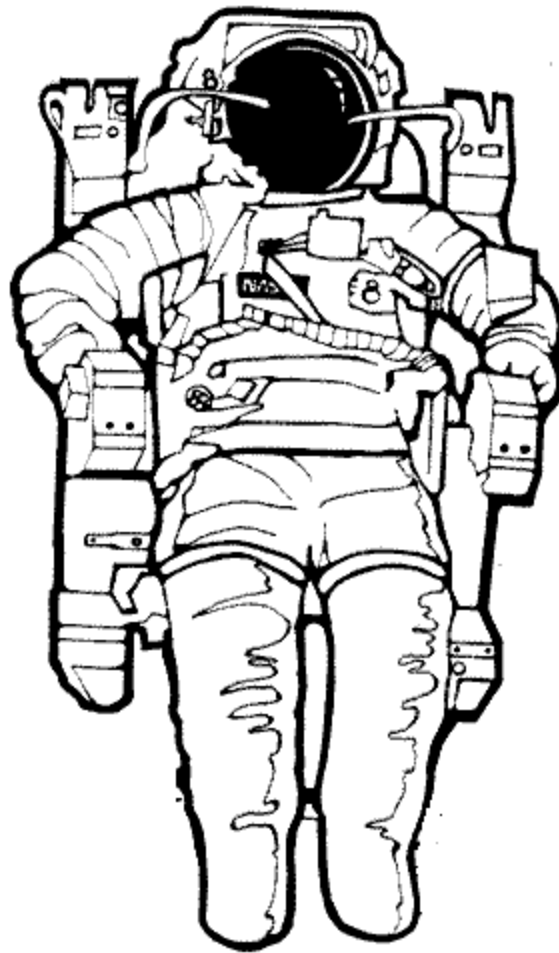

2300DAD



Equipment Guide II

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Computers

INTERSTELLAR COMPUTER ENTERPRIZES (PTY) LTD

Interstellar Computer Enterprizes, or "ICE" as it's come to be known, is the premier supplier for computer equipment throughout the American Arm. Using the DarElex family of processors and BIOS chips, as well as plastics produced in Zion County, Ellis and metals mined on both King colonies, "ICEboxes," as they're affectionately known by satisfied consumers have become much a part of American and Australian colonial culture as Morningstar Wines, Mule-Apache tractors and Botany Bay paper.

Using standardized designs, "ICEboxes" are assembled at factories on each of the American Arm colony worlds save Kingsland, and a factory was recently opened at Kellyston, New Canberra, Tirane. Capable of using all ISO 13000-standard operating systems and data chips, ICEbox users appreciate the flexibility and ruggedness of the designs.

Models assembled on King for Mayflower's and Huntsland's citizens have proven to be better able to withstand the extreme conditions of that world better than any other comparable locally-produced or imported model. (However, ICE does not recommend taking ICEboxes built elsewhere to King without the proper modifications. These modifications can be had at a reasonable cost from any authorized ICE service center.)

Parents and children both enjoy the ease of use and

ICE 9K

9000GB data storage, 2GB standard DRAM, 128-bit 2GHZ processor with 128-bit data bus. Compatible with all ISO 13000 standard planetary networks, data chips, and software. This is the basic unit issued to Darwin Library clients for their children's education. Approved for use by "EI-Ed," the Ellis State Department of Education
Weight: 1.5kg, Price: Lv525

ICE 12K

12000GB data storage, 4GB standard DRAM, 128-bit 3GHZ with 128-bit data bus. Similar compatibilities of the 9K model above. Popular with students at Chandler and Ellis State Universities, as well as small business.
Weight: 1.5kg, Price: Lv600

ICE 15KX

15000GB data storage, 6GB standard DRAM, 128-bit 5GHZ processor with 128-bit data bus. Compatible with all ISO 13000 and forthcoming ISO 14000 standard networks, software, and data chips. Recommended for business and field use. Optional line of rugged duraplas cases for use in all breathable environments from -40 degrees Celsius to 55 degrees Celsius, as well as rough handling as expected in those areas where technical support is hard to find.
Weight: 1.5kg with standard case, 1.75kg with rugged case. Price: Lv750, Lv775 with rugged case

ICEScribe printer family:

Using old but reliable laser xerographic technology, the ICEScribe series printers can generate a minimum of 20 full-color or black & white sheets per minute, and can connect to any ICEbox computer using fiber optic or copper-strand cables with an ISO 13000 standard interface jack. Why wait for your computer to finish

Sending large documents to the printer? With the ICEScribe family of printers, starting with our basic 2300 model, each comes with a minimum of 200MB of buffer memory to store even the largest documents. So you can continue your work, as your ICEScribe printer generates crisp, clear TrueFont documents. Also, each ICEScribe printer has FAX receiving capability separate from any existing computer, using a hard-wired 2GB/sec. modem, compatible with all ISO 13000-compliant planetary data networks. You don't own an ICEbox? Drivers for any ISO 13000 standard operating systems are included with each printer.

ICEScribe 2300

200MB buffer memory, 20 sheets per minute, single paper tray, capacity 300 sheets. 2GB/sec fax modem. Black/white toner good for 10,000 sheets, color toner good for 5,000 sheets. Excellent for individual use.

interoperability of their ICEboxes provided or supported by their respective school systems and the primary computers used in the home. In the American Arm, these home units are also likely to be ICEboxes. So, whether your child is remotely educated by the Darwin Library of Botany Bay, El-Ed's MicroSchool Network on Ellis, or Kingsland's School of the Air, you can be assured that your child's ICEbox will become the most valuable tool they use. Indeed the ICEbox 9K is Darwin Library's standard issue computer, and the basis of El-Ed's MicroSchool Network's application standards.

Purchasers of ICEboxes also have the option of upgrade subscription. Why throw away a perfectly good computer just because it's obsolete? Icebox upgrade subscribers need only take their computer to any ICE authorized service center for all appropriate upgrades to ensure their hardware remains compliant to the ISO standards applicable for that time. Also, during the upgrade a friendly ICEbox technician will assist you in determining your optimal software needs. ICE proudly offers software from Bonneville Software of Ellis, Ellis DataTech, and OutWorlds Software of Botany Bay.

Wt.: 5kg, Price: Lv150

ICEScribe 2450

300MB buffer memory, 20 sheets per minute, single paper tray, capacity 400 sheets. 2GB/sec fax modem. Uses toners above. For home networks, small businesses, and elementary classrooms.

Weight: 5kg, Price: Lv200

ICEScribe 2600

400MB buffer memory, 30 sheets per minute, dual paper trays, each with 400 sheet capacity. 2GB/sec fax modem. Black/white toner good for 15,000 sheets, color good for 7,500 sheets. Great for small business and work sections. The

standard printer for the Botany Bay colonial government, used in all of it's offices.

Weight: 5.5kg, Price: Lv275

Other Peripherals

ICEScan 6000 scanner

Converts any paper document or photograph into a digital file.

Wt. 2kg, Price: Lv125

ICEScan portable imager

Capable of over 100 hours of full-motion 2D video or 60 hours of 3D holo images, able to transfer still 2D images to any standard printer, and can play edited or unedited stored video on any flat screen or holovision system. Popular with journalists on the American Arm.

Weight: 3kg, Price: Lv 250

As modems are integrated into all ICEbox computers, ICE does not offer a line of external modems.

Pharmaceuticals

Expansion to the standard rules in 2300AD

Each pharmaceutical comes in two variants, pills and liquid. The liquid being the more potent variation. The pill is ingested and absorbed through the stomach, this process is slow requiring 20 to 60 minutes to take effect. (d5+1) The liquid is injected directly into the bloodstream and takes effect immediately. Auto

injectors and derms have replaced the standard syringe. In auto injectors the liquid vial is inserted, the dose selected, and then it is just point and inject. The derms is a single dose disposable capsule; it looks like a small suction cup, (holding the needle) with a small rubber balloon on one side. The use is simple, place

the suction cup over a vein rich area of the recipient's body and activate the derm by pressing the rubber balloon. The derm is the easiest way to self-administer an injection.

All pharmaceuticals have some characteristics in common, this includes legality, level, availability, price, activation, OD on dose, avoid OD task, OD effect, effect and duration. A simple explanation of these characteristics follows:

Name: This is the name of the pharmaceutical, followed by the type in a ().

Legality: Pharmaceuticals is divided into three classes. Legal pharmaceuticals can be bought anywhere, except on the black market (unless it's a scam). Restricted pharmaceuticals can be bought with a prescription from an authorized medic. Illegal pharmaceuticals are primarily traded in the black market

Level: This represents the difficulty in obtaining the pharmaceutical. Legal pharmaceuticals are level 1 (or blue), restricted pharmaceuticals are level 2 or 3 (green/yellow) and illegal pharmaceuticals are level 3 to 5 (yellow/red/infrared). These levels could be used directly as task level for streetwise checks.

Available in: Some pharmaceuticals only come as pill and/or liquid.

Price: This is the number of doses and the price in livre for those.

Activation: All pharmaceuticals must pass an activation test, this is symbolic for the human body's ability to absorb or reject the pharmaceutical in question. For most substances this is easy, but some of the more exotic pharmaceuticals have higher risk of rejection.

Overdose in general: Unrestricted use of pharmaceuticals may lead to OverDose. The risk may be negligible, but it is possible to OD on all pharmaceuticals. OD is only possible with multiple doses in effect at the same time, but different pharmaceuticals all counts. (I.e. two doses of painkiller and a single dose of Herc counts as three doses) When a PC/NPC ingests/injects a new pharmaceutical dose he/she must immediately check if any of the pharmaceuticals reaches 'OD on dose' and if they do, perform an 'OD task' for that pharmaceutical. Note that all tasks to avoid an

OD are hazardous, and that 3d6 are used in the failure table. If a mishap occurs the severity of the mishap defines how many of the OD effects that happens. (I.e. if the above example injects another dose of painkillers or any other pharmaceutical, he/she should immediately test if the number of doses (four) are larger then all the previous pharmaceuticals in his/her system. If they are, then perform the OD task for all pharmaceuticals

OD on dose: This is the number of doses a person can use without risk. To exceed this number is very hazardous, and possibly lethal.

OD task: This is the task a person must succeed to avoid an OD, when 'ON on dose' is ignored. The OD task level is specified under the pharmaceutical. The person's endurance modifier is negatively adjusted by any excess doses. The timeframe is unknown and defined by the GM.

TASK (To avoid OD, OD task, Endurance - (any excess doses), Unknown) Hazardous

OD effect: The effects of an OD are varied, but all are divided into levels that are written in a comma separated line. Of course light effects are listed first.

Effect: This is a short description of the pharmaceutical and the effect of it.

Duration: This is the normal or medium duration of the pharmaceutical, followed by a simple way to calculate the duration.

A simple painkiller would look like this:

Name: Painkiller (Stimulant)

Legality: Legal

Level: 1 (Blue)

Available in: Pill

Price: 100/Lv10

Activate: Simple

OD on dose: the nth dose

OD task level: Simple

OD effect: vomiting, light liver damage, light kidney damage, liver damage

Effect: Relives small pains and aches

Duration: 1d10 hours

Name: Bounce (Stimulant)

Legality: Legal

Level: 2 (Blue)

Available in: Pills

Price: 10/Lv40
Activate: Simple
OD on dose: Second dose
OD task level: Routine
OD effect: Paralysis (Duration),
 Paralysis (Duration*4)
Effect: Bounce is a pharmaceutical
 used primarily by people operating in
 zero-G environments. It lessens the
 negative effect
 persons experience, on dexterity, in
 lower gravity. Each level of gravity is
 treated as if it were one higher. Multiple doses
 can be
 taken, at once to increase the
 gravity level to two higher, or
 continually to increase the
 duration.
Duration: 10 hours (3d6 hours)

Name: Herc (Booster)

Legality: Legal
Level: 1 (Blue)
Available in: Pills
Price: 10/Lv100
Activate: Simple
OD on dose: Third dose
OD task level: Difficult
OD effect: Muscle Spasm, Muscle
 damage (LW), Fractures (LW)
Effect: Herc is a muscle booster,
 which works like a very fast and
 controllable version of steroids.
 Each dose increases a persons
 strength by five for the duration of the
 pharmaceutical. After Herc wears off the
 person is exhausted and must rest for an
 amount of time equal to the duration. If
 resting is ignored the person
 suffers the same effect as an
 overdose.
Duration: 7 hours (2d6 hours)

Neurotronics

Neurotronics are microchip implants wired directly into the brain. The chips listed below act as an extension of the brain, giving users the advantages and disadvantages imposed by the chip. Optionally, the chips may be external and removable, which requires a Neural Interface Plug on the side of your head, usually near the temple or behind the ear. Such quick-chip neurotronics can be easily removed or added.

Chips wired directly into the brain do not require you to have some sort of basic CPU processor to 'interpret' the data. It is assumed that neuro-cyber technology is refined enough that the neuro-electrical connections are compatible with your brain and nervous system, operating with their own independent signal interpreter.

Psychiatric Implants This implanted chip can add or remove a single psychological complication, personality trait, or compulsive behavior. However, each chip gives a -1 to INT. *Cost: Lv 3000-Lv 10,000*

Meta-REM Chip You need very little sleep because your EEG is regulated to make up for the loss. You only need about six hours of sleep each week. On the down side, you are a Light Sleeper. *Cost: Lv 15,000*

Pain Buffer Chip Probably the single most popular chip around. The body's pain sensors are numbed, so the user does not feel as much pain and shock when he or she takes damage. *Cost: Lv3,000*

Arithmetic Logic Unit Popular with students and engineers. This is a chip that has an on-board clock and timer accurate to the pico second. You always know exactly what time it is. It maybe used as an alarm clock or timer. This chip can also function as an advanced floating-point scientific calculator. It gives the user the Time Sense and Lightening Calculator Talent and can do almost all types of math, including graphs, advanced calculus, and matrices. With optic readout it can display equations and graphs. *Cost: Lv6,000*

Eidetic RAM This chip lets the user record what he or she sees and senses, effectively granting the Eidetic Memory Talent, but this device can only store up to a day's worth of memories. *Cost: Lv3,000*

Neural Operating System This amazing new chip is an operating system for the brain. Using 1 terabyte RAM, it lists all your memories and knowledge in an advanced file structure. When you want to remember something, the chip knows where it is stored in your brain and finds it. In effect this chip grants

Eidetic Memory and gives a +1 INT. If the chip is destroyed or removed, you loss all memories and have total amnesia.

Cost: Lv6,000

Skill Chips

Skill Chip give the user a skill as long as it is

Tasks

To Implant a Neurotonic Chip. Difficult. Medical. 5 hours.

Serious Mishap results in the host's body rejecting chip.

Cannot reattempt implant for 1-6 weeks.

To Implant Neural Interface: Difficult, Medical. 6 hours.

Serious Mishap indicates host body rejects implant and can cause nervous system damage at GM's discretion.

To Insert Neurotronic or Neural interface chip into Neural Interface. Routine. Computer. Instant.

A mishap results in an improper chip insertion and system boot.

A serious mishap could damage the chip or socket and make both unusable.

installed. It gives +1 in the skill for every level, up to a max of three levels. This chip will override, not augment, an existing natural skill of the same type. You may have as many skill chips as equal to your INT. Many people have a bag full of skill chips and an external chip slot for quickly clipping in and clipping out the chips.
Cost: Lv6,000

Data Chips

Data Chips are ROMs that hold information. They are accessed as if they were a "on-line" manual or book, complete with indices and pages. It may take several seconds to locate a specific piece of data. A few of the available chips are:

The Complete Works William Shakespeare
 A modern law book
 A world telephone directory
 Encyclopedia Britannica
Cost: Lv1,000-3,000

Emotion Chip

An Emotion Chip gives you a constant emotional feeling. Any emotion is available, from bliss to anger, from love to fear, from excitement to hatred. Only one emotion can be accessed per chip, and you cannot have more than one turned on at a time. It may be activated at will. While chip is off you feel emotions normally.
Cost: Lv3,000

Null-Emotion Chip

Have too much Humanity? Want to be on the side of the Machine, or join the latest Cyber-Goth cult? This quickest, cheapest, best way to lose Humanity in a hurry. A variation of the Emotion Chip, this device prevents any emotions from occurring at all. You are totally emotionless. On the positive side, you never react emotionally to any situation, keeping a calm, purely intellectual perspective at all times.
Cost: Lv3,000

Empathy Chip

This is a more advanced form of the Emotion Chip. The Empathy chip allows the you to select any emotional state, including none at all. If you are angry, you can select calmness. If you are sad, you can easily cheer up. This chip allows a user to negate any emotion he or she is currently having, replacing it with a new one whenever he or she wishes it. The effect is that you can never really be upset or hatefully angry,

unless, of course, you want to. You are in full control of your emotions.
Cost: Lv5,000

Memory Implant

These are chips that allow you to have an certain set of experiences (i.e., go on vacation somewhere). A 1 hour tour of Yosemite, for example would *Lv 1000*;
 a day trip on a luxury cruise would cost *Lv2000*
 A week as a secret agent on Mars would cost *Lv 80,000*

vacation with your favorite vid stars costs *Lv 10,000*

The memory stays as long as the chip is in. You will recall the trip or vacation as if you had really been there.

Cost: Variable

Neural Interfaces

These neural interfaces are the command/control processes for translating data to neural commands, images, signals, and impulses. You must also buy one or more Neural Interface Plugs (see below), as well as the Interface chips or Neurotronics chips for the desired features.

Neural Interface Plug

You may have all the Interface or Neurotronics chips you want, but to use them you must have one or more interface plugs. This is the external socket where a neural device is connected, by wire or direct contact. Usually plugs are installed in the wrist, palm (for Smart-weapons), temple, behind the ear, but conceivably they could be placed anywhere. One plug can serve all the interface translation chips, but only one at a time. To use more than one interface at a time, you will need multiple plugs.
Cost: Lv 5,000

Wireless Interface

Same as above, but this device is internal and completely wireless. There is no plug at all; the signals are sent by an IR or RF signal from an external jack/plug. Typically the external unit is worn on the belt, in a pocket, backpack etc. There are several types of external units which utilize the wireless interface.

Basic Unit-this unit is supplied with the wireless interface. .25kg and holds one chip.

Cost: Lv 2000

Multi Chip Unit-this unit holds 2-8 chips depending on the model and has a selector

switch to allow one chip at a time to interact with the interface.

Cost: Lv2,000-8,000

MultiChannel Unit- This unit is holds 2-8 chips and can transmit on separate bands to multiple interfaces. Thus if a character has 4 interfaces and wishes to run 4 chips at once, this is the unit they would need.

Cost: Lv 3,000-9,000

Neural Computer Interface Chip

This popular chip allows a human and computer to directly interface. A computer user basically becomes "one with the machine". The default effects are +2 to all computer skills.

Lv4,000

Neural Vehicle Interface Chip

This chip gives its user direct neural control of a vehicle. Any vehicle can be neurally controlled, including cars, jets, and combat walkers. By default, this grants a +2 to the skill (or skills) to control the vehicle. If weapons are an integrated component of the vehicle, such as with combat

walkers, you have a +1 chance to hit when using these weapons. The cost of making the vehicle neurally controllable depends on the gameworld.

Cost: Lv5,000

Neural Tech Interface Chip

This chip gives its user direct control over heavy machinery, diagnostic equipment, scientific equipment, or any TECH related unit which has a compatible interface system. This direct control gives a +2 to operate that machine when linked.

Cost: Lv3,000

Smart-Targeting Interface Chip

In order to use this chip, you must have a smart-link on the gun. The smart-link system on the gun acts as an active location tracking system, so you see via your eye a targeting cross-hair in front of you which tracks with where the gun is pointing. The gun must also have a smart-link interface, usually a Lv2,000 modification.

Cost:Lv1,000 per level

Weapons

Small Arms

Maxwell LMG-2303

After the Battle of Armstrong's Mountain (Kimanjano), the Texas military saw the need for a fairly light weight squad assault weapon. The weapon which eventually won the contract was designed by the Maxwell Firearms Division of AusCo. The Maxwell Light Machine Gun 2303 utilizes proven technology to produce a squad assault weapon that is light weight and effective. It fires a 4.9mm caseless round and the butt stock area holds a 300 round clip. The clips are quick and easy to change, plus the caseless ammunition eliminates jammed rounds. The design incorporates an integral folding bipod, which when folded under the barrel creates a fore grip area for firing while on the move. It has proven itself as an excellent weapon during trials with the Elite Texas Rifles.

Type: 4.9mm Light Machine Gun, Country: Texas, Weight (Empty): 7.0 kg (1.3 kg full ammo drum), Length: 90 cm (Bulk = 3), Action: Single shot or bursts, Ammunition: 4.7mm caseless ball Muzzle Velocity: 1000 mps, Magazine: 300 rounds, ROF: 4, Aimed Fire Range: 600 m, Area Fire Burst: 10 rounds (AFV = 0.5), Area Fire Range: 400 m, DP Value: 0.5, Price: Lv600 (Lv15 for 300 round disposable magazine)

Anti-Tank Weapons

Obviously most are crew served weapons and would be handled like mortar squads; the weapons are broken down and the parts are carried by individual squad members. Depending on the size of the platoon, there may be 3-4 anti-tank rifles per platoon. The names of the weapons are the actual names.

20mm Lahti Model 39

Type: 20mm conventional anti-tank rifle, Country: Finland, Weight(empty): 222.21kg, Length: 292.42cm (Bulk=19), Action: SS, Ammunition: 20x138mm ball, Magazine: 10 round box, Magazine Weight: 40.75kg, ROF: 1, Aimed Fire Range: 5670m, DP Value: 18, Price: Lv 11,558.99 (Lv 8.67 per round)

13mm Mauser Tank-Gewehr M2218

Type: 13mm conventional anti-tank rifle, Country: Germany, Weight(empty): 65.45kg, Length: 195.05cm (Bulk=13), Action: BA, Ammunition: 13x92mm ball, Magazine: 1 round

breach loaded, Magazine Weight: NA, ROF: 1, Aimed Fire Range: 3070m, DP Value: 10, Price: Lv 4,329.6 (Lv 2.44 per round)

7.92mm SS41

Type: 7.92mm conventional anti-tank rifle, Country: Germany, Weight(empty): 26.71kg, Length: 156.26cm (Bulk=10), Action: SS, Ammunition: 7.92x94mm ball, Magazine: 10 round box, Magazine Weight: 4.35kg, ROF: 1, Aimed Fire Range: 1770m, DP Value: 6, Price: Lv 2,513.49 (Lv 0.93 per round)

7.92mm PzB38

Type: 7.92mm conventional anti-tank rifle, Country: Germany, Weight (empty): 27.86kg, Length: 181.46cm (Bulk=12), Action: BA, Ammunition: 7.92x94mm ball, Magazine: 1 round breach loaded, Magazine Weight: NA, ROF: 1, Aimed Fire Range: 1960m, DP Value: 6, Price: Lv 2,819.84 (Lv 0.93 per round)

7.92mm PzB39

Type: 7.92mm conventional anti-tank rifle, Country: Germany, Weight(empty): 27.83kg, Length: 180.86cm (Bulk=12), Action: BA, Ammunition: 7.92x94mm ball, Magazine: 1 round breach loaded, Magazine Weight: NA, ROF: 1, Aimed Fire Range: 1950m, DP Value: 6, Price: Lv 2812.55 (Lv 0.93 per round)

20mm PzB41

Type: 7.20mm conventional anti-tank rifle, Country: Germany, Weight(empty): 221.78kg, Length: 289.12cm (Bulk=19), Action: SS, Ammunition: 20x138mm ball, Magazine: 10 round box, Magazine Weight: 40.75kg, ROF: 1, Aimed Fire Range: 5610m, DP Value: 18, Price: Lv11,516.09 (Lv 8.67 per round)

0.55in Boys Mk 1

Type: 0.55in conventional anti-tank rifle, Country: Great Britain, Weight(empty): 81.35kg, Length: 196.48cm (Bulk=13), Action: SS, Ammunition: 14.08x100mm ball, Magazine: 10 round box, Magazine Weight: 14.64kg, ROF: 1, Aimed Fire Range: 3270m, DP Value: 11, Price: Lv4,967.93 (Lv 3.11 per round)

20mm Model 97

Type: 20mm conventional anti-tank rifle, Country: Japan, Weight (empty): 199.05kg, Length: 266.36cm (Bulk=18), Action: SS,

Ammunition: 20x124mm ball, Magazine: 5 round box, Magazine Weight: 22.98kg, ROF: 1, Aimed Fire Range: 5130m, DP Value: 17, Price: Lv 10,363.89 (Lv 7.79 per round)

7.92mm Maroszczyk wz35

Type: 7.92mm conventional anti-tank rifle, Country: Poland, Weight(empty): 31.35kg, Length: 194.88cm (Bulk=13), Action: SS, Ammunition: 7.92x107mm ball, Magazine: 7 round box, Magazine Weight: 3.85kg, ROF: 1, Aimed Fire Range: 2560m, DP Value: 6, Price: Lv 3,087.68 (Lv 1.05 per round)

20mm Solothurn S-18/100

Type: 20mm conventional anti-tank rifle, Country: Switzerland, Weight(empty): 178.46kg, Length: 313.78 (Bulk=21), Action: SS, Ammunition: 20x105mm ball, Magazine: 10 round box, Magazine Weight: 31.01kg, ROF:

1, Aimed Fire Range: 6190m, DP Value: 18, Price: Lv 9,825.79 (Lv 6.60 per round)

14.5mm PTRD

Type: 14.5mm conventional anti-tank rifle, Country: Russia, Weight(empty): 99.43kg, Length: 234.85cm (Bulk=16), Action: BA, Ammunition: 14.5x114mm ball, Magazine: 1 round breach loaded, Magazine Weight: NA, ROF: 1, Aimed Fire Range: 3830m, DP Value: 12, Price: Lv 6,055.35 (Lv 3.76 per round)

14.5mm PTRS

Type: 14.5mm conventional anti-tank rifle, Country: Russia, Weight(empty): 99.37kg, Length: 234.15cm (Bulk=16), Action: SS, Ammunition: 14.5x114mm ball, Magazine: 5 round box, Magazine Weight: 11.11kg, ROF: 1, Aimed Fire Range: 3820m, DP Value: 12, Price: Lv 6,046.59 (Lv 3.76 per round)

P-Suits

Light Duty Pressure Suit

This is the Pressure Suit preferred by starship crews. It is light weight, flexible and perfect for wear in side of a starship. It includes a special air cartridge that supplies air for 30 minutes. A standard life support unit can be used to extend the operation of this suit. It protects against temperatures +50 C to -40 C.

Weight: 10kg (plus life-support Unit)
Armor:.2 Initiative:-1 Price: Lv 1,500

General Purpose Pressure Suit

This standard issue P-suit is unwieldy and uncomfortable if not custom fit. This is the standard suit used for EVA and other activities involving activities outside of a starship or other structure. The General Purpose P-Suit protects against temperatures from +100 C to -110 C. It requires a life support unit for power and oxygen.

Weight: 20kg (plus life-support Unit) Armor: .5 Initiative:-2 Price: Lv 2500

Hostile Environment Pressure Suit

This is a heavy duty Pressure suit designed for operation in hostile atmospheres. It provides personal protection against temperatures +200 C to -180 C. Very bulky and usually hard molded, these suits have extra heavy shielding around the joints. It requires a life support unit for power and oxygen.

Weight: 25kg (plus life-support Unit) Armor: .7 Initiative:-3 Price: Lv 3500

Portable Life Support Units

A portable life support unit is necessary with a P-suit. The life support unit supplies the suit with its power and air supply. The unit is in backpack form which plugs into all standard P-suit designs and operates from the suit's standard controls. They come in various sizes and durations and all units can be recharged within 24 hours.

PLSU-1 -*Weight: 7kg, Duration: 4 hours, Price: Lv 1000*

PLSU-2 -*Weight: 15kg, Duration: 24 hours, Price: Lv 2000*

PLSU-3 -*Weight: 29kg, Duration: 48 hours, Price: Lv 3000 This unit also includes a thruster unit for EVA activities. It has a 60 second burn limit.*

Construction and Mining Equipment

This represents the machinery mix that would be used in the first phase of carving a new colony or outpost out of the wilderness, ie, clearing and flattening ground and creating a temporary air strip capable of handling interface vehicles. (Equipment for operating the air strip, such as fuel tankage, navigational aids, etc, not included) It is assumed the buildings at this stage are pre-fabbed. Prices given are for "standard" versions of the equipment. The vehicles can all be adapted for exotic (or non-existent) atmospheres as per the ground vehicle guide. There are a few special rules that pertain to construction and mining vehicles:

The civilian versions of these vehicles are delivered painted in high visibility colors and equipped with reflectors, flashers, alarms, etc, in the interest of safety. The military versions are not. Hence, when using military versions, deduct 3 from signature, but add two to any mishap rolls made while working with them.

By way of the "CAT Fusion" hat depicted in the Adventurer's Guide, I conclude that Caterpillar is one of the few, if not the only, 20th century industrial corporations still active in the 24th. I also assume that "CAT Fusion" refers not to their construction, mining, quarrying, military and agricultural vehicles division but to their powerplant division which produces portable (To the folks at Caterpillar, something can weigh 20 tons and still be portable) powerplants. In 2300, though these portable powerplants are fusion powered rather than gas turbine powered. (Which is a bit of a bother because 20th century gas turbine plants seem to be so much more powerful, in MW per ton, than their 24th century successors. Still, it explains the hat...)

A skill such as Heavy Equipment Operator, Combat Engineer, Mining Engineer, Etc, is required to use most of this stuff. The average- or even above average- untrained person will get himself hurt. As none of these skills are in the standard rules, it is up to the Director to determine, if needed, who has the skill and how to acquire it.

You'll note that many of the vehicles here are much heavier than other, non-construction oriented versions of 2300 equipment. Weight during construction operations is an asset. Bulldozers need lots of friction, loaders, cranes, etc need counterweights for leverage, and trucks need to be heavy enough to avoid becoming dangerously top-heavy when loaded.

Caterpillar TWU 4 "Centaur" Work Unit, Track/Walker Hybrid Type

Multi-purpose utility walker. Arms may be used to carry loads, handle materials, operate tools, etc. Design incorporates a tracked chassis, which, when the walker is being used in an upright position, is carried as if it were a large backpack. In this position it acts as a counterweight to any load carried in the walker's arms. The tracked chassis is capable of extending downwards on telescoping struts. The walker unit then leans back until the full weight is supported by the chassis. In this position, the arms and legs can work together to handle much heavier loads, or the legs fitted with heavy tools such as a plow or dozer blade. This unit can be operated by anyone with "Combat Walker" or "Heavy Equipment Operator" skill. Irregular military forces can arm and armor the Centaur, although the result is mediocre. It is much slower than military models, and much heavier (but if it could ever catch up to a military walker, it could pick it up and throw it). The Centaur often arrives with the first deployment of a colonial engineering firm to a remote site. Once unloaded, it can unload everything else before proceeding to work. Comes equipped with minimal communications gear.

Weight: 2.5 tons, Crew: Operator, Armor 2 throughout, although any attack directed against the operator has a 20% chance of striking the safety cage, with a value of 6. Signature 7, Evasion 2, Cargo: Walking: 1.6 Tons (arms) Tracked: 4 tons (arms and legs), Max Speed 30 Kph, walking, 60kph tracked, Average Speed 10 Kph, Combat Move 150m Tracked, 75m walking, Off Road Mobility: Full, Power Plant .1MW Fuel Cell, Fuel Capacity 40kg, Fuel Consumption 4kg/hr, Endurance 10 hours, Dimensions: (shipping)

3m x 1.75m x 1.5m
Price Lv 13,999

Henderson WMU 10 "Spider" Work Unit, Walker Type

A lightweight utility walker. Its six legs give it excellent mobility in terrain that frustrates anything else- it can even climb stairs. The two forward legs also function as tool mounts or material handlers. Extended, the forward legs can carry 250 kg. This capacity can be increased, up to three times, by the placement of counterweights on the back of the Spider. This will raise fuel consumption accordingly. The spider is commonly used to handle heavy tools and move materials in very unimproved surroundings. Since it is operated from the seated instead of the

standing position, the spider also has a profile low enough to be used in mines or inside buildings.

Standard unit is equipped with integral but minimal communications gear.

Weight: 500kg (2 forward legs), Crew: Operator, Armor 1 throughout, Signature 6, Evasion 3, Cargo: 250 kg, (load on extended forward legs), Max Speed 30 Kph, Average Speed 10 Kph, Combat Move 75m, Off Road Mobility: Full, Power Plant .05MW Fuel Cell, Fuel Capacity 16 kg, Fuel Consumption 2kg/hr, Endurance 8 hrs, Dimensions: 2m x 2.5m x 2.5m

Price Lv3599

Caterpillar DT-190 Ground Clearing Vehicle, Tracked

Typical piece of earth moving/excavating equipment. In addition to the heavy blade in the front, the DT-190 mounts a large tool arm in back, capable of swinging over the cab and bringing a heavy duty tool, typically a claw, cutting tool, electromagnetic hammer, etc, to bear on the

problem at hand. When clearing forests, the claw is the tool of choice, as it can pull trees and logs out of the way. An electromagnetic hammer with a heavy duty breaker chisel head will be preferred in rocky terrain. The DT-190 is often outfitted with communicators, and a position

locating system, for exact control of clearing operations. Military versions are typically armored, and may be used for the creation of defensive positions.

Weight: 8500kg, Crew: Operator, Armor: 25 at Blade, 2 throughout, although any attack directed against the operator has a 15% chance of striking the safety cage, with a value of 6. Signature 10, Evasion 1, Cargo: None, Max Speed 80 Kph, Average Speed 40 Kph, Combat Move 200m, Off Road Mobility: Half, Power Plant .25MW Fuel Cell, Fuel Capacity 120 kg, Fuel Consumption 10kg/hr, Endurance 24 hrs, Dimensions: 4m x 2.5m x 2.5m

Price Lv 21,599

Konia CTTR-20 Compactor/Tamper Unit, Trailer Type

Machine used to compact soil, gravel, etc, increasing the density and strength of a subgrade so as to support whatever infrastructure- landing strip, highway, railroad tracks, sidewalk, paved plaza, etc, is being built above it. Tamping/Compaction is performed by a heavy steel plate

which is rapidly raised and lowered by means of electro-magnets, powered by the unit's fuel cell. During operation, the unit is towed behind or pushed in front of a walker work unit or other vehicle. Work times will vary wildly depending on the degree of compaction required, and the condition of the precompacted fill, but 1500 cubic meters per hour is typical. The unit's power supply is not required during towed transport.

Weight: 1500kg, Crew: None (Operated from towing/pushing vehicle), Armor 0.2

Signature 7, Evasion 0, Cargo: None, Max Speed As towing vehicle, Average Speed As towing vehicle, Combat Move As towing vehicle, Off Road Mobility: As per towing vehicle, Power Plant .04MW Fuel Cell, Fuel Capacity 20 kg, Fuel Consumption 2kg/hr, Endurance 10 hrs Dimensions: 1.5m x 2.5m x 1.75m

Price Lv1699

Caterpillar PV-22 Mobile Crusher/Pulverizer Unit, Wheeled

The PV-22 is only a recent means to accomplish one of mankind's most ancient tasks: making big rocks into smaller rocks. Why? Because importing concrete, gravel, sand, stone, etc any distance is ludicrously cost inefficient. With carborundum studded grinding drums and a water

pump capable of putting out 100,000 PSI, (into its own mouth, so the water can be retrieved, filtered, and re-used) the PV-22 can reduce 36 tons of rock per hour to pebbles, or 20 tons to sand, depending on the choice of the operator. Also used for pulverizing mine tailings, and reducing bulk rock to workable ore.

Weight: 3500kg, Crew: None (Operated remotely, and only when set up), Armor 0.4, Signature 12, Evasion 0, Cargo: None, Max Speed As towing vehicle, Average Speed As towing vehicle, Combat Move As towing vehicle, Off Road Mobility: As per Towing Vehicle, Power Plant .2 MW Fuel Cell, Fuel Capacity 80 kg, Fuel Consumption 8kg/hr, Endurance 10 hrs, Dimensions: 5m x 2.5m x 3m
Price Lv 48,999

Pundi Industrial SVTR-30 Telescoping Loading/Conveyor Unit, Trailer

An articulating, mobile conveyor system, able to extend up to 100 meters horizontally and 25 meters vertically, as well as allowing for up to two 90 degree turns along its length, as well as "micropositioning" at the two ends. Capable of moving up to 2000 tons per hour. Typically used to move material from a quarry, mine, or excavating site to a loading site or tailings mound.

Weight: 4 Tons, Crew: None (Operated remotely, and only when set up), Armor 0.2, Signature 12, Evasion 0, Cargo: None, Max Speed As towing vehicle, Average Speed As towing vehicle, Combat Move As towing vehicle, Off Road Mobility: As per Towing Vehicle, Power Plant .03 MW Fuel Cell, Fuel Capacity 20 kg, Fuel Consumption 2kg/hr, Endurance 10 hrs, Dimensions: 40m x 2m x 2.5m
Price Lv 16,999

Henderson EXT-17 "Exomite" Demolitions Vehicle, Tracked

A small tracked vehicle specialized in the removal of "hard" rock. Used for mining, road cuts, and bedrock excavation. Armored hatches along the front of the vehicle conceal more specialized and dangerous looking tools than a Kafer's mouth. It was decided, by the manufacturers, that this arrangement of multiple permanent fixtures, as opposed to a universal tool mount or two, would save the operator time as he switched between tasks. Included are: 1 ultrasonic probe for structural analysis, 1 probe/manipulator for placing and tamping of explosives, 1 vacuum hose, for removing dust and abrasives cuts and probe holes, 2 sweeper arms for clearing rubble, 1 100,000 psi micro-fine water cannon, with carborundum abrasive feed hopper, for cutting and drilling rock, abrading soft rock, damping down dust, and saturating cuts and holes with water, and one laser, for super-heating water saturated holes and causing the rock to split, as well as vaporizing small bits of rocks for analysis by spectrograph. The vehicle is heavily armored, for protection against flying rock splinters, collapses, and demolitions accidents. The rear of the vehicle contains a winch, a heavy metal anchor, and some 50 meters of heavy duty cable. The anchor is set before the vehicle goes to work, and provides a retrieval mechanism in case something goes wrong. There are also hoses for connections to external water and abrasive tanks for extended operations, and storage space for additional tools and demolition charges. The exomite can "eat" through 10 cubic meters of rock per hour.

Weight: 3500kg, Crew: 1 (room for 1 passenger), Armor: Front and overhead 40 Sides 8 Rear 1, Signature 7, Evasion 1, Cargo: None, Max Speed 100 Kph, Average Speed 40 Kph, Combat Move 250m, Off Road Mobility: Half, Power Plant .2 MW Fuel Cell, Fuel Capacity 80 kg, Fuel Consumption 8kg/hr, Endurance 10 hrs, Dimensions: 5m x 2.5m x 2m
Price Lv 93,999

Caterpillar HTT-700 Off Road Medium Hauler, wheeled

A medium weight dump truck, used for movement of earth and bulk materials. Cargo area can be tipped to dump to the rear or side, or hopped to release load from beneath. (In this fashion it is commonly used for spreading gravel, sand or road materials over a work area). Since cargo space is at a premium when delivering equipment by air or interface vehicle, the hauler will generally arrive with its cargo bed packed with other equipment. Can be fitted with a plow for light clearing duty.

*Weight: 14 tons, Crew: 1 (room for 1 passenger), Armor 0.4 Throughout, Signature 11, Evasion 0, Cargo: 20 Tons, Max Speed 120 Kph, Average Speed 80 Kph, Combat Move 300 m, Off Road Mobility: One Quarter, Power Plant .4 MW Fuel Cell, Fuel Capacity 160 kg, Fuel Consumption 16kg/hr, Endurance 10 hrs, Dimensions: 5m x 2.5m x 3m
Price Lv 18,999*

"DIRTLOK" Deep Soil Stabilization System

Used to provide reinforcement of subgrades in areas where soil is too loose to maintain compaction, such as swamp or sand areas. System consists of 2 elements. First are the perforated composite tubes, 3cm diameter by 1 meter long, which are driven into the soil by means of electromagnetic hammer. The tubes can link together to provide whatever length the engineer deems necessary. The second is a two component, fast hardening liquid synthetic grout which is force pumped into the tubes. The grout leaves the perforated tubes under pressure and hardens, forming a strong rootlike tangle, strengthening the soil.

Also used to

reinforce walls and ceilings of mines.

High pressure Grout Pump: (11kg) Lv 210

60 "Dirtlok" tubes: (15kg) Lv 180

Synthetic Grout for 60 Tubes, (1 150 liter tank each of components A and B) Lv 80

(Shippers take note: Grout components should always be separated during shipping, material will harden rapidly when both components are mixed.

Electromagnetic Hammer, Work Unit Mount

Uses alternating magnetic fields to operate a hardened metal hammer. This does what hammers typically do, either break things or insert things, but with... as the 20th century Sitcom character put it.. MORE POWER! Has no integral power source, as it is vehicle or walker mounted and draws power from its carrier. (Typically, the vehicle or walker is not moving while using the hammer, so this isn't a problem) A variety of chisels and other heads can be mounted on the hammer, from diamond-coated awls for splitting the toughest materials to a specialized driver head to insert "Dirtlock" tubes. A hammer mounting a chisel designed for destruction of rock, concrete, etc, is commonly called a "breaker".

Weight: 25 Kg,

Price: Lv300

Construction Chemical Sprayer, Man Portable

A battery powered, lightweight device for spray or mist application of chemicals. Connects by hose to either a pack mounted tank, or a roll-along tank. Sprayer has valves to allow proper mixing of separately stored chemical components. A small display shows the operator the current tank load remaining, the dispersal rate, and the current settings (pressure, droplet size, etc.)

Weight: 2 Kg + Tank weight,

Price: Lv35

Construction Chemical Sprayer, Work Unit or Vehicle Mount

Drawing off vehicle or walker power, the big brother of the device described above. Controls and display are remotely located so as to be reachable by the vehicle or walker operator. Enables fine control over quantities sprayed and areas covered, (useful, for example, if you want to control precisely the thickness of a coating) Connects by hose to either a vehicle carried or trailer tank. Sprayer has valves to allow proper mixing of separately stored chemical components

Weight: 20 Kg + Tank weight,

Price: Lv 180

"Aud-Alert" Warning Markers

Small, reflective, luminous, battery powered, annoying plastic squares that are posted around work areas. In addition to visually warning of hazards, the "Aud-Alerts" announce it to anyone coming within 4 meters of the sign. (detection is via a simple thermal system, fairly easy to fool if you really want to) With over 1200 preprogrammed warnings in a number of languages, such as "Warning! No Bridge!", "Danger, Blasting in Progress!" or "Caution! Wet Paint!" (This last ensures that passersby will test the surface in question, just to be sure the warning is accurate) the Aud-Alert has sufficient battery life- 72 hours- to ensure non stop irritation of work crews. The Aud Alert is used primarily where local governments or

insurance companies insist on it. The Pentapods are known to be working on an equivalent product, but at this time it does nothing that a well trained parrot can't.

Weight: .25 kg,

Price: Lv 5

Field Office Trailer

A portable shelter with climate control, lighting, desks, seating, cabinets and a restroom. Space for computers and communications equipment, including a satellite uplink, is included, but the devices themselves are not.

Weight: 1.5 tons, Crew: 2-8, Armor 0.1 Throughout, Signature 8, Evasion 0, Cargo: None, Max Speed As per Towing Vehicle, Average Speed: As per Towing Vehicle, Combat Move As per Towing Vehicle, Off Road Mobility: 15 Kph Max- higher towing speeds may damage trailer, Power Plant .03 MW Fuel Cell Fuel Capacity 96 kg, Fuel Consumption 1 kg/hr, Endurance 96 hrs, Dimensions: 9m x 2.5m x 3m

Price Lv 2,599

Field Crew Support Trailer

A "life support" unit supplying showers, laundry, galley and sanitary facilities for work crews in remote areas. Military and conscript crews may put up with less, as would poor laborers, but professionals will require these trailers. One will serve a 25 man crew.

Weight: 2 tons, Crew: None, Armor 0.1 Throughout, Signature 8, Evasion 0, Cargo: None, Max Speed As per Towing Vehicle, Average Speed: As per Towing Vehicle, Combat Move As per Towing Vehicle, Off Road Mobility: 15 Kph Max- higher towing speeds may damage trailer, Power Plant .04 MW Fuel Cell, Fuel Capacity 150 kg, Fuel Consumption 1.5 kg/hr, Endurance 100 hrs, Dimensions: 9m x 2.5m x 3m

Price Lv 4,299

"Intellipost" Automated Survey and Control Stake System

"Intellipost" Software

Necessary for computers to administer "intellipost" system. Computers, Document scanners, and survey and navigational satellites are not manufactured by Intellipost, but useful in getting the full benefit of the system. Intellipost software is compatible with most design software, allowing the actual process on the ground to be guided directly from plans and surveys in the computer's memory. Intellipost software also responds immediately to design changes. For example, if an engineer alters the design to reroute a sewer line, red blinking lights will flash on all the control/survey stakes already planted at the site laying out the future sewer line, indicating they are improperly positioned.

"Intellipost" Software, v.16.2

Price: Lv140

"Intellipost" Software, v.1.0

Price: Lv 2

"Intellipost" central node module

Maintains constant, precise local positioning of up to 640 control stakes and display modules, in relation to geography, construction plans, and the other units.

Weight: 2kg Price: Lv 400

"Intellipost" Survey/Control stake

Used to establish key control points from the construction plans- points are established with the computer, and the system's survey/control stakes then guide workers placing them, using a miniature "direction/range indicator". The worker merely follows the stake's instructions to bring it to the proper place, then drives it into the ground, after which the stake 'micro-adjusts' itself for precise alignment. Stakes guide materials placement, and show directions, angles, plumb and level lines with the aid of low power lasers. Stakes are battery powered.

Weight: .5 Kg Price: Lv7

"Intellipost" operator's display module

Allows equipment to be tied into the Intellipost system. With a few stakes establishing directions and dimensions, for example, and a display module in the cab of a tunneling vehicle, and operator could excavate a tunnel aligned almost perfectly with the construction plan. Other manufacturers produce robotic vehicle and equipment control devices that can interface with Intellipost- these can enable some operations to proceed with no human crew at all. Intellipost does not recommend this and will accept no liability for errors occurring in the absence of a human operator.

Weight: 1.5 Kg

Price: Lv 125

"AEROMAT" Spray applied lightweight structural mesh

Fast curing binary-type chemical compound which, when sprayed, forms a mesh of very fine, very strong interwoven and tangled synthetic fiber. This is typically sprayed either into a form- a box designed to give the structural mesh shape- directly onto the ground to add strength to concrete or other paving materials, or onto a wall to support stucco. 1 liter of chemical will form about 2 cubic meters of mesh, enough to reinforce 10 square meters of paving.

Note to Shippers: While the binary component system offers protection against product curing in the event of a leak, tanks of "A" and "B" components should always be stored with maximum distance between them, to minimize chance of product curing in the event of multiple ruptures to containers.

Price: Lv5 per Liter in small quantities, Lv3.75 per liter in tanks (100 Liters +)

"HAACSAW" Hyper-Accelerated Abrasive Cutting Tool, Vehicle or Work Unit Mounted

State of the art cutting system using a mass driver to propel a stream of particles, diamond, carborundum, or synthetic, at a surface. No internal power, requires connection to walker work unit or vehicle power source of at least .1 MW (carriers lacking this power can carry additional fuel cell power units) Within a half-meter of the nozzle, the abrasive stream is moving at speeds of up to Mach 5, and will make a meter long cut at rate of .75 Armor Value points per second. Cutting power falls off rapidly with distance in an atmosphere, being reduced by

a factor of 3 every additional half meter, and having no effect at all past 5 meters. In a vacuum, it's another story, with cutting power being reduced by a factor of 2 per 10 meters (due to the abrasive stream spreading with distance) In vacuum, however, the integral abrasive recovery

system cannot be used, so a steady supply (.1kg/sec.) must be available. Even with the recovery system on, some abrasive loss is inevitable: 1 kg/hour is typical. Some uses for HAACSAW include cutting of raw stone into shaped pieces for masonry work, cutting structural steel (and other metals), cutting armor plate for field repair of armored vehicles, rescue and demolitions work, and making "control" cuts for underground excavating. The nozzle directing the abrasive stream from HAACSAW can be set to rotate, allowing HAACSAW to execute circular cuts or even be used as a core drill. For safety purposes, the unit is often used in conjunction with the "Intellipost" system, with the HAACSAW set to disengage automatically if the unit is moved or turns away from its delineated work area.

Weight: 120 Kg, Price Lv8,900

Portable Bulk Loading System, Trailer Mounted

Loads, packages, and/or bags sand, gravel, and other bulk material- wood chips, whatever- from loose piles. Often teamed with a pulverizer for turning local rock into useful building materials. Can be used for fast loading of sand bags- a great aid in flood or military situations- or packing of rock into mesh blocks- or loading piled gravel into hoppers for spreading on roads, etc. An unsung but valuable piece of machinery, capable of loading or packaging up to 12 tons per hour. Bags, containers, etc, are a minimal additional cost.

Weight: 400kg, Crew: None (Operated from towing/pushing vehicle), Armor 0.1, Signature 5, Evasion 0, Cargo: None, Max Speed As towing vehicle, Average Speed As towing vehicle, Combat Move As towing vehicle, Off Road Mobility: As per towing vehicle, Power Plant .02MW Fuel Cell, Fuel Capacity 10 kg, Fuel Consumption 1kg/hr, Endurance 10 hrs, Dimensions: 3m x 2m x 1.75m

Price Lv499

Spray Applied Siloxi-Polymer Consolidant

Fast curing liquid adhesive compound, used for solidifying sand, bonding materials together, and putting a tough, clear shell on wood and other materials. It will Not produce an esthetic finish- prior to curing, it has extreme adhesion qualities, and will invariably bind dirt and dust as it cures. Nor will it give a smooth finish, due to its curing speed. Typically, it is used to bind local materials when doing "quick" construction. For example, in creating a hasty landing field for shuttlecraft or spaceplanes, after the land has been flattened, graded, and compacted, a layer of "Aeromat" would be applied, the mat filled with locally available sand, and the sand consolidated with polymer. The whole operation could produce a servicable runway within a month-about a week if the manpower is available to run triple shifts, and the terrain not too rough. When used in this manner, one liter will bind about a third of a cubic meter of sand, or about two square meters of runway surface. It's fast, not cheap

Note to shippers: Exercise caution in handling containers, especially in zero or low gravity conditions. Even small shipboard spills in the absence of gravity could have severe consequences..

Price: Lv3 per liter in small containers, Lv2.4 per liter in 150 Liter tanks.

<p>Digging In This represents the machinery mix that would be used in the second phase of establishing a new colony or outpost. Now that the base camp and facilities are in place, the engineers go to work finding and exploiting local construction materials that will be used to build the rest of the colony. Basic roads are laid out, quarries and mines dug, cement and brick yards placed near suitable mineral deposits, and forestry operations begun. Until the colony is fully developed, the "low tech" materials harvested directly from the planet will be cheaper than advanced composites and synthetics produced by modern industry.</p>	<p>Krag-Suiza Machineworks "Atlas-98" Off Road Truck, Wheeled, Flatbed, Heavy This is a high end heavy "low-boy" type flatbed truck, meant for moving the heaviest equipment or supplies to or from a worksite. It is also used by the military for road moves of heavy tactical equipment. Just aft of the cab is a single equipment mount, most commonly carrying a boom arm material handler, a crane, or a winch to aid in the loading or offloading of cargo. The cargo bed is equipped with load sensors, and a small display in the cab informs the driver of the current weight, as well as tire pressure and other pertinent data, as well as alerting him to problems such as a shifting load, an off balance load, or excessive strain due to crosswinds. The vehicle has hydraulic shock absorbers isolating the cargo bed from the chassis, and protecting the vehicle from sudden bouncing of the cargo. The retractable plastic cover stretches over the cargo, enhancing the aerodynamics of the truck and protecting the cargo from the elements. Finally, six small power winches are available along the perimeter of the cargo bed, used to tighten the tie-down straps or cables.</p>
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*Weight: 26 tons, Crew: Operator, room for 2 additional in cab, Armor 1 throughout, Signature 10, Evasion 1, Cargo: 88 Tons, Max Speed 110 Kph Average Speed 70 Kph, Combat Move 275m, Off Road Mobility: Quartered Power Plant .6MW Fuel Cell, Fuel Capacity 240kg, Fuel Consumption 24kg/hr, Endurance 10 hours ,Dimensions: (shipping) 12m x 2.5m x 3m
Price Lv59,999*

Mid-Tech of Omaha "Haulmaster 620HD" Off Road Truck, Wheeled, Flatbed, Medium

A very common workhorse flatbed from a company with a strong background in cargo handling. The cargo bed of the Haulmaster is designed to fit the space going cargo modules also produced by Mid-Tech, but the vehicle has proved itself in many other tasks, including the transport of mobile workshops and shelters. The Haulmaster series has all of the features notes for the Atlas above, except the plastic cover. (The modules it was designed for do not need them.) It has a few additional features of its own, most notably, a magnetic sling similar to the device used by starships to carry missiles and landers. Loss of vehicle power will not interrupt the sling, as it is fly-wheel power, but will cause the sling to gradually lose power. Drive-on ramps can be extended by remote control from the cab. The combination of these two features allows a vehicle to be driven onto the flatbed, locked in place with the magnetic sling, and the drive-on ramp retracted with no-one leaving the cab. Tie down cables are supplied, with fast ratchet-tightened turnbuckles- for cargo not appropriate to use of the magnetic sling, or when operating in highly

electro-magnetically sensitive areas where use of a magnetic sling is proscribed. The models prior to the 630-D are very similar, but slightly different, generally inferior features. For example, the on board computer on the 630-C stores seat, interior climate, mirror, and console preference data for only 4 drivers, while the D can store 8.

Weight: 14 tons, Crew: Operator, room for 2 additional in cab, Armor 1 throughout, Signature 8, Evasion 1, Cargo: 62 Tons, Max Speed 120 Kph, Average Speed 70 Kph, Combat Move 300m, Off Road Mobility: Quartered, Power Plant .5MW Fuel Cell, Fuel Capacity 200kg, Fuel Consumption 20kg/hr, Endurance 10 hours, Dimensions: (shipping) 12m x 2.5m x 2.5m
Price Lv 44,550

Caterpillar HET-770 Heavy Excavator, Tracked

Common earth moving/excavating equipment, consisting of a big, tracked, carrier and a large shovel, sometimes called the bucket or shovel, on the end of a work arm. The shovel can be extended outwards 15 meters from the vehicle, and downwards 8 meters from ground level. In soil or loose material, 20 cubic meters can be dug and loaded per hour- in actual practice, the figure will be slightly lower as the operator will have to reposition the vehicle periodically. The shovel can be replaced, if desired, with a claw, useful for handling timber or other large objects, or a "clamshell" type bucket useful for handling very loose materials. In either configuration the arm can handle a maximum of 5 tons at a time. Other features include an operator's display that shows the current load of the bucket, interfaces for Intellipost and other control systems, balance sensors and alarms, and an integral soil stability probe and sensor.

Weight: 25 tons, Crew: Operator, Armor: 2 throughout, although any attack directed against the operator has a 4% chance of striking the safety cage, with a value of 4. Signature 10, Evasion 0, Cargo: None, Max. Speed 40 Kph Average Speed 20 Kph, Combat Move 100m, Off Road Mobility: Half, Power Plant .25 MW Fuel Cell, Fuel Capacity 120 kg, Fuel Consumption 10kg/hr, Endurance 24hrs, Dimensions: 6m x 2.75m x 5m (Minimum, folded, for shipping)
Price Lv 52,299

Mercia "RoboBurro" Autonomous Cargo Carrier, Low Clearance

Cargo carrier used to haul materials around within a work site, with a low silhouette optimized for mining sites. Typically, this unit will work in conjunction with some automated control system, such as Intellipost, to steer it around work areas. The control unit's computer and sensors enable the vehicle to avoid hazards, stop and signal at intersections, report obstacles, etc. It does not have the intelligence or sensor capability necessary to maneuver in a non-automated high speed traffic flow such as a typical highway. The control unit has all the capabilities of the cargo units, and a series of these vehicles can be linked, so that a number of cargo units can be controlled by a single control unit. The control unit, containing the sensors, should be in the front. In mines, where turning space is limited, a control unit is commonly placed at each end of a line of cargo units. The number of cargo units is generally limited by the maneuvering space available, but a single control unit can handle up to 16. Each unit is independently powered. The Roboburro units have very flexible programming: typically, they're programmed to remain at one stop until all the units are loaded with a minimum specified weight. Then, they drive to another station, and remain there until unloaded. Or, they may be set to remain at a station for a fixed length of time. One mining consortium has used a modified Roboburro as an automated mobile coffee station. The cargo containers on each unit can tip to either side, or dump from below as hoppers.

Weight: 320 kg for control unit, 300kg for cargo units, Crew: None (Robotic) Armor 0.2, Signature 4, Evasion 0, Cargo: 2000 Kg per unit, Max. Speed 40 Kph, Average Speed 30 Kph, Combat Move 100m, Off Road Mobility: Quartered, Power Plant .025 MW Fuel Cell, Fuel Capacity 10 kg Fuel Consumption 1kg/hr, Endurance 10 hrs, Dimensions: 2m x 2m x 1m
Price Lv 2,000 for control unit, Lv 690 cargo unit

Crane, Crawler, Lattice Type, Medium: American Crane Company C-44

Cranes have, by 2300AD, long since reached the limits of technology. Suspended load limits are no longer related to the strength of the crane's structure. Only the counterweight provided by the mass of the

crane itself, and the simple physics of leverage and balance determines the load the boom can take before the whole thing tips over. Still, the basic crane has been in widespread use since antiquity, and will probably not go out of style. 24th century crane operators will have a few things on their mind their ancestors didn't. most notably, always remember that the crane's load limit is given as a mass, not a weight, and thus stays constant regardless of the gravity of the world on which it's employed. That is, if you assume a crane operating in 0.5 g can lift twice as much steel girder as it can in 1 g, you will be left with a crane toppled over on the ground. (Unless you increase the counterweight, naturally) The modern crane, like most other tools of the age, is enhanced with electronics: the operator can consult displays to see the current load, angular momentum, wind shear, and other factors helpful for safe operation, whereas once upon a time, operators just had to "eyeball" it.

*Weight 45 Tons, Crew 1, room for several more in the cab, Armor 0.6, Signature 12, Evasion 0, Cargo: (Max. Suspended Load) 32 Tons, Height- variable up to 35 meters, Safe extension varies with load and height, max 16 meters. Max. Speed 40 Kph, Average Speed 20 Kph, Combat Move As 75m, Off Road Mobility: Half, Power Plant .4 MW Fuel Cell, Fuel Capacity 480 kg, Fuel Consumption 8kg/hr Working, 16 kg/hr traveling, Endurance 60 hrs, 30 hours traveling, Dimensions: 5m x 2.5m x 4m x 3 elements, folded for shipping
Price Lv 37,299*

Caterpillar "Ruffian" GT-404 Work Unit/General Carrier, Tracked

The Ruffian is a popular prime mover capable of taking on a variety of roles. The work platform area on the back of the vehicle can support cranes, boom arms, excavating and loading equipment, heavy generators, compressors, pumps. etc. Space is left in the cab for specialized consoles to operate whatever equipment is currently mounted. The front can be fitted with a plow blade. Often the Ruffian is left as a cargo carrier, but almost every major user has developed some different configuration. Ruffians have acted as tow vehicles, fiber optic cable installer/reel carriers, supported exploratory core drilling rigs and "cherry picker" type work platforms, and have even acted as emergency response vehicles and carriers for various pieces of military hardware.

Weight: 20 Tons, Crew: 1 (Room for 2 more in Cab), Armor 0.8 Cab, 0.5 Elsewhere, Signature 10, Evasion 1, Cargo: 40 Tons (in General Cargo Configuration), Max. Speed 120 KPH, Average Speed 60 KPH, Combat Move 225 Meters, Off Road Mobility: Halved, Power Plant .25 MW Fuel Cell, Fuel Capacity 240 kg, Fuel Consumption 10kg/hr, Endurance 24 hrs, Dimensions: 4m x 2.5m x 3m (Without specialized tools)

Price Lv 18,299

Optional 10 ton capacity boom arm for Ruffian:

Add 2 tons weight, Lv3,500

Caterpillar HHT-990 Front Shovel, Tracked

Huge piece of earth moving/excavating equipment, the thing that strikes fear into the hearts of environmentalists and gives strip mining a bad name. A front shovel has a large scoop on the end of a cantilevered, counterweighted arm, the whole affair mounted on a tracked chassis. A heavy unit like this would show up only for really big jobs- at mines where the owners expect decades of ongoing operations, and the largest construction project sites, like dams at major rivers, or highway cuts through mountains ranges. The bucket will drop 20 tons at a time into a waiting dump truck, railroad hopper car, etc. A single bucket load will fill a medium type dump truck. The shovel can be extended outwards 24 meters from the vehicle, and downwards 12 meters from ground level. In soil or loose material, 240 cubic meters can be dug and loaded per hour- in actual practice, the figure will be slightly lower as the operator will have to reposition the vehicle periodically. Features, like its smaller cousins, include an operator's display that shows the current load of the bucket, interfaces for Intellipost and other control systems, balance sensors and alarms, and an integral soil stability probe and sensor. Because this machine will typically be working in one place, repetitively, for long durations, significant attention is paid to operator comfort. The cab is fully climate controlled, the windows are self adjusting non-glare, etc. The relatively high armor values reflect not specific armor applied to the vehicle so much as the Front Shovel's massive steel construction. (Lighter structural materials would exist in 2300AD, but the vehicle's weight is important in providing a counterweight to the arm.)

Weight: 120 tons, Crew: Operator, room for several more in cab Armor: 1 around engine and cab, 3 at suspension, 4 elsewhere, Signature 10 Evasion 0, Cargo: None, Max Speed 40 Kph, Average Speed 20 Kph Combat Move 75m, Off Road Mobility: Half, Power Plant 1 MW Fuel Cell Fuel Capacity

480 kg, Fuel Consumption 40kg/hr, Endurance 24 hrs Dimensions: 5m x 2.75m x 4m x 4 units,
unassembled for shipping
Price Lv180,000

Haagland 2600S Digger-Loader Unit, Wheeled

A wheeled vehicle designed for operation in mines. The front of the vehicle is taken up by a large drum, with scoop-like blades mounted in offset rows. As the drum spins, it digs at the material in front of it and propels it into the loading conveyor chute, which runs through the center of the vehicle. The conveyor chute deposits the material behind the vehicle, where, if the mine operators have planned things correctly, some other sort of conveyance will be waiting. The material is then removed from the mine to begin processing. The 2600S is generally better at exploiting found veins of ore than the Exomite, which, lacking the conveyor chute, and using water to cut up the rock, is somewhat messy and inefficient when it comes to removing material. The Exomite, on the other hand, will bore through tough rock about twice as fast, and is the superior vehicle for opening up new mines.

Weight: 2500kg, Crew: 1, Armor: Suspension: .4, Elsewhere .5 Roof over operator only:1, Signature 7, Evasion 1, Cargo: None, Max Speed 40Kph, Average Speed 20 Kph, Combat Move 75 m, Off Road Mobility: Quartered, Power Plant .2 MW Fuel Cell, Fuel Capacity 80 kg, Fuel Consumption 8kg/hr working, 2 kg/hr traveling, Endurance 10 hrs working 40 hours traveling, Dimensions: 3m x 2.5m x 1.75m

Price Lv16,999

By their nature, tracked and wheeled work units usually handle bigger tools than the Walker work units. Tools are available in a variety of sizes to correspond to the task and budget available, and to the capacity of the carrier. Smaller pieces are usually mounted on walkers, more massive units on larger vehicles. Most tools come with a modular display that is mounted near the vehicle's controls, allowing for one operator/driver to handle the task. Power for all these tools is provided by the carrier.

Pallet Handler

This is a generic and common device, consisting of two strong metal prongs designed to slide into openings on cargo pallets, and two smaller arms to help keep the load stable. The whole arrangement is mounted either on the work units integral arms or a large boom arm mounted on a vehicle. Allows for fast handling of cargo.

Weight: 5% of the cargo handling capacity of the unit.

Price: Up to 2 Tons capacity: Lv 800

Up to 5 Tons capacity: Lv 1,600

Up to 15 Tons capacity: Lv 3,500

Up to 50 Tons capacity: Lv 12,000

Up to 150 Tons capacity: Lv 40,000

Warsaw Waldow Universal Handling Tool

Warsaw Waldow produces a non-traditional but very capable multipurpose work arm and handling unit, available for mounting on a variety of carriers. Unlike most mountable tools, attachment of a Warsaw Waldow is a complex process, and cannot be done quickly in the field. Use of a Warsaw Waldow, however, is very simple. The unit is a structural analogue of a human arm and hand, operated with the aid of a logarithmically scaled force feed-back glove. Control is extremely sensitive; with minimal experience an operator can pull a tree stump out the ground, then plant a delicate flower in its place without damaging it. (This very routine is shown on Warsaw Waldow's promotional holo.) Warsaw Waldow's true innovation is not the equipment itself so much as the proprietary safety software, which can somehow distinguish the operator's intended movements from inadvertent gestures, switches, etc. Some operators are able to use two at once, with a glove on each hand. A Centaur work unit mounting two Warsaw Waldows can get a lot done. Three different sizes are available:

1 Ton capacity Waldow (WW1T):

Weight, 100 Kg,

Price: Lv 1,200

Grip 150 PSI

4 Ton capacity Waldow (WW4T):

*Weight, 500 Kg, Price: Lv3,000
Grip 300 PSI*

22 Ton capacity Waldow (WW22T):

*Weight, 4,000 Kg
Price:Lv14,000
Grip 500 PSI*

Grapple

Common, generic tool used for handling trees, pipe sections, etc., or removing debris, vegetation, or similar obstacles.

1 Ton capacity:

*Weight 200 kg,
Price: Lv700*

5 Tons capacity:

*Weight 700 Kg,
Price: Lv2,100*

10 Tons capacity:

*Price: Weight 1200 Kg,
Price: Lv 3,000*

25 Tons Capacity:

*Weight 2400 Kg,
Price: Lv5,000*

Scoop Loader

Common, generic tool used for handling of soil, gravel, rubble, and other loose materials, and for digging in same.

3/4 ton .5 m3 capacity:

*Weight: 250 kg,
Price: Lv300*

1.5 Tons 1 m3 capacity:

*Weight 700 Kg,
Price: Lv2,100*

3 Ton 2 m3 capacity:

*Weight 1200 Kg,
Price: Lv3,000*

6 Ton 4 m3 Capacity:

*Weight 2400 Kg,
Price: Lv5,000*

12 Ton 1 m3 capacity:

*Weight 700 Kg,
Price: Lv2,100*

24 Ton 2 m3 capacity:

*Weight 1200 Kg,
Price: Lv3,000*

Konia "Dynagopher" series Chain Drive Bucket Excavator

Resembling a miniature version of an amusement park ride, the chain drive bucket excavator consists of arm, rounded on both ends, along which a series of small scoop buckets travel at high speeds, digging into whatever is in front of them at one end, flipping over and spilling their contents out at the other, then returning. The unit is sold with a set of chains, each with different characteristics. The standard steel deep bucket is used for softer materials, while the rock excavator version has much smaller buckets with diamond teeth. These units are too big for walkers, but are commonly mounted on tracked or wheeled carriers, or on barges for underwater excavation and dredging. Barge mounted units generally have longer arms, to bring material up to the surface. Material removed per hour refers to soft material only. Harder materials will slow progress considerably.

Dynagopher "A" Standard Unit:

Weight: 6 tons, 5 m³ per hour, 2.5 m long.

Price: Lv3,800

Dynagopher "B" Heavy Unit:

Weight: 15 tons 12 m³ per hour, 3.5 m long,

Price: Lv12,000

Dynagopher "AX" Long Arm Standard Unit:

Weight: 9 tons, 5 m³ per hour, 10m long.

Price: Lv 5,949

Dynagopher "BX" Long Arm Heavy Unit:

Weight: 35 tons, 12 m³ per hour, 20m long.

Price: Lv 21,900

Drum Type heavy Grinder/Grader

Generic device used to abrade a hard surface to a specific size, shape and finish, for example, to smooth a floor in a tunnel cut through rock, or to prepare quarried stone for a specific construction (or furniture) application. Requires outside power. Typically carried and powered by a walker work unit in the field, or attached to a fixed mount in a quarry shop. In addition to the standard coarse diamond coated drum, "Fine" "Hone" and "Polish" drums are available to provide progressively smoother finishes for stone. "Polish" provides a mirror gloss. Also used to grind away damaged portions of synthetic hulls and armor in preparation for the installation of replacement pieces, and to shape the replacement pieces for installation.

Weight: 100 Kg,

Price: Lv1,900

Replacement Drum

Weight: 60 kg,

Price: Lv 400

High Pressure Grout Pump and Hose

Device for pumping highly viscous materials, like concrete, grouts, resins, synthetics, etc. Hoses should always be flushed with water or solvent after use, to prevent curing of materials in hoses, resulting in clogs. Hose is 8cm wide, and pump will place up to 24 cubic meters of material an hour through 100m of hose, 20 cubic meters through 200m. Pump can overcome a maximum of 120 meters height in standard gravity. (Very high structures can be built by having multiple pumps, but in any case, when pumping through more than 200m of hose, material manufacturer should be consulted.)

Pump:

Weight: 120 Kg

Price: Lv 3900

100m Hose with Reel:

Weight 80 Kg

Price: Lv1,200

100 m Hose with Reel (Heated):*Weight: 100 Kg**Price: Lv 2,000***Hand Held Load/Stress Analysis Device**

Small multi-sensor/analysis with integral or removable display, uses ultrasonic probe and short range maser spectroscopy to measure stress and (by extrapolation) load on structural members. Accuracy is +/- 3% if material is known precisely. Accuracy degrades if material is not narrowly defined by user. Sensor head must be within 1 meter of item being measured.

*Weight: .2 Kg**Price: Lv 620***Five-M Model 180 Gas Driven Fastener System**

A 24th Century derivative of the nail-gun, and later "powder actuated fastener systems" in use in the late 20th century. Essentially a specialized firearm, firing pins, studs, fasteners, eye-bolt pins, and specialized devices of many types. The Five-M Model 180 weighs in at 4

Kg, (without extended magazines). The combustive gas cell will drive an average of 120 fasteners into wood, 80 into masonry, 70 into typical synthetics, 60 into steel. A sensor in the Model 180's head will lock the gun if there is no suitable object directly in front of it, a safety feature. The sensor will also determine the optimum gas charge based on the type of fastener, stud, etc, and the type of substrate it is being fired in to. The operator can specify a reduced charge if he wishes a portion of the fastener to remain protruding from the substrate- this is assumed and automatically figured for such things as threaded pins and eyebolt pins, which are then used as attachment points. Five-M "gas-guns" are unable to drive fasteners into any substrate with an armor value per centimeter depth greater than 6. A red light will flash and the gun will refuse to drive a pin whenever the sensor detects an unsuitable combination of pin type and substrate, including instances where the operator has selected too high a charge, which would drive the fastener all the way through the substrate, rather than just embedding it. The Model 180 has slots for three different fastener magazines, giving workers extra flexibility. The Model 150 has slots for only 2.

Model 180:*Weight: 4 kg**Price: Lv 320***Model 150:***Weight 4 kg**Price: Lv 265***Gas Cell:***Weight: .75 Kg**Price: Lv 9***Preloaded expendable fastener magazines, 30 fasteners:***Weight: .5 Kg,**Price: Lv5 for simple pins, Lv6 for threaded pins, Lv10-12 for special purpose pins.***Bulk Mixing Hopper**

A generic and fairly low tech device designed to blend large quantities of dry materials. Used to prepare raw materials for brick, mortar, concrete, etc. Truck transportable, typically on a flatbed, although some variants are trailer mounted. Unit weighs 8 tons, and can mix up to 12 cubic meters in a batch. Mixing time will depend on materials involved, but a typical load of concrete, starting from lime, sand, gravel, and various additives (The bulk mixing hopper is able to finely control the quantities added from four integral additive tanks) is about 10 minutes. The hopper has a series of counter-rotating helical blades inside, purchased separately, which have to be replaced every few years. The unit has no integral power source.

*Price: Hopper Lv7,000. Set of Blades: Lv2,800***Swenson and Edding THZ-10, THZ-40, and THZ-120 "Thazer" Articulating Steerable Drill System**

One of the more advanced drilling systems around, the Thazer series drills rely on a steerable drill head, with rings of counter rotating teeth at the front, and six secondary bits angling out just behind the cutting

head. By varying the speed on the different bits of the secondary drill collar, the drill head can be made to turn. The turn radius is not large, 20-40 times the diameter of the drill head is typical, but it offers drillers great flexibility, especially as it has the ability to drill down to a depth, then level off and make a horizontal run. A whole series of probes, or a number of blast holes, or several kilometers of ventilation shaft, sewer or conduit can be done from a single location, saving the time and effort of moving the equipment. Because of the complexity of the drill head (Unlike a conventional drill, all rotary motion is generated at the Thazer's head unit, rather than being passed down a shaft) the Thazer works poorly as a core drill-then entire drill must be recovered to retrieve a sample. However, sensors from various geological scanning devices may be carried by the Thazer head, and the data passed back to the surface by way of cable. Articulating but non-rotating Teflon coated shafts are placed into the tunnel behind the drill head as it progresses, primarily to keep the tunnel open and prevent the loss of the head. (still, loss of the drill head unit is not infrequent.) THZ series drills do not require a large derrick, and can be set into the ground at angles as shallow as 30 degrees. The main difference in the models is the head diameter- the series number is the diameter, in centimeters, of the tunnel the Thazer creates. Several military organizations have expressed interest in the Thazer system, and the U.S. Army Combat Engineers use a variant for subterranean emplacement and removal of explosives and land mines. Thazer is typically transported on a truck, with additional trucks carrying articulating shaft sections and reels of data/power cables. Power is provided via cable from an external source.

THZ-10

Base system: Weight: 2500 kg, Price: Lv 2,900

100 meters shaft and cable: Weight: 50 Kg, Price: Lv300

Additional head: Weight: 30 kg Price: Lv2,000

THZ-40

Base system: Weight: 4500 kg Price: Lv 9,000

100 meters shaft and cable: Weight:250 Kg, Price: Lv800

Additional head: Weight:250 kg, Price: Lv6,000 Lv

THZ-120

Base System: Weight:11,000 kg Price: Lv45,000

100 meters shaft and cable: Weight:1,250 kg, Price: Lv20000

Additional head: Weight:2,000 kg Price:Lv28000

Inanuk Industrial Group Transportable Saw Mill

During the early phase of Tirane's colonization, a young architect watching the progress at a new colony town being cut from a virgin forest, and thinking of the soon to be built civilian residences, said to one of the engineers: "We'll need some lumber, I think." The engineer, an Irish veteran of many field projects, said "Bejeesus! We're F\$%&!! hip deep in F**&!! Lumber!! What we need is for those S@#&\$@!!'s back home to send us a F*&#&\$!! saw mill!" Five months later a saw mill arrived, containerized and ready to use, from a small industrial firm in northern Canada. IIG has been cranking them out ever since, and shipping them to whatever new worlds had tree-like organisms that could be cut up into useful parts. The mill arrives in 4 truck transportable containers, each weighing 12 tons and measuring 6m x 2.75m x 3m. The units are off loaded, connected, roofing and floor panels extended between them, connected up to a generator, and in about 3 hours, ready to work. A six man crew can turn 16 tons of lumber per shift into useable structural material, or 6 tons into furniture grade wood, or 1 ton into intricately carved woodwork.

Price KLv 90 Another 32 Lv per 8 hour shift (average) is spent in expendable supplies.

Consolidated Masonry Portable Kiln and Brick Extruding Module.

The brick maker's answer to the portable sawmill. Size is similar to the sawmill, but weight is 12 tons on each of two units, and 24 tons on each of two other units. Requires additional purchase of two bulk mixing hoppers for production. Containerized, and generally set up at a useable clay deposit. With a four man crew, the module will churn out about 8,000 brick per shift.

Price: Lv120,000, with another Lv 5 per shift, average, spent in expendable supplies.

Telepresent confined space miniature work unit.

Small bug like robot, controlled via fiber optic line, used for work in small tunnels, ducts, sewer lines, conduits, and other difficult to access areas. Unit is designed to travel through tunnels as small as those produced by the THZ-10, however, the work it can do and the tools it could would be very limited in tunnels of this size. Under the control of a skilled operator the battery powered unit can perform diagnostic duties, sampling, testing, welding, place explosives, or any of a wide variety of tasks. Unit is sold with 250 meters of fiber optic display, and a control console. It can handle tools up to 6 kg in weight, and drag loads of up to 20 kg in a specially designed synthetic "sock", part of the base kit sold with the robot.

Weight: 8 Kg

Price: Lv1,900 Additional 250 m control line 75 K Lv.

Non-Stik

Spray, brush, or roller applied extremely low viscosity substance that produces an almost frictionless surface when it dries, which takes minutes. Generally used in the construction industry to coat the interior of concrete forms, create "slideways" to move material, and to lubricate bearing plates, expansion joints, and other items that have to slide against each other. Also used to coat walls in graffiti-prone environments. Just about the only thing Non-Stik will stick to is its own primer, always sold with the product. 1 liter of primer, followed by 1 liter of Non-Stik, will coat about 10 square meters. Because of its unusually high mischief potential, Non-Stik's manufacturer insists it be sold only to government agencies engineering firms, and licensed contractors.

Price: per 2 Liter unit (1 liter ea. Primer and Non-Stik) Lv5

Price: per 50 Liter Unit (25 Liters each Primer and Non-Stik) Lv100

Structural Resin

A 2 component resin used for filling of holes, adhering construction elements together, and "field forming" of structural pieces. Cured resin has a sectional modulus similar to mild steel, with similar values for tensile strength and compressive strength, but has lower elasticity, and is much lighter. It has been applied to the side of vehicles, often sandwiched under a metal panel, as field expedient armor plate. Due to its high viscosity, it poses no special dangers to shippers.

Price: per 5 Liter unit Lv25

Price: per 150 Liter Unit Lv625