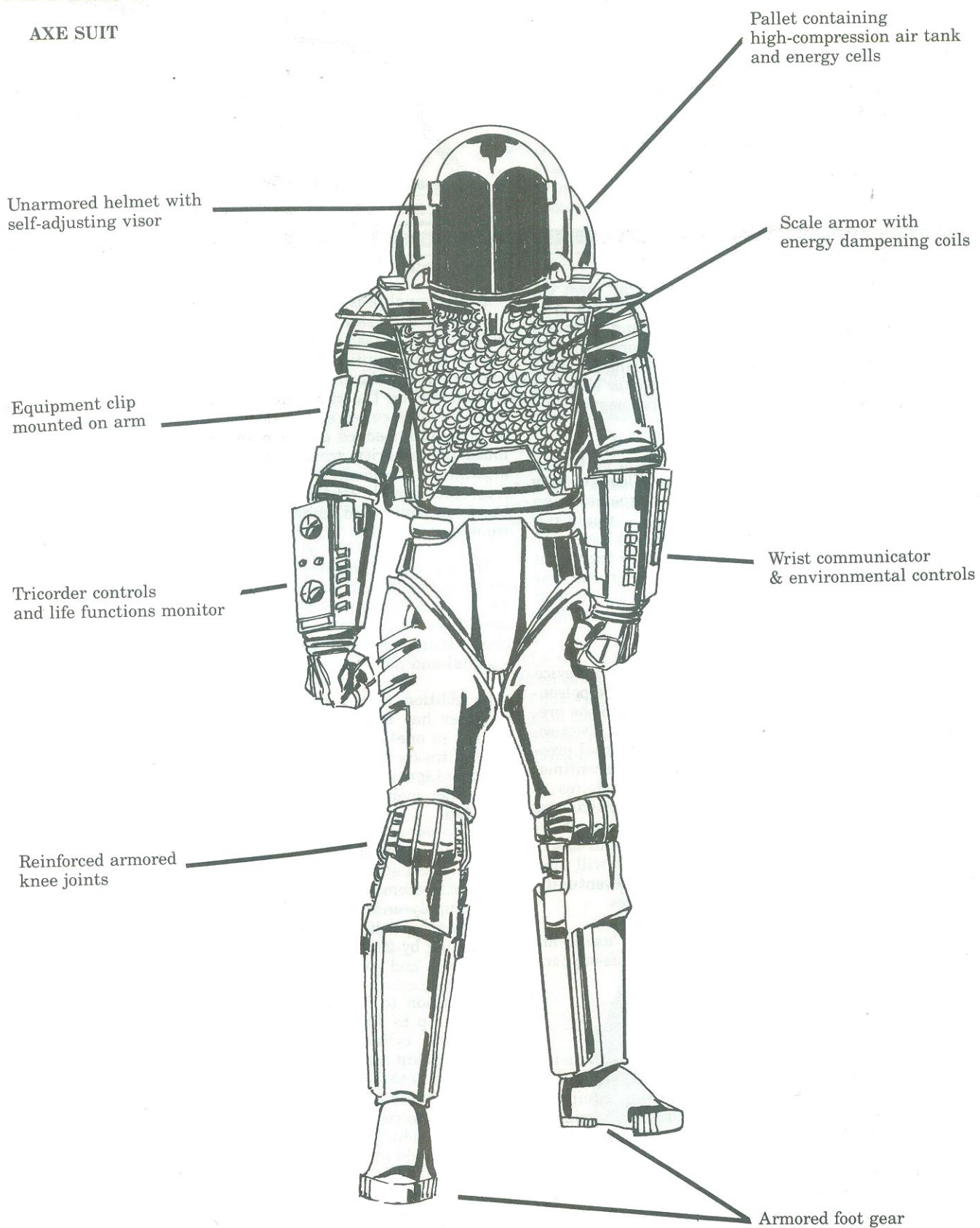
In addition, a modified version of the standard sciences tricorder has been installed in each suit, with controls located in one arm and the video display and data lights located inside the suit just below the faceplate. The sole disadvantage is that it can only hold a single two-hour molecular memory disc, instead of the eight normally included.

The rear of the suit contains three separate environment and electrical access ports, as well as an assortment of magnetomic fasteners and plastimetal clips. The 36-hour atmosphere supply and energy cells are packaged in a modular, rechargeable, self-contained cylinder (approximately one meter long by 20 cm in diameter), which is then fastened to the back and plugged into one of the three access ports.

In addition to the life-support pack, there is sufficient room for up to four medium-sized (i.e., 20 cm by 45 cm) transparent, cylindrical specimen containers (usually used for soil or plant samples), or two extra life-support cylinders hooked up to the remaining ports, or a combination of the two. With three fully-charged life-support cylinders — and no specimen containers — the suit offers an absolute maximum endurance of 108 hours (though such an extended duration would grow quite uncomfortable).

Note: it is *extremely* difficult — and potentially disastrous — for someone who is wearing a suit to try to connect or disconnect his own suit's life-support pack. For example, a character's cylinder is running low and a charged one is sitting on the ground beside him, but no one else is around. Too bad. Hooking the unit up correctly to the access port is a tedious task calling for careful attention and an unobstructed view; to have someone else make the connection is the only sensible option. However, the person doing the

AXE SUIT



work on someone else's suit may himself be in a suit; the gloves do not interfere. Fortunately, ordinary sample containers are far easier to fasten or remove.

Notes on Operation:

Characters with a Skill Rating of 20 or more in *Security Procedures*, OR characters who are currently serving with the Galaxy Exploration Command and have a Skill Rating of 15 or more in *Environmental Suit Operations*, have been trained in the use of the A-X-E suit. Untrained characters wearing this suit who are familiar with other types of environmental suits lose 1 AP per turn, while persons untrained in the use of any suit lose 2 AP per turn.

It takes about two minutes for trained personnel to put on the suit, while untrained persons will take a minimum of three minutes. At the end of this time, they must make a Saving Roll against their DEX score. Failure requires an additional minute and another DEX Saving Roll with a modifier of +5. Additional attempts may be made each following minute until successful.

As with personal security armor, the A-X-E suit is designed for maximum comfort and minimum restriction; a character may sit or even lie down in it, but sleeping is extremely difficult.

While wearing the suit, these tasks require the following number of AP expended:

Putting on the helmet: 1 AP

Removing the helmet: 2 AP

Hooking up and adjusting the communications and life functions monitor/transponder: 3 AP total for both

Activating the suit's built-in tricorder: 4 AP

Fastening or unfastening a specimen container: 4 AP

Armor Effectiveness:

Protection From Physical Attacks:

This includes hand-to-hand combat, melee weapons, and projectile weapons. 80 percent (minus 1 percent for every scale destroyed by combat) of front torso hits will strike one or more plastimetal scales. Damage from a hit on the scaly area is reduced by 1D4 times 20 points, depending on how many scales were hit. One scale is considered to be destroyed for every 20 points of damage reduction. If the hit is on the suit itself, and does not puncture the suit (e.g., from hand-to-hand combat or a crushing blow from a blunt melee weapon), damage is reduced by 5 points. Blows to the helmet cause full damage. Damage against the helmet or suit (not including the scales) counts toward total suit damage.

Protection From Energy Attacks:

The helmet and suit's energy-damping coil will absorb up to 20 points from each attack by phasers, disruptors, or similar weapons on stun or disrupt settings. The coil will *not* protect against disintegration, however, except from grazing shots. The scales and undersuit mesh are totally impervious to old-style hand lasers, though heavier laser-type weaponry does half damage. Energy attacks do not count toward total

suit damage.

Damage To Suit:

The suit's protection is broken down under repeated attack by physical weapons but not by energy weapons. The suit has a protective value (against both energy and physical weapons) of 10 points per attack after it has absorbed 40 damage points, and the entire suit is considered to be destroyed after it has absorbed 40 more points.

Potential Equipment Failures:

A LUC Saving Roll may be required to avoid equipment damage in combat.

Damage to the front of the suit may cause the life functions monitor panel/transponder to fail.

Damage to the suit's arm (player's choice) may cause the sciences tricorder to fail.

Damage to the helmet may cause the communicator and/or sciences tricorder to fail.

Damage to the rear of the suit may cause a life-support systems failure, or the random destruction of a specimen container.

(Detailed information on other possible movement, combat, and medical modifiers for environmental suits appears in the FASA adventure, *Where Has All the Glory Gone?*)

Availability:

As of Reference Stardate 2/2301, A-X-E suits are in limited use aboard a number (approximately 17 percent) of Star Fleet vessels serving in the Galaxy Exploration and Intelligence Commands. Availability for SFIC personnel: 5 percent per group member.

The suit is *not* available commercially at this time, as it is still considered to be experiments. Unlike security armor, A-X-E suits are not tailor-made, but neither does one size fit all. The suits currently come in a variety of lengths and are available for several different races.

For Humans, there are five different sizes, of which one will fit anyone from 140 to 215 cm tall. (This model of suit — of the appropriate length — may also be worn with equal ease by Vulcans, Tellarites, Caitians, Klingons, Romulans, Orions, Alpha Centaurans, Deltans, and Efrosians.) For Andorians, there are three different sizes of varying length, four different sizes for Edoan users, and two sizes suitable for Arkenites. Suit helmets are interchangeable for all races, except for the Andorian and Arkenite suits, which in both cases are race-specific. Atmospheric cylinders containing each race's preferred breathing mixture are available for every race listed above, another unique feature of the A-X-E suit.

Development work has begun to produce a model that will be equipped with a medical tricorder rather than a sciences tricorder. This is the only variant under development, and there are no plans at this time to develop A-X-E suit models for any other non-humanoid UFP member race.

ENVIRONMENTAL SUITS

What could be more natural for a spacegoing game than spacenuts? If a ship has to be boarded, or repairs made to the outside, or if a strange world has to be explored — well, none of this is something you'd care to do in your street clothes. Unless, of course, you're a denizen of the Star Trek universe, where every world is either Class M or equipped with comfortable life support. Environmental suits are for those exceptional times when an airless bridge needs to be investigated.

This can't be the case. Not *all* the time. In a big and busy universe like Star Trek's there are going to be planets with valuable minerals, or ancient artifacts, or living races eager to trade, planets with atmospheres of howling ammonia, or scorching monoxide, or some other totally hostile environment. Even ordinary, everyday vacuum.

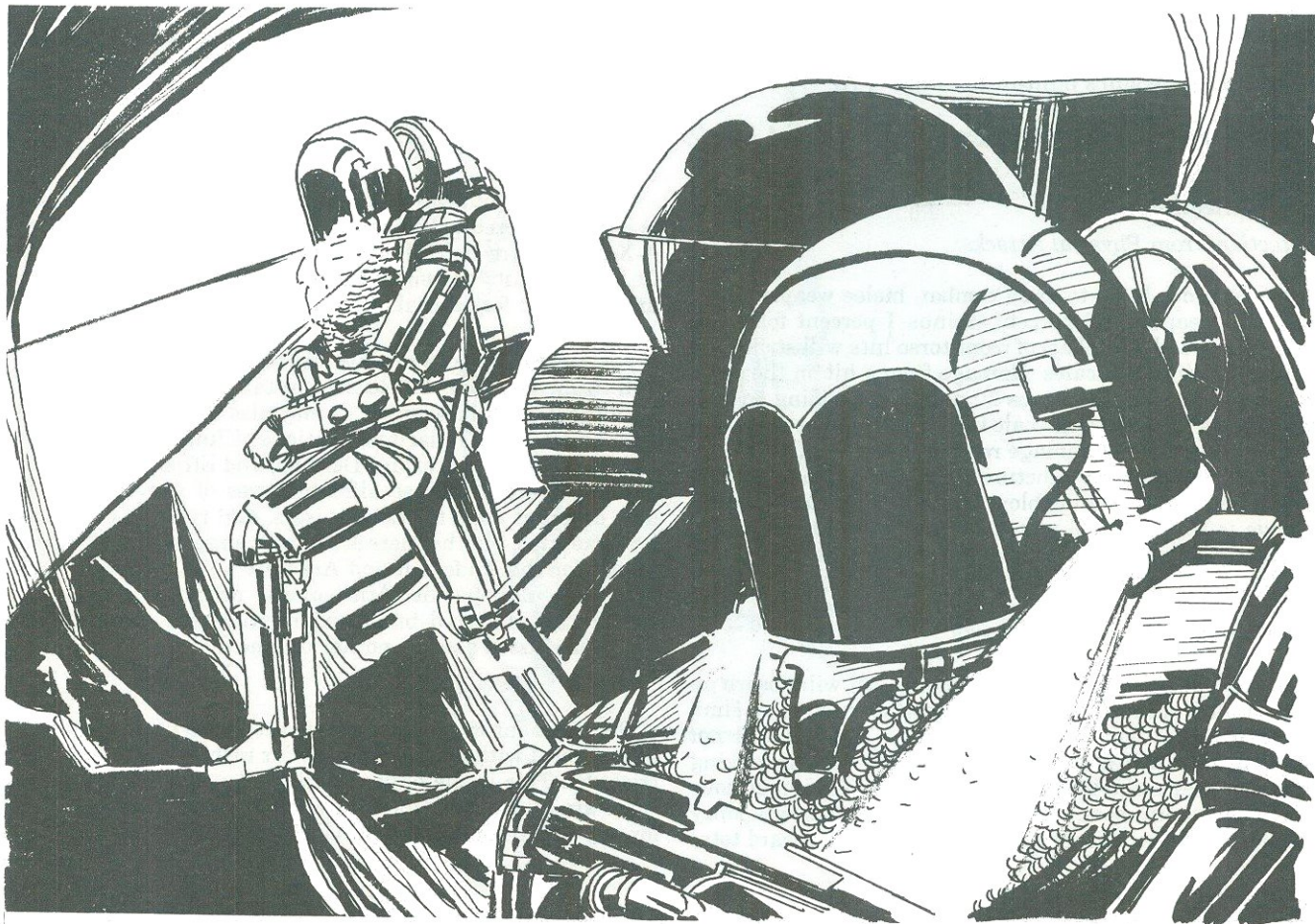
Besides, E-suits make for fun possessions. Characters may want to customize the ones they get off the rack with additional lights, comm gear, tools or even decorations — stripes, slogans, camouflage, even more elaborate art like portraits and so forth; kind of like pressurized T-shirts. E-suits are vital, necessary, and in times of crisis can even be sold to get the characters some grocery money. Planets with hostile environments, asteroid bases, or any kind of outpost in space will likely need a steady supply of such suits, too; characters may get into the E-suit trade if it looks lucrative enough.

E-suits are not generic; a suit capable of maintaining life in vacuum is not necessarily ideal for withstanding pressure. A suit intended to reflect heat and keep its wearer cool on Mercury-type planets won't be much good in methane slush. Suits should be suitable to the environment they're going to be operated in. Hence, below, are six different kinds of E-suits, available to civilians and Star Fleet alike, each tailored to survive a particular kind of environmental nastiness. Of course, most people can only afford a standard E-suit — so if they make a side trip to, say, Rigel 7, where pools of metal lie boiling under the sun, they're either going to have to watch their step very carefully, or price a high-temp E-suit. Or lease one — probably at (GM-set) astronomical rates.

ENVIRONMENTAL SUITS

Six Basic Designs for StarTrek: The Role-Playing Game

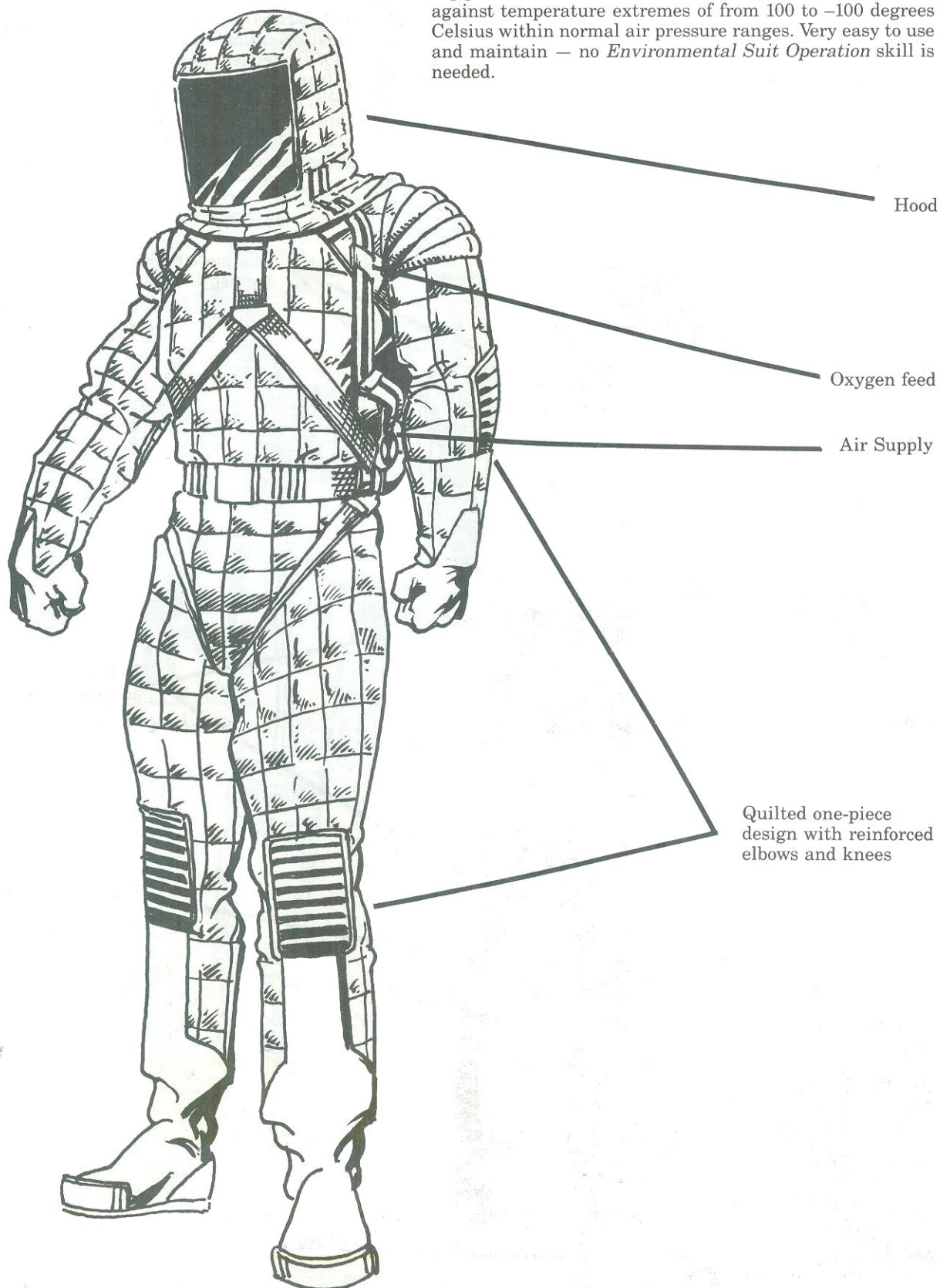
SUIT TYPE: The common name generally used, and the environment the suit is intended to protect against. **WEIGHT:** Empty but fully charged and stocked. **ARMOR VALUE:** Amount of combat damage subtracted from any attack. If the value is exceeded the suit is no longer airtight; if the damage done is twice the armor value or more the suit is destroyed. **AIR SUPPLY/DURATION:** Absolute limit to time suit may be worn without replenishing air, power, or other consumables. **MAINTENANCE:** Time spent per hours of usage on suit upkeep, repair and cleaning.



LIGHT

LIGHT: Used in near-normal pressure conditions only. *Weight:* 2-4 kg. *Armor Value:* None. *Air Supply/Duration:* No inherent life-support; with pressure mask, 8 hours. *Maintenance:* 1 hour every 24 hours. *Cost:* 50 credits.

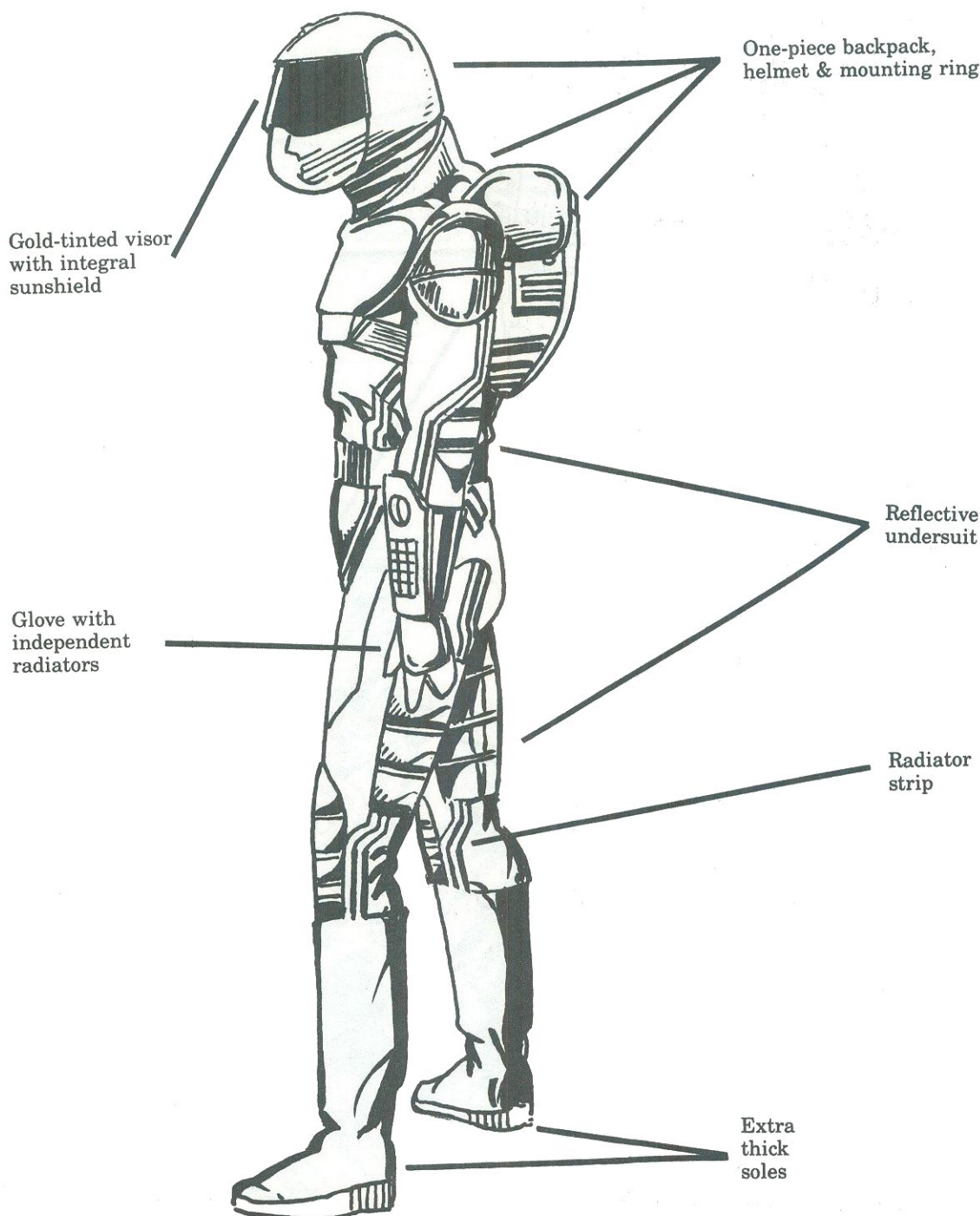
Made of light, usually quilted plastic fabric or film, including gloves and overshoes, and a visored fabric hood. Protects against temperature extremes of from 100 to -100 degrees Celsius within normal air pressure ranges. Very easy to use and maintain — no *Environmental Suit Operation* skill is needed.



HIGH TEMPERATURE

HIGH-TEMP: Used in high-radiation and high-temperature (300-1500 degrees C) conditions. *Weight:* 40 kg. *Armor Value:* 50 points. *Air Supply/Duration:* 12 hours. *Maintenance:* 1 hour for every 3. *Cost:* 15,000 credits.

Heavy construction and shielding protect against heat, sharp temperature changes, 7500 BeV of normal solar radiation and 25 rems of ionizing radiation in typical use. **Warning:** Usual operation conditions may limit range of communicator in helmet. Users require an *E-Suit Operation* skill of 40 or higher to use efficiently. Lower-skilled wearers may use it, but must subtract the difference from all other rolls while in the suit *and* must roll against the difference every hour of suit use for malfunction. This number is added to the base chance for non-maintenance malfunctions (see below).



NORMAL

NORMAL: Used in any conditions from 300 to -200 degrees C. *Weight:* 15-25 kg. *Armor Value:* 20 points. *Air Supply/Duration:* 36 hours. *Maintenance:* 1 hour for every 12. *Cost:* 2500 credits.

Rotatable one piece helmet with flip down anti-glare visor

Flexible oxygen hose

Portable life-support system backpack

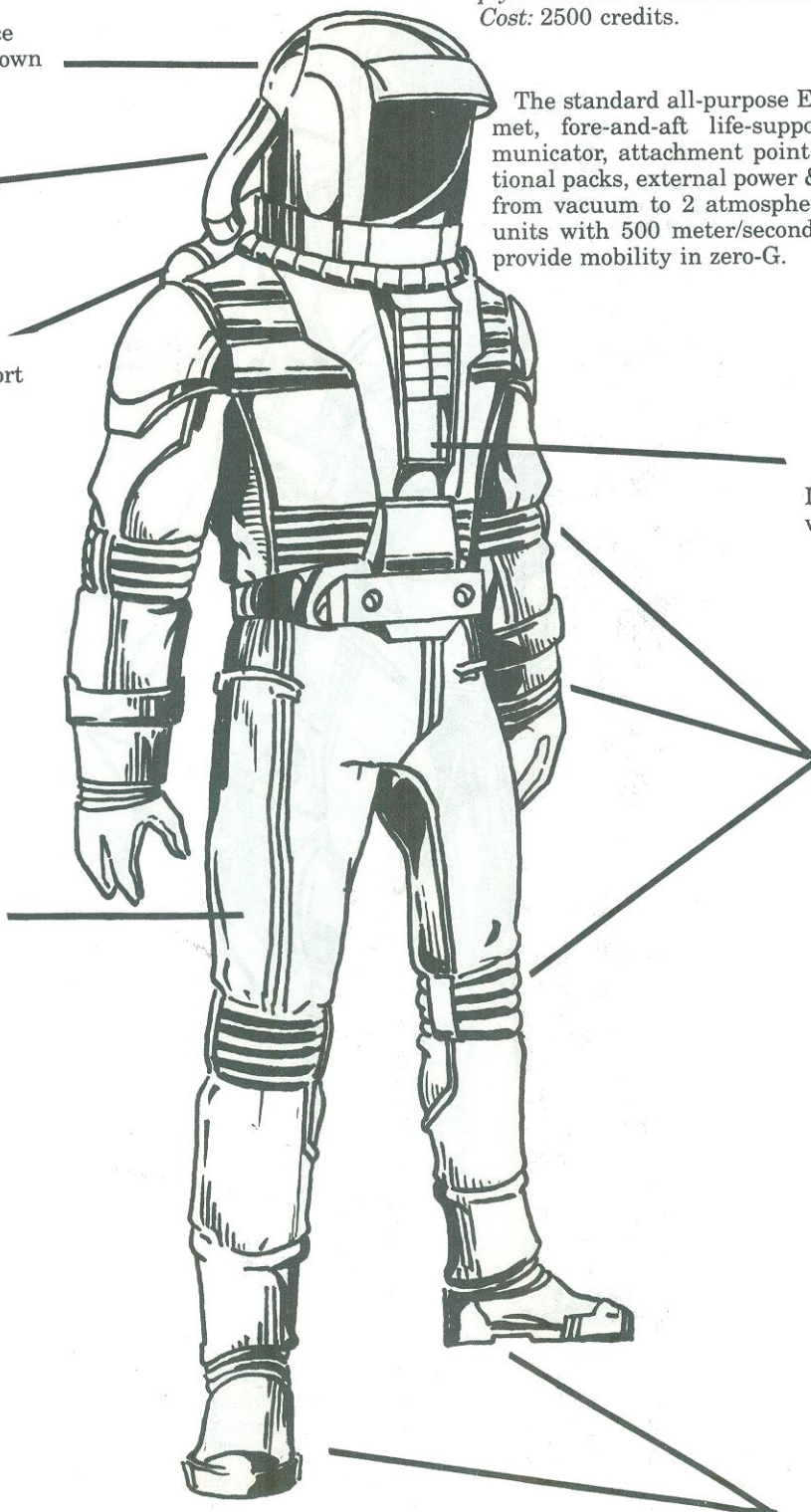
Reinforced hard leggings

The standard all-purpose E-suit. Polarizable visor in helmet, fore-and-aft life-support and power packs, communicator, attachment points for lights, tools, lines, additional packs, external power & air. It will tolerate pressures from vacuum to 2 atmospheres. Detachable maneuvering units with 500 meter/seconds of thrust cost 1000 credits, provide mobility in zero-G.

Life-support yoke with chest controls

Pressure equalizing joint pleats

No-skid hard boots



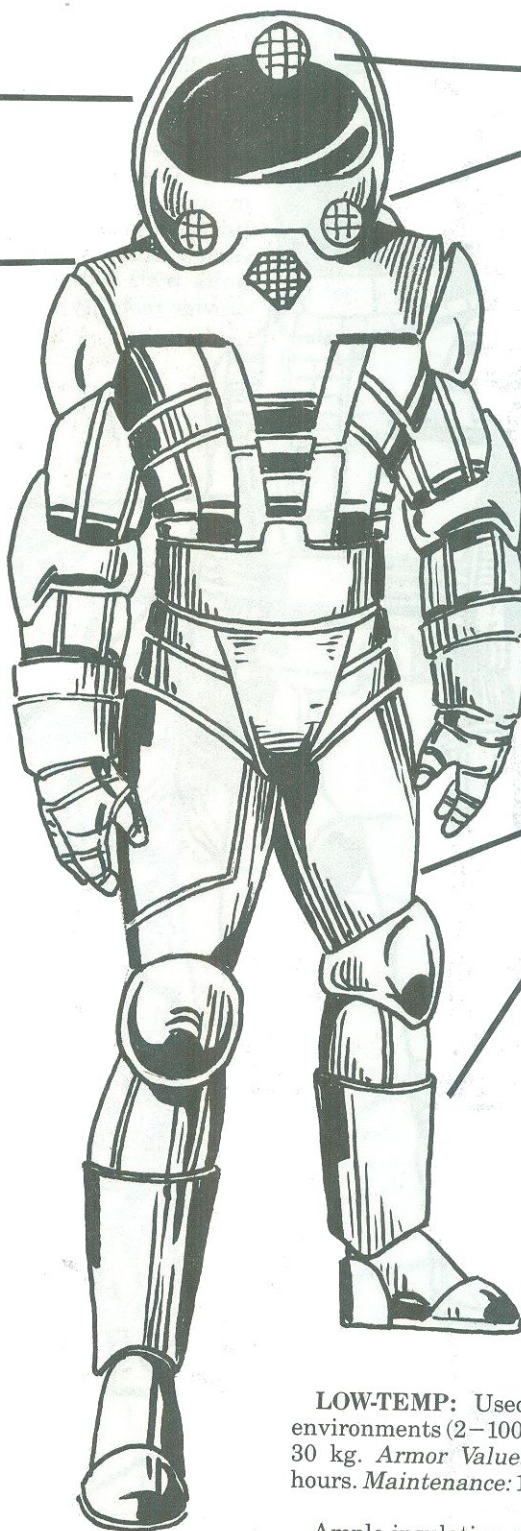
LOW TEMPERATURE/ HIGH PRESSURE

Spherical pressure-resistant helmet and reinforced double-thickness visor

Life support yoke, backpack and mounting ring are all one piece

Quartz/halogen lights

Pressure-resistant plates support each other, remain functional to zero atmospheres



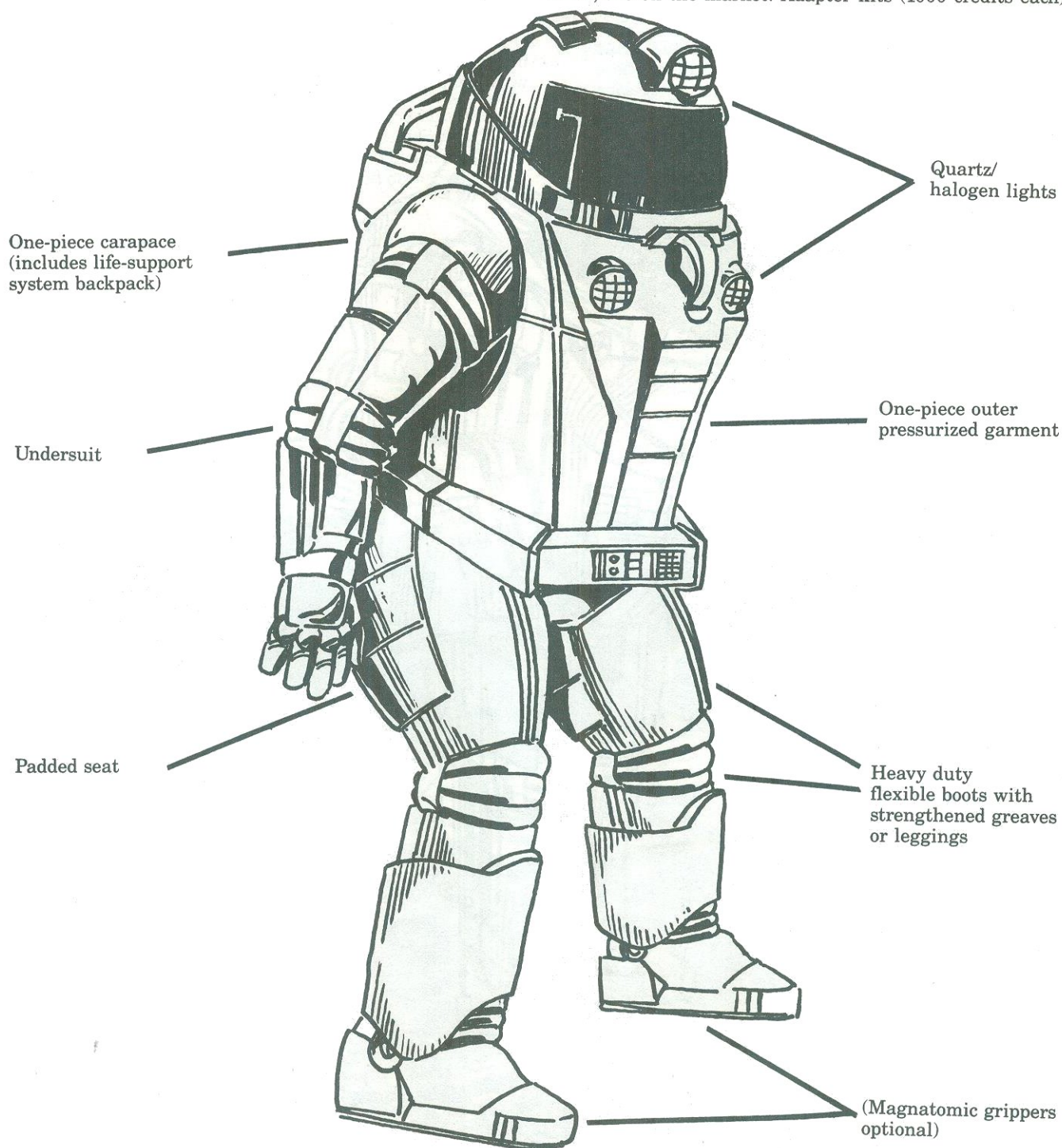
LOW-TEMP: Used in high-pressure, low-temperature environments (2–100 atmospheres, down to -272°C) *Weight:* 30 kg. *Armor Value:* 40 points. *Air Supply/Duration:* 24 hours. *Maintenance:* 1 hour for every 6. *Cost:* 12,000 credits.

Ample insulation and multiple heating units allow wearers of this suit to withstand conditions typically found deep in the atmosphere or slush of gas giant planets or their frozen moons. A sonar system penetrates opaque gases or fluids for crude distance estimation. The low-temp E-suit must be handled as for a high-temp suit.

HEAVY PLANET

HEAVY SURFACE: For extended heavy-duty use on planets. *Weight:* 25-45 kg. *Aarmor Value:* 20-50 points. *Air Supply/Duration:* 36 hours. *Maintenance:* 1 hour for every 12. *Cost:* 3000-15,000 credits.

Extra-heavy-duty suit for construction, rescue or salvage work on hostile worlds. Many different models of wide variations in quality, with various selections of standard equipment, are on the market. Adapter kits (1000 credits each)

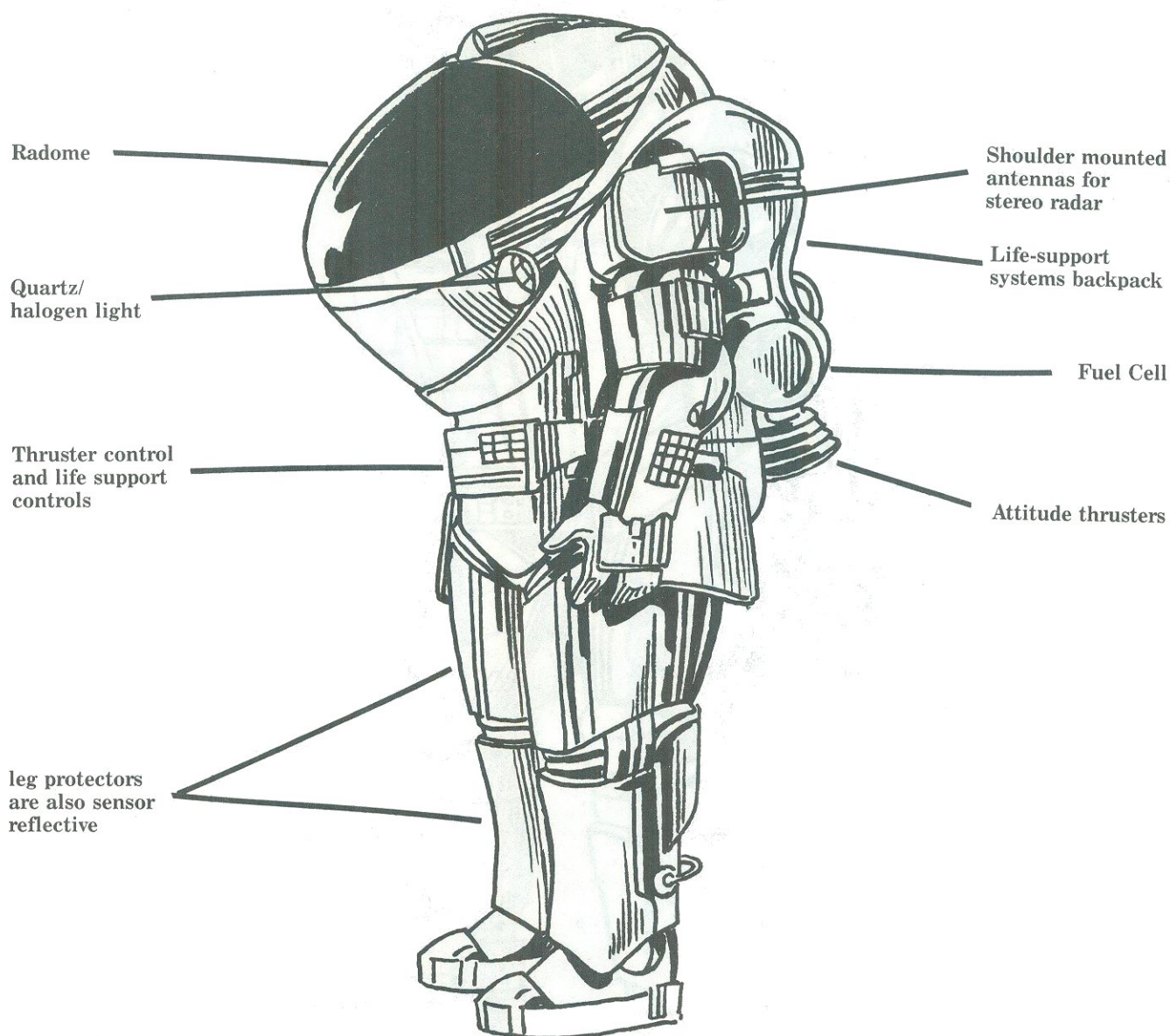


for unique world conditions are available, providing sunshades, extra armor or what-have-you. Designed for extended and punishing use, the base chance for lack-of-maintenance failure is only 10% per missed hour, not 20%.

DEEP SPACE

HEAVY SPACE: Used in deep space beyond star systems.
Weight: 30 kg. *Armor Value:* 20 points. *Air Supply/Duration:* 36 hours. *Maintenance:* 1 hour for every 8. *Cost:* 18,000 credits.

Greatly resembles a normal E-suit except for the integral maneuvering system built into the backpack, the oversize helmet containing the radar displays for EVA navigation, and the extensive communications system including a beacon in case of accident. EVAs are rare beyond the limits of a planetary system, where the suit is typically used, but heavy space E-suits are often used wherever people must work near a ship or other structure in space.



MAINTENANCE: An hour must be spent for each interval or portion of an interval of suit use; failure to maintain the suit may result in malfunction. For every hour of required maintenance missed there is a chance of 20% every hour of use when the suit is next worn of component failure. For instance, a normal E-suit worn for 16 hours must have two hours of maintenance spent on it or it will fail if the user rolls a 40 or less on percentiles.

All malfunctions happen after the suit is donned a second time, or after the original air and power have been exhausted; a properly-maintained E-suit does not normally suffer malfunctions, and it may take some time for the user of an unmaintained suit to notice something's wrong. There is no additional time penalty for repairing malfunctions. Maintenance may be performed by an individual with a score of 20 or greater in *E-Suit Operation*. (Characters with a skill of 20+ in *Life Support Systems* need only spend half the required time for maintenance)

If a suit suffers a malfunction, roll 1D10 and consult the following table:

E-SUIT FAILURE TABLE

- 1 — **AIR MALFUNCTION:** Wearer no longer receiving fresh air. 2D10 minutes of reserve left.
- 2 — **POWER MALFUNCTION:** Lights, fans, heaters/coolers, electronics, communicator, electronics and tools out. They may go slowly or one at a time. Can be lethal.

- 3 — **SLOW LEAK:** Suit air is escaping, reducing Duration — unless the outside pressure is greater, in which case something's leaking *in*.
- 4 — **HEATING/COOLING MALFUNCTION:** Suit temperature begins to rise or fall, according to outside environment. Can be lethal.
- 5 — **CO₂ BUILDUP:** Wearer starts panting. 4D10 minutes until unconsciousness, another 4D10 to asphyxiation.
- 6 — **ELECTRONICS MALFUNCTION:** Tools (if suit-powered), radar/sonar, other specialized gear (in that order) goes down.
- 7 — **COMMUNICATOR OUT:** If in heavy space suit, the backup still works. If rolled again, that goes out too.
- 8 — **HUMIDITY BUILDUP:** Visor fogs up, temperature starts to climb, electronics may fail from moisture.
- 9 — **MINOR SYSTEM MALFUNCTION:** No drinking water, or a bulb burns out, or a glitch develops in a major system, Irritating.
- 10 — **MAJOR DISCOMFORT:** Too personal to mention. A hygienic problem gone out of hand. Say, how often do you clean this thing?

An effect with nothing to affect (a light E-suit and 'Communicator Out') is no effect.

