

EQUIPMENT (Wearables and Life Support)

Humans are, almost by definition, tool-using creatures. In order to accomplish the tasks they encounter, characters will need certain equipment. A wide variety of equipment is available to characters in the 27th century. Of course, availability depends upon locale.

Equipment Ratings

Each item in this chapter is rated in two ways. First, it is assigned a Tech Level of 1 through 4 to indicate its technical complexity. Each item is also classified according to its availability.

The Tech levels are:

- 1 = Low Tech. Requires normal industry; pre-20th century technology
- 2 = Medium Tech. Requires normal industry; 20th-century or later technology.
- 3 = High Tech. Requires heavy industry of the 26th century.
- 4 = Advanced High Tech. Experimental technology.

More advanced versions of items with a Tech level of 1 or 2 are usually available.

The availability ratings are:

- A = Commonly available.
- B = Uncommon. Available to government departments, heavily licensed individuals and businesses or on the black market. The price listed is for those with one or more points in the "Well Equipped" advantage and should be multiplied by a factor of between two and ten (or greater at the GMs discretion) for other purchasers.
- C = Rare. Restricted military issue, large private corporations, occasionally available on the black market. The price listed is for those with two or more points in the "Well Equipped" advantage and should be multiplied by a factor of at least ten for other purchasers.
- D = Experimental high tech – Military/Government or Private. This equipment is not generally available for purchase, but may be issued to trusted agents of some organisations.

Survival and Camping

Over the centuries of interstellar expansion, humans have encountered a wide variety of environments, climactic conditions, and atmospheric situations. Only a small percentage of discovered worlds are as accommodating to human life as Terra; therefore, many kinds of life-support devices have been developed to deal with unusual, or even hostile, biospheres.

Under most conditions, player characters need nothing more than a field kit to survive in the wilderness. Extreme weather or environmental conditions, however, can damage and eventually kill an unprotected character. If the characters are operating unprotected in such conditions, the gamemaster should roll 1-4 D6 (depending on the severity of the weather) at the end of each day. The result is the amount of damage each character takes from the weather. This damage can heal normally.

Backpack [1/A]

An 'H' frame lightweight backpack with a capacity of 30 litres/30 kg or 60 litres/60 kg Weight: 2 kg. Cost: 35 C-Bills.

Basic Field Kit [2/A]

The basic field kit contains all the equipment necessary for camping out in the wilderness for short periods of time. This equipment includes a small butt pack, sleeping bag, heating tabs for food, utensils, collapsible cup, a ground cloth, matches, a 10-meter nylon cord, a survival knife, and similar items. One kit is required per person. Having a basic field kit allows an injured character to heal normally when out in the wilderness. Weight: 2 kilograms. Cost: 10 C-Bills.

Deluxe Field Kit [3/A]

The deluxe field kit contains all the equipment necessary for a prolonged stay in the wilderness. In addition to the standard equipment, there is also a rucksack, inflatable mattress, lantern, camp stove, thermal blanket, compass, and similar items. One kit is required per person. Weight: 5 kilograms. Cost: 100 C-Bills.

Field Rations [1/A]

Standard rations which will sustain a man (or equivalent) for 1 day. Weight: 500gm. Cost: 2 C-Bills. Bulk purchases of 100 ration packs (50 kg) may be made at a reduced cost of 200 C-Bills. The food is quite tasty, with many items dehydrated to save weight. (These are cooked).

Concentrated Rations [3/A]

Food lozenges suitable for a space-suit or Power Armour dispenser may be obtained which provide a full days' requirement in 100 gm. Cost: 275 C-Bills for 100 lozenges (10 kg). The food is not 'superb' cuisine by a long shot, but it can be tolerated for quite some time.

Jerrycans [1/A]

Both plastic and metal jerrycans are available for storage of water, fuel, and other liquids. They come in 10 litre and 25 litre capacities. Weight: 1-2 kg for plastic 10L/25L and 2-4 kg for metal 10L/20L. Cost: 10 C-Bills for 10L and 15 C-Bills for 25L containers.

Chemofluor Rods [2/A]

The ChemoFluors are small plastic rods containing chemically fluorescent materials that provide the equivalent of bright moonlight in a 5m radius for 6 hours. The rods can be extinguished. Weight: 100gm. Cost = 2 C-Bills.

Electric Torch [2/A]

The electric torch or flashlight is an illumination device which can be adjusted to give a beam of light which can be varied from 10 meters to 100 meters, with a duration of 100 hours on 2 MiniSEC power cells. The beam will illuminate a circle 5m in diameter at 100m. Weight: 250gm Cost: 20 C-Bills.

More primitive flashlights have a duration of under 24 hours and cast a beam about 20m. Cost = 5-8 C-Bills.

Gas Lantern [1/A]

The gas lantern is a butane/propane/kerosene lamp with a 6-hour fuel capacity. The lantern will illuminate a 5m radius or, if used with a reflector/lens attachment, can cast a beam for 10m to 15m. Weight: 750 gm. Cost:10 C-Bills.

Magnesium Flares [2/B]

Flares are meter-long rods with a self-igniting pull-tab on the flare tip. Magnesium flares provide brighter than light illumination for 20 minutes, even in a vacuum or under water, as oxidizing chemicals are built into the flare materials. The light can be blinding to the unprotected eye at close range. The flares burn very hot and can be used as weapons to burn unprotected adversaries. They also serve as excellent incendiaries. Illumination range = 10m in atmosphere, 5m under water. Weight: 450 gm. Cost: 3 C-Bills.

Sleeping Bag [1/A]

An insulated sleeping bag is available in 4 versions, corresponding to Cold Weather Clothing types. All weigh 2 kg. Type A costs 250 C-Bills, Type B 150 C-Bills, Type C 60 C-Bills, and Type D 40 C-Bills.

Shelter Half [2/A]

A sheet of waterproof material 1.5m x 2.5m, with provision to be ziplocked to another shelter half to make a full tent. The lightweight material will fold into a space equivalent to that of several packs of cigarettes. Weight: 1kg, Cost: 10 C-Bills.

Tent [2/A]

A basic lightweight tent for 2 persons made of the same lightweight waterproof material as a shelter half, but it includes a floor, end flaps, tent poles of light telescoping construction, and pegs. Larger tents are also available. Weight: 3 kg. Cost: 45 C-Bills.

Cold Weather Tent [2/A]

A basic lightweight tent for 2 persons which is insulated against the cold. It can be heated most satisfactorily with a Cold Weather Heater. Weight: 5 kg. Cost: 125 C-Bills.

Cold Weather Heater [3/A]

A lightweight heating unit which runs on hydrox fuel cells. The CWH will warm a cold weather tent so that temperatures will remain above freezing in outside temperatures up to -125°F/-87°C. Duration = 120 hours (5days) minus 1 hour per -10°F/5.5°C below freezing (per day). Mass of heater includes one fuel cell. The unit can also be used for cooking, with 1 hour of fuel used per 2 litres of food cooked (litre = about 1 kg of solid food or else boiled water). Weight: 3 kg. Cost: 40 C-Bills. Fuel cells cost 9 C-Bills and weigh 2 kg.

Hot Weather Tent [2/A]

A basic lightweight tent for 2 persons which is insulated against the heat and may be sealed to provide water security. Cooled tents are equivalent to StillSuits for overall protection. A powercell operated refrigeration unit may be acquired at CR 350 which provides cooling for 96 hours of operation. Weight: 5 kg. Cost: 125 C-Bills.

Environ Bag [3/B]

The personal environ bag, or "body bag" as it is popularly called, is a one-man environmental shelter similar to the environmental bubble tent. It is normally issued as part of a personal survival kit. The PEB, or body bag, is much more cramped than a bubble; a character in a PEB may not take any action. A character can survive as long as the bag is charged and he has enough food. The body bag must be recharged every 24 hours.

Cost: 300 C-Bills

Total Damage Points: 10

Environmental Bubble [3/B]

Made of durable plastics and self-sealing ceramic-plastic polymer, an environmental bubble tent is a temporary shelter issued to field troops operating in the harshest weather conditions (deserts, arctic areas, thin air, and so on). These tents do not provide protection from vacuum, however. An environmental bubble can provide shelter and other requirements such as warmth, cooling, and sanitary facilities for a 24-hour period before needing to be recharged.

An environmental bubble provides limited protection from weapon attacks. The bubble reduces by 4 points any slug-thrower, laser, or other similar weapon damage to occupants. Flamer attacks may be made only on the bubble itself. Bubbles can sustain 10 points of damage per occupant. In order to return fire, occupants must either leave the bubble or destroy enough of it so that their fire can get through. For every 10 points of damage that a bubble sustains, there is a flat 9+ Target Number that the whole tent will collapse and become useless.

The maximum number of occupants per tent is twelve. The size of the bubble is equal to the maximum number of occupants multiplied by 7 cubic feet.

Cost: 200 C-Bills per occupant

Repair cost per Damage Point: 5 C-Bills

Repair cost per 10 Damage Points: 15 C-Bills.

Filter Mask [1/A]

A filter mask is designed to remove trace impurities from breathable atmospheres. The atmosphere itself need not be contaminated or tainted per se. For example, a filter mask would be of use on a battlefield whose atmosphere was filled with smoke and debris from a previous combat.

The filter portion of a filter mask is disposable and must be replaced once per 24 hours in extremely contaminated environments, and once per 48 to 72 hours in more benign environments (gamemaster's discretion). *Filter Mask*

Cost: 2 C-Bills

Respirator [2/A]

An oxygen-delivering mask covers the nose and mouth (some versions will cover the entire face). The unit is for use in atmospheres where protective suits aren't needed, but the oxygen levels are too low to sustain life or to permit strenuous activity. It provides 6 hours of oxygen on chemical purifiers (rebreather type), and the chemicals may be reused if they are heated to burn out the 'impurities'.

The breathing tanks for the respirator, generally worn strapped on the back, provide only four hours of breathable air before they are empty. The mask weighs 300 to 500 grams, and the breathing tank 1 to 3 kilograms.

Cost 50 C-Bills

Oxygen Breathing Apparatus [2/A]

A self-contained breathing system utilizing a facemask or mouthpiece and oxygen tanks. A tank of oxygen lasts 3 hours and costs 150 C-bills. The breathing mask, hoses, and adaptor cost 100 C-Bills. A standard unit consists of two tanks and breathing equipment, for a mass of 5 kg and a cost of 450 C-bills. A chemical purifier system is available at extra cost of 50 C-bills to increase breathing time by 100%. A powercell purifier system is available at 250 C-Bills to increase breathing time by 1600% (96 hours on two tanks). The units are usable in underwater conditions as SCUBA gear, as well as in dangerous atmosphere and in low-pressure or vacuum conditions.

Scuba Suit [1/A]

A protective underwater suit, including swimming fins and face mask. Weight: 2 kg. Cost: 75 C-Bills.

Artificial Gill [3/A]

A powercell operated unit which extracts oxygen from surrounding water. It has an endurance of 48 hours on a power-cell. The Gill is usable only on planets with a sufficient oxygen atmosphere to permit the waters to contain a reasonable oxygen content. Weight: 2.5 kg. Cost: 1000 C-Bills.

Warm Weather Clothing [2/A]

Air-conditioned clothing which will protect the wearer from the effects of temperatures up to 150° F/65°C and high humidity. It is ideally suited to tropical jungle conditions and normal desert/steppe conditions. The material will not rot from exposure to humid conditions, fungi, etc. Weight: 5% of body mass Cost: 900 C-Bills.

Cold Weather Clothing [2/A]

A complete set of clothing that will protect the wearer from the effects of exposure and frostbite. Several versions are available:

CWC Model	A	B	C	D
Temperature	-125°F/-87°C	-75°F/-59°C	-50°F/-45°C	-25°F/-32°C
Weight	15% body mass	10% body mass	7% body mass	5% body mass
Cost (C-bills)	1250	600	250	100

'Stillsuit' Desert Planet Clothing [3/A]

A highly efficient set of protective clothing which provides an almost self-contained environment. Heavy emphasis is placed upon conservation of body water through the use of sealed zips, filtered face masks or nose filters, and a water/waste reclamation system that is muscle-powered. Goggles also provide protection against wind-blown grit and sand. Basic Stillsuits give protection in temperatures up to 160°F/71°C. Weight: 7% of body mass. Cost: 1500 C-Bills. The units may be air-conditioned at an additional expense of 350 C-Bills to increase protection +25°F/+14°C over standard limits.

Protective Suit [3/A]

An all-purpose coverall of syntheleather mesh which will provide protection against most corrosive chemicals and atmospheric constituents, poison gases (including nerve gases), etc., if it is sealed against the atmosphere. The suit can be worn over other clothing and may be totally sealed if oxygen breathing apparatus is used with it. It is not, however, a full-fledged vacuum suit in a sealed condition; for it cannot withstand large pressure differentials. Weight: 5 kg. Cost: 400 C-Bills.

Light Environment Suit [2/A]

This suit weighs 1 kilogram, but replaces the wearer's normal outer clothing. It is form-fitting and equipped with a helmet or filter mask/respirator combination. The suit is made of tear-resistant fabric, designed for use in potentially hostile environments that are within Terra-normal ranges of temperature and pressure. The suit would be sufficient for conducting operations on Mars, for example, but would be totally unsuitable for the surfaces of Venus or Jupiter. Cost: 200 C-Bills.

Hostile Environment Suit [3/B]

The hostile environment suit weighs 20 kilograms. It is similar to diving suits used in deep-ocean exploration, and is intended for use in the most hostile environments where temperatures or pressures vary widely from Terra-normal. A hostile environment suit is partially powered. Tools are often built into the suit's extremities. The hostile environment suit can easily withstand normal slug-throwing and melee weapons. Cost: 10,000 C-Bills.

Space Suits & Vacuum Suits [2/A]

The basic space suit provides pressure, heating and oxygen for up to 6 hours. They usually come with a polarisable visor and an inbuilt communicator. Physical protection equal to an armoured bodysuit is provided but the suit is likely to lose function if it absorbs any damage. Weight: 15kg, Cost 2000 C-bills.

More resilient suits are actually armoured. Weight 20kg Cost 3000 C-bills

A jetting unit for maneuvering outside of the confines of a starship weighs 1 kg and costs an additional 200 C-bills. For 50 C-bills per rad factor, suits can be shielded from radiation. The mass of the unit is increased by +2 kg per factor of protection.

Other utilities (such as oxygen purification systems) can also be added at appropriate cost.

Emergency Jetpack [3/D]

A lightweight emergency jetpack allows a person to escape combat or some other dangerous event. These disposable systems were developed for the Defense Forces.

The system is relatively simple. The pack is small, about the size of a suitcase, and very light. It contains a solid rocket propellant and a hand-held electronic control system. The pack can lift 280 kilograms for 1 kilometre at a height of 30 metres. Maximum horizontal speed is approximately 160 KPH.

It takes less than a minute to put on the pack and activate it. The control system is hard-wired to the pack, and is disposable after use. Once activated, it takes only 5 seconds to ignite. Once fired, the system cannot be shut off. Maximum altitude is 30 meters, and maximum distance flown is 1 kilometre. The emergency jetpack can be used only once. Cost: 5,000 C-Bills.

Armor

Many individuals make it a point to acquire some or all of the following equipment. For more details on armor see the *Personal Combat* document.

Ablative/Flak Vest And Body Suit [3/B]

The development of personal armor has been a military necessity for hundreds of centuries. In the current era, the most popular armor materials are bullet-resistant and laser-ablative. Though each of these materials has its advantages and disadvantages, ablative/flak armor is the most effective because it combines both types in one. Ablative/flak vests protect the torso, absorb a total 20 points of damage, and reduce by half the damage from slug-throwing weapons to that location. Ablative/flak body suits absorb 35 points of damage and reduce all weapons damage by one-half. A body suit also reduces the wearer's movement by one-half.

Vest Cost: 300 C-Bills Patch Cost: 15 C-Bills

Body Suit Cost: 800 C-Bills Patch Cost: 25 C-Bills

Armored Vest/Bodysuit [2/A]

The development of hand-portable laser weapons may one day make this form of personal armor obsolete, but in the civilian world most lethal firearms can still be countered somewhat by the ubiquitous bulletproof vest. Armored vests protect the torso and reduce by half the damage from impact weapons to that location. Armored body suits reduce all weapons damage by one-half. A body suit also reduces the wearer's movement by one-half.

Vest-Cost: 50 C-Bills

Body Suit-Cost: 150 C-Bills

Combat Body Armour [3/C]

All CBA is personal combat armour designed to protect the entire body under battlefield conditions. Some forms utilize a cuirass similar to the Armored Vest, with a lighter armour protecting the arms and legs. Helmets are also included, but these can be purchased separately at about 25 C-Bills plus 10% of the cost of the whole unit. CBA reduces all damage by one-half.

All CBA units have the possibility for optional features to be built in at added cost:

Sealed Armour: For 1000 C-Bills, the armour is sealed against the outside environment, effectively converting it into an armored pressure suit proof against toxic gases and liquids, low pressure conditions, etc. Life support and breathing apparatus must be purchased separately.

Radiation Shielding: For 50 C-bills per rad factor, CBA can be shielded from radiation. The mass of the unit is increased by +2 kg per factor of protection.

Other equipment-corn gear, vision aids, jump packs, etc,-can be added at additional expense. It should be noted that the overall mass of the armour will quickly increase as optional features are installed and battle efficiency will eventually be impaired by overloading. Base weight: 10kg. Base Cost: 6000 C-Bills