ANTARES D10+ RPG

DRAFT

This is a draft version of the Antares D10+ RPG rules and does not contain all the examples or illustrations we would like. Please read this with that in mind!

EQUIPMENT GUIDE

Ver 0.17 K

A SF Roleplaying Game in the far distant future of the 'Beyond the Gates of Antares' universe

Antares RPG Credits

Authors: Tim Bancroft

Special thanks to: Rick Priestley, David Horobin , Warlord Games for the *Beyond the Gates of Antares* wargame

Principal playtesters & additional contributors: Gergely Gombos, Ed Harrington, Jon Harrington, Nicole Sijnja, Rudi Hein, David Horobin, Adam Murton, Tim Oliver, The Tabletop Warlords

Proof reading and consistency checking: David Horobin, Rosemary Bancroft

Miniature design: Jon Cave, Russ Charles, Wojtek Flis Joey Pruitt, Steve Saleh, Marco Sano, Paul Sawyer, Des Hanley, Kev White, John Wigley

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Antares D10+ RPG Structural Note

To help with downloading and printing rules, we have split the rules, equipment and character generation into separate, smaller documents. This document contains definitions and descriptions of weapons, armour, drones and equipment used in the game. The player and character rules are in *Antares RPG: Player's Guide* and the core game system in the *Antares RPG: Core System Guide*. Extensive background detail can be found in the wargame's document *Antares 2: The Universe* (https://antaresnexus.com/rules/), whilst information on mapping your own gaming region of Antares is in the *Mapping Supplemental*, also available on the Nexus (https://antaresnexus.com/2022/05/14/mapping-antares/). All are available to download for free at antaresnexus.com.

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Change Log

These PDFs are version numbered so players can keep up to date with any releases. Version numbering is in the following format:

<version>.<iteration> <edit>

Where: <version> is '0' for playtest rules, '1' for the first release, and so on; <iteration> is numeric reflecting a major change within that rules release; and <edit> is an alphabetic series (A→Z, AA→ZZ, and so on) that reflects any minor changes or edits within that iteration.

0.17J Post proof-read and release with additional equipment.

0.17 First release in this format. **Exclusions** are currently transports/vehicles, starship guidance & hand-held equipment.

INTRODUCTION

WELCOME TO THE MANY WORLDS OF ANTARES!

This is the Equipment Guide for the *Antares D10+ RPG*, an unofficial system for roleplaying in Rick Priestley and Warlord Games' *Beyond the Gates of Antares* setting. The setting was originally designed for narrative wargames between three major civilisations and a number of lesser factions in conflict around a space-time transfer-hub built by the mysterious Gatebuilders. To our delight, we found that the background is also rich enough to support in-depth roleplaying across a number of factions, species and panhuman morphs.

This rulebook could almost be regarded as a player character (PC) shopping list and catalogue: it contains many of the goodies and items an Antarean adventurer would need to survive when exploring the often hostile reaches of distant worlds – let alone exploring the forbidding and dangerous vacuum of space. Two other RPG rulebooks, the *Antares D10+ RPG Players' Guide* and the *Antares D10+ RPG Core System* provide details on how to create characters using a prior experience mini-game and explain how the system works (task resolution, skills, injury, combat, and so on).

For details on the people and factions of the universe of Antares and the Gatebuilders, see the Antares Nexus at antaresnexus.com. A great deal more information can be found in the wargames rules reference *Antares 2: Guide to the Universe* and, for the game's moderator (we'll refer to them as a GM), information on mapping your own region of Antares is in the *Mapping Supplemental*, also available on the Nexus (https://antaresnexus.com/2022/05/14/mapping-antares/). All these PDFs are downloadable (is that a word?) for free from the Nexus' main rules page: https://antaresnexus.com/rules/.

The *Guide to the Universe* and the *Antares Nexus* provide details on the major civilisations of the Antares universe, namely:

- the **PanHuman Concord**, which is dominated by machine intelligences and post-humans of several types;
- the **Isorian Senatex**, arguably the most technologically advanced civilisation comprising post-humans and a strange, alien species called the Tsan Ra; and
- the **Vorl Ordo**, the Vorl being an advanced, xenophobic, symbiotic, scorpion-like people.

These civilisations deal with the Freeborn traders, the Boromite builders and miners, the warlike Algoryn, the paranoid machine-people termed the Virai, and others, including the pathetic, genetically-engineered (geneered) species called Ghar who have but one aim: to eradicate all of panhumanity.

What this dispersed, four-guide structure means for the Antares' RPG is that we can avoid repeating key details and focus on what matters in each book. It also allows us to produce and update them relatively easily and cheaply (time and money!) without forcing gamers to reprint everything each time. We can't help but provide a lot of additional background

What is the focus of Antares D10+ RPG?

This ruleset is focused on Antarean panhumans and expects a small group of allied characters to have a good reason to be together. Perhaps the PCs are a front line Concord Strike squad, the characters all being Strike troopers; perhaps the campaign or group of scenarios is based around the crew of a Freeborn trader or survey ship as it seeks out new systems and worlds around Antares; or perhaps the PCs are a small band of mercenary specialists dispatched to a crisis zone, perhaps intending to right a wrong they discover in a hostile universe.

Alternatively, and perhaps with more flexibility, the PCs could just be a group of adventurers being ferried between systems and adventures aboard Freeborn ships or great starliners.

To allow flexibility for GMs and to ease how campaigns are run in such a huge universe, the guides focus more on providing characters for a Freeborn-sponsored exploration group; this allows PCs to work together from a wide variety of backgrounds. This book assumes what almost all players want for their characters: a wide variety of equipment that may be difficult to obtain but which enhances their survivability.

But whatever you choose to do, and however you play your game, there is only one wish: have fun!

> **Design Note:** Throughout the rules we add in design notes to explain what we were thinking in the rules or to suggest options or local variants.
>
> This design note is to explain why the *Antares D10+ RPG* system is the way it is. At its core, it is deliberately gritty in combat and richly broad-spectrum in skills. This is because of the nature of the Antares universe, sometimes referred to as a semi-hard, space opera universe, forged from its inception as a gritty wargame. We found that players of the wargame much preferred the grittier combat rules (perhaps similar to other, mainstream RPGs) and also liked the potential detail, character customisation and flavour of a rich and flexible skills system. **That said, there is nothing wrong in reducing the 'grittiness' and running your own style of game with less detail: it's your game and rules support that style of play as well.**

> **Gameplay:** At other times, we'll add hints and tips on gameplay in similar boxes. For example, despite the intentionally 'gritty' system, you can play the game as detail-focused or as loose as you wish. Antares' games are intended for a narrative approach and the skill system allows play to be as detailed or as narrative-driven as players prefer.

> **Disclaimer:** It is worth noting that this is a **draft** version of the Antares D10+ ruleset. The detail contained here has been playtested, but the game never fully reached the light of day. As a result, it *is* unfinished and has a few rough edges. Nonetheless, rather than leave it languishing, we thought it worth releasing for all to enjoy.

to answer some critical questions (such as 'what can fabricators fabricate?'), but for how each panhuman morph and faction might react to another it's the *Guide to the Universe* and the character generation in the *Players' Guide* and its supplements that matters; GMs and players can bask to their heart's content in the rich background and hundreds of thousands of words of background detail already available.

WHAT DO I NEED TO PLAY?

Rather than repeat what has been expressed many times before, we'll assume that you, the reader, understands what a roleplaying game (RPG) actually is and what it involves. We'll also assume you understand the basics of rolling different sided dice (D4, D6, D10, and so on), what PCs and non-player characters (NPCs) are, and the guiding role of a traditional GM.

That said, all you will need to play is largely the same as any other RPG: writing implements, paper, character sheets, a number of D10, only one each of D3, D4, D5, D6, D8 and D12 for damage resolution, and a scenario to play. A wipe-off sheet and pens (or a computerised playing surface) is useful to plot some details of combat – but is by no means vital as narrative works well – and, if you want, Antares miniatures representing the characters and their opponents (see www.skytrex.com).

KEY TERMS

Before we go any further, it's worth going over some of the key terms we'll use throughout the rules. Don't worry if you can't quite get what they're referring to straight away as we'll go into a lot more detail later. For now, it just helps to know they exist.

The **game difficulty** sets just how hard or demanding a scenario or campaign should be for the player characters (PCs). This is reflected in a **target number** (tn), the value a task check (see below) has to reach or exceed. This is normally 11+ for starting and mid-career characters.

Tasks are what a character has to perform to achieve an interim goal such as repairing an engine or shooting an enemy. This is achieved through a **task check**, essentially a roll of a 10-sided dice (D10) plus a number of bonuses. The result is compared against the target number to determine whether the character succeeded or failed at the task. The task check bonuses are derived from the acting character's characteristics, skills, traits and assists.

A **success** is when a PC or NPC attempts a task and achieves a result equal to or above the target number. The task is carried out successfully.

A **critical success** is when a character not only succeeds at a task but also rolls a 10 on the dice. Critical successes bring special results, typically a one step improvement to the task, but might also allow something special, such as in combat.

A **failure** occurs when the task check's D10 plus bonuses sum to less than the target number (normally to 10 or less). An automatic failure also occurs if the D10 roll is a 1, irrespective of bonuses. The task was not achieved, or took longer than normal.

Mishaps occur when the task check dice roll is a 1 and the bonuses would result in a failure: something unfortunate happens during the task. A character with task check bonuses totalling +10 or more can fail a target number of 11+, but will not have a mishap.

Characteristics are the natural capabilities and potential of a character that are broadly comparable with those of other species. They are rated from 1 to 10 (higher in special circumstances) and give a bonus or penalty to completing a task depending on the value: a characteristic value of '5' gives no bonus or penalty, for example, whilst one of 8 gives a +2 bonus.

Characteristic bonuses can vary by task – it need not be tied to a specific skill. For example, a character trying to remember the schematics of an advanced propulsion drive might use their Intellect whilst actually fixing that same drive, but doing so in a clunky spacesuit would require whole-body Agility.

An injury results in damage to a characteristic, temporarily reducing its effectiveness and characteristic bonus. There are five characteristics:

- ◦ **Agility**
- ◦ **Endurance**
- ◦ **Strength**
- ◦ **Intellect**
- ◦ **Empathy.**

Measures are a character's more nebulous attributes, or those geared solely towards game mechanics. Measures cannot be used in task checks. The main measures are:

- ◦ **Social Position –** a character's standing in their society;
- ◦ **Move –** how far a character can travel during a turn;
- ◦ **Dying Track –** on which potentially fatal injuries are tracked.

Skills are what a character has learnt during their life or are those innate capabilities built into a machine. Some complex skills, such as Engineering, must be learnt and cannot be performed until a character has acquired a little knowledge behind the skill domain; others, such as Athletics, come with being born or constructed and can be attempted by anyone – typically just not very well until a character has had more practice or training.

Traits are the attributes unique to a species or which a PC may acquire through heroic gameplay. Not all characters or species have traits. Traits give special bonuses to task checks or allow a character to do something different, such as glide, fly, brachiate or, in the case of NuHu, seamlessly connect to, and interact with, a friendly IMTel (**I**ntegrated **M**achine **InTel**ligence) shard.

Assists are bonuses from task checks that come from other factors such as the IMTel lending a hand, from one character aiding another, or from advanced or special equipment being used. Assists are not always applicable to a task check.

Build Points (BPs) are what are used during character generation. The number of BPs assigned to the campaign governs how strong or experienced each character is before play begins as they can be used to buy special, panhuman morphs or phenotypes, increased characteristics, skills or episodes of prior experience (in the mini-game: see the *Players' Guide*). Leftover BPs can also be used to call in favours from a character's contacts, perhaps to gain specialised or black market equipment.

TECHNOLOGY BACKGROUND

This chapter explains the background to the equipment and technology across Antares, a universe in which adventurous PCs are as likely to come across devolved humans with hatchets and spears as high-tech soldiers with nanotech-enabled combat gear. Whilst panhuman PCs are unlikely to be employed by the most advanced civilisations – the Senatex or Concord – the equipment of even the second most advanced civilisations is powered by endemic nanotechnology.

It's not just the technology that's key: how does anyone purchase anything in a society that is close or post-scarcity? Can anyone ask for anything? And if so, can they do so in a contested frontier where the raw materials might be hard to come by? Whilst most trade is carried out on a bartering system ('15 Ferals for a crate of plasma carbines' OR '10kg of refined lithium in exchange for a new suspensor motor'), other trades are carried out in exchange for information or in payment for favours. Such a basic system cannot cope with all trade combinations, so the Freeborn have developed a Common Exchange Unit, or CEU, which acts much like coinage and money in scarcity-driven civilisations.

There is another factor that we need to consider, and that is the application of sensors and communications: which devices can communicate with each other? What level of technology makes sensing difficult to other sensors. We'll run through some guidance on how the GM might want to deal such technology.

> **Design Note:** Of course, the GM might want to skim over all such differences, assuming the PCs are capable of sorting out all the technology differences themselves.
> Such an approach is perfectly fine!

ANTAREAN TECHNOLOGY

Much of the equipment listed in this guide can only be manufactured and understood when a certain level of technology has been reached. Furthermore, someone raised in the 19th century would have no idea how to operate equipment reliant on technology a millennia ahead of them. To simplify this, we group technology into a number of broad bands called general technology levels (GTLs).

Before going into the technology groupings, we'll start with a quick note on Antarean nanotechnology: the nanospore and the nanosphere that arises from that.

Nanosphere and Nanospore

Much of the advanced Antarean technology is based around the manipulation and usage of nanospore, a cloud of nano-scale, relatively simple devices that are combined to produce a wide range of effects. This cloud is a nanosphere.

Some nanospheres are fairly unintelligent, needing to be controlled from an outside source, but those from the PanHuman Concord and Isorian Senatex appear to be sentient as they provide a backbone for countless machine intelligences

(the IMTel). Nanospheres used by the Vorl and Freeborn are at a similarly advanced level but have much lower levels of machine intelligence integration. The nanosphere of the Algoryn is slightly lower, again, as it has been deliberately designed to have executive functions bypassed by a living intelligence.

IMTel nanospore automatically carries out tasks in anticipation of what a citizen might need; other nanospore must be commanded to do something. Nonetheless, the nanospheres are each highly potent when compared with the non-nanosphere societies.

General Technology Levels

The levels of technology around Antares are classified by the Isorians into a number of broad bands that describe its capability. Unsurprisingly, the basis is on nanosphere and some of the classifications can even sound pejorative to a non-Isorian. For ease of recording, these are shortened into technology codes.

Each general type of technology is given a single-character code, such as N (nanosphere) or D (digital).

For further specialisation or refinement, after this single digit comes a digit that defines the level of sophistication or stage of development within that technology - the GTL **band**. This is normally between 0 and 3, with 0 being low, 3 being high and very occasionally '4' being used; for example, N3 is more advanced than N1. The letter 'X' is used to indicate a very advanced but fundamentally unknowable implementation of that technology, whilst a 'U' means a completely unknown type of implementation of that specific technology type.

Finally a suffix is used to determine the faction or specific implementation of that technology (origin is explained in the *Core System Guide* under skills). Such faction codes could be 'V' for Freeborn (*vardosi*) or 'PHC' for PanHuman Concord and are explained overleaf.

> *For example:* IPHC *or* N4PHC *refers to the IMTel implementation of the nanosphere in the PanHuman Concord.*

This can produce a hugely detailed array of classifications, but the GTLs and the most common suffixes to convert them to faction technology levels are as follows.

IMTel (I) indicates an advanced nanosphere with an advisory and guidance capability distributed amongst numerous databanks, machine intelligences and individuals. There are only three known civilisations with such technology: the Senatex, the Concord and the Tsan Kiri (now extinct). Whilst they are now totally incompatible, the Senatex and Concord used to use the same underlying technology and approaches. Much as the Concord and Senatex would hate to admit it, the Algoryn and Freeborn just regard the (I) classification as just a specific implementation of an advanced nanosphere.

Origin codes are key for IMTel societies as the nanospheres are mutually incompatible, as in IIS (Senatex), IPHC (PanHuman Concord) or ITK (for the Tsan Kiri – not in use nowadays) – or just N4.

Nanosphere (N) indicates where an extensive nanosphere saturates a planet or civilisation and provides a backbone for communication, monitoring, sensors, power distribution, and data access and a broadly distributed, but not guiding, intelligence. Machine intelligences are the equal to panhuman general intelligence and use the nanosphere for communication and integration.

The nanosphere (N) technology classification is used for the Advanced Spill worlds, Freeborn, Algoryn and Boromites. A suffix is added to indicate the technological sophistication and origin of the nanosphere, such as: N1B for Boromite, N2AP for the Algoryn Prosperate, N3V for Freeborn Vardos, N2AS for Advanced Spill and N3VO for Vorl Ordo. N0RS represents a burgeoning or basic nanosphere in an advanced Retrograde Spill world.

Digital (D) indicates equipment from, perhaps, Earth's 21st century as well as electricity-based devices and power sources from Earth's early- or mid- 20th century onward. The most frequent factions using such technology are Retrograde Spill .

As in nanosphere levels, a numeric is used to indicate how far advanced the civilisation is along applying such technology. For example: D0 would indicate the extensive use of electricity; D1 the widespread use of computers and algorithms (perhaps current Earth would just be in this category); D2 a world that has good inter-system spaceflight capability and machine intelligences; and D3 an advanced digital technology belonging to a small interstellar civilisation with interfaces that could tolerate a nanosphere. The more advanced Retrograde Spill worlds are often D2 or D3 whilst the unique technology of the Ghar Empire is DXGE – indicating that some degree of weirdly advanced digitisation is present.

The **Mechanised** (M) or machined-based GTL indicates a developing industrialised or machine-dependent society, most likely with steam and gunpowder weapons. This is potentially a possible origin for Feral or stock human characters. M1 would be those societies at the dawn of the industrial revolution whereas M3 might indicate those on the cusp of digitisation with, perhaps, valve-based, rudimentary calculating machines.

The **Primitive** or **Pre-Industrial** (P) designation refers to all pre-industrial societies (in the eyes of the IMTel) from Stone to Iron Age. It occasionally has a suffix indicating the technology expected, such as P0 for Stone Age, P1 for Bronze Age development, P2 for Iron Age manipulation, and P3 later Iron Age up to medieval times. Even P3 is still pre-industrial and largely non-mechanised, though such technology can, at times be intricate and highly functional.

A **Gatebuilder** (GX, GU) GTL indicates a planet or system dominated by Gatebuilder technology which, at present, only applies to Xilos. Gatebuilder technology is often assigned the U (unknown) or X (highly advanced but unknowable) suffixes as it is, fundamentally, an advanced mystery.

Unable to be assessed/Unknown (U) indicates a technology that cannot be assessed and is, therefore, also at an unknown stage of development. There may or may not be any visible signs of technology but, for whatever reason, the exact nature or even its existence could not be determined. Most ancient artefacts from before human times have a (UU) technology classification.

Technology Suffix

In addition to the digits showing the general development, there are two suffixes that are used when in doubt.

Advanced (X) indicates a highly advanced technology of the specified type, such as NX for a nanosphere beyond that of an IMTel, but which cannot be fully assessed. The Shamasai Shard and the bionanospore on the planet Shamasai is one example of an NX classification. Virai are given the DX code as their technology is suspected to be advanced digital, non-nanosphere technology possibly based on crystal or even quantum-scale memory devices with an advanced machine intelligence. Almost all X technology devices are considered dangerous.

Unknown (U, sometimes Z) is a suffix only given to a technology whose basic principles are possibly known but nothing else is knowable beyond that. Often worlds with extensive numbers of post-Gatebuilder artefacts are given the U suffix as little is known about their operation.

Combination Classification

In addition to the above, there are a few terms used to describe planetary civilisations.

Colony: When seen in planet or system definition, a '+<tech code>' construct following a lower-technology code indicates the presence of an colony, survey, inculturation station or similar presence from one of the advanced civilisations.

> *For example,* M+IPHC *would indicate a world that is largely industrialised but which also has a small colony or presence from the PanHuman Concord. The nature of the civilisation's presence would be in an expanded notes field in the database entry, such as:*
> M+IPHC notes(CCNS presence)

Technology Faction or Origin

The origin code is a formal way of reflecting a technology Origin for a device or technology (see the *Core System* rulebook). The origin codes are used as suffixes to a GTL code to create a Faction Technology Level (FTL). The most common origin or codes used are as follows:

Origin Code	Origin
AP	Algoryn Prosperate, as in N2AP
AS	Advanced Spill, as in N2AS
B	Boromite, as in N1B
GE	Ghar Empire (typically DXGE)
IS	Senatex, as in IIS
PHC	PanHuman Concord, as in IPHC
RS	Retrograde Spill, as in D3RS or N0RS
TK	Tsan Kiri (no longer assigned)
V	Freeborn (vardosi)
VO	Vorl Ordo

Faction/General Technology Levels

Rather than leave the explanations in text, we've pulled the main FTLs and GTLs together and grouped them into their relative levels of sophistication. This also provides an easy reference for the technology 'boundaries' which could be used to apply origin penalties to task checks. Despite the apparent detail, the GTLs have been deliberately designed to allow as fine- or broad- brush an approach as is required.

Faction Technology Levels (FTLs)

Boundary	Bands/ Tech Code	Description
Gatebuilder	GX, GU	Gatebuilder, currently Xilos only
Nanosphere	NX	Shamasai Shard (NX-Shamasai), Chryseis Shard (NX-Chryseis)
Nanosphere	IIS/N4IS	IMTel – Isorian Senatex
	IPHC/N4PHC	IMTel – PanHuman Concord
	N3V	Freeborn nanosphere, no IMTel, suffused with IMTel scrubbers
	N3VO	Vorl Ordo, highly advanced nanosphere but no IMTel
	N2AP	Algoryn Prosperate core world nanosphere, limited M/I
	N2AS	Advanced Spill, machine intelligences
	N1B	Boromite Nanosphere – sparse by implication
	N0RS	Retrograde Spill with basic Nanosphere
Digital	DXGE	Ghar Empire
	DXVI	Virai
	D3RS	D2-class Retrograde Spill with interstellar spaceflight; possibly some 5th/6th age reconnected systems
	D2RS	As D1 with machine intelligence and extensive intra-system spaceflight (Retrograde Spill)
	D1RS	Retrograde Spill: Widespread use of electricity, computers and advanced algorithms
	D0F	Very advanced Feral: Use of electricity for power and communications
Mechanised	M0F-M3F	Machine-dependent and industrialised. Typically advanced 'feral' societies or (often) stock human and classed as Feral
Pre-Industrial	P3F	Feral, pre-industrial with extensive alloy and iron usage
	P2F	Iron Age equivalent
	P1F	Bronze Age equivalent
	P0F	Stone Age
Suffix Type	Tech Suffix	Description
Level	0-4	Approximate relative level of technology
Advanced/Variable	X	Roughly known technology but variable or unexpected in implementation
Unknown	U	Unknowable or unexpected technology variation
Colony	*An*+<Code>	A suffix added to show the small presence of another technology

Gameplay: For a broad-brush game, the higher-level GTLs (nanosphere/N, digital/D, etc) can be used as origins so a character from any nanosphere-using planet would be happy with using nanosphere based technology.

If players wish to be more specific, it might be worth considering that an engineer or technician can probably cope with technology within two GTL bands of their own within the same GTL boundary and perhaps suffer a -1 task check DM beyond that. The same technician trying to understand technology *across* a boundary should require at least a -2 penalty to such technology-based task checks, with bands deeper into that boundary invoking further penalties (as the GM and players see fit).

For example, a Ghar technician would probably have little bother working with a Retrograde Spill world's D3RS *systems (-1 task check DM) but would really struggle with the nanosphere of a Retrograde Spill world (*N0RS*) over the other side of technology boundary, so would suffer a -2 origin penalty, at least.*

UNITS OF EXCHANGE

Antares is an amazing universe, with two great panhuman powers that exist for the perfection and delight of panhuman existence. All the core systems and many of the peripheral systems in these civilisations live in a society that is as near to post-scarcity as can be achieved. In such societies, all physical needs are fulfilled, the focus is on personal development and governance is via benevolent machine-intelligences and NuHu who are elevated to positions of prominence simply through their adherence to a benevolent creed.

It's a circular situation: only those who believe in and support the benevolence of the IMTel are encouraged into positions of influence (never power). And once there, they guide the IMTel in its dedication to the protection, furtherance and enrichment of the societies within the IMTel.

Stepping Away from Post-Scarcity

Around the core, advanced IMTel systems are others that are being brought into the embrace of the IMTels. They may come from a society that was almost post-scarcity, or may have come from societies that returned to a more primitive society during the collapse. Such retrograde development often happens in systems that are resource-poor and which previously relied on vital supplies being ferried in from surrounding systems.

The difference between the needs of the scarcity based systems and the post-scarcity is sometimes stark. The IMTel can exist in both, but tries to maximise the satisfaction and well-being of all. Which means that the leaders of the feudal or scarcity based civilisations find their authority being undermined and the scarcity on which their riches are based is eroded.

Somehow, the IMTel has to bridge the gap. At times it tries to encourage trade with supposedly licensed Freeborn ships as well as its own merchant vessels. But the Freeborn expect something in return and whilst the IMTel nations can exchange favours, or design patterns or technology to the Freeborn in exchange for transportation or goods, it is very rare that the more primitive, Retrograde Spill systems and fiefdoms have much to offer the independent traders, let alone the Freeborn.

The Media of Exchange

When carrying out such trade, sometimes the Freeborn will accept local artefacts and art – interest in primitive cultures is strong amongst the more advanced nations and museums and universities are always willing to trade knowledge and information. At other times, local luxuries are useful trade items and, occasionally, a native plant or animal might have some properties that are of interest to the more advanced nations. Even 'feral' warriors are sometimes used – the locals providing warriors willing to act as mercenaries in exchange for the enrichment of their homes and families.

And need it be said that smuggling based on barter is also commonplace, especially where the goods that the Freeborn can supply are not those that the growing, local IMTel would like to see (armaments, much of the time).

The Freeborn are often happy to barter for the goods they can manufacture or supply, exchanging them for such on-world goods that might be of interest elsewhere. At other times, the trade imbalance is such that there is nothing of practical interest, so one of the IMTels has to step in and provide some means of making the exchange that makes sense to the locals. This gives rise to a Common Exchange Unit (CEU).

The Common Exchange Unit

Instead of bartering situations where one side is at a significant disadvantage, the Common Exchange Unit (CEU) was born, for which we use the symbol ₵.

In return for a guarantee of stability and rate of exchange within the IMTels, the Freeborn put a 'fair' price on much of their goods. Whilst they still barter with many worlds and systems, especially where the world has something of interest, they can equally ask for the transfer of CEUs which they know will be honoured by an IMTel nation when the Freeborn wish to obtain goods, information, designs or knowledge from the IMTel.

The IMTels acceptance and encouragement of the CEU meant its usage spread beyond the purely borderline IMTel worlds. As a common currency, it is now in use in many of the Spill nations and even the Algoryn Prosperate is willing to transact using the CEU, actively keeping the exchange rate from the local currencies constant to prevent internal, economic destabilisation.

Within the IMTel nations and between IMTel citizens, however, the CEU is largely pointless: with fabricators able to produce almost anything from the right raw materials, the only thing of value becomes those raw materials that are not easily obtainable – one reason why the Boromites flourish.

Information as Currency

With the only limit on goods being raw materials, trade at the high end of Antarean technological civilisations is primarily in the exotic, or information or knowledge. At this level the Boromites provide the most rare minerals and metals and the Freeborn provide information, IMTel updates, and interesting artefacts or luxury materials – as well as transport for the more adventurous IMTel citizen. In addition to the Concord's own ships carrying IMTel updates, the Freeborn are often paid to carry IMTel propagation transmitters that allow the IMTel to propagate its updates to rarely-visited systems, those off the beaten path or amongst voids.

Such trade even goes on between the Algoryn and the Freeborn and Boromites, though the Freeborn are more likely to provide lower-level goods transport for when the shipping lines of the Algoryn member systems cannot provide capacity.

Within the Prosperate, Determinate and the Spill – and outside the IMTels' influence – the Freeborn and Boromites provide other goods, not just rare metals, luxuries and off-world high technology items, but banned goods and materials. The Freeborn provide the shipping and act as the main transport for smuggling operations, whilst the Boromites provide the local crime lords with a brokerage service – after all, the Boromites tend to stay in one place for a while whilst they work whatever claims they have established and refine the materials they have unearthed. Locals may provide a reliable shipping service to a few, outlying worlds but for high-end goods, artefacts, technology and raw materials, the Freeborn and their Boromite allies cannot be beaten!

Barter

Away from the IMTels, barter is largely the order of the day, with information, artefacts, rare raw materials and hi-tech components being valuable commodities. Where there is a mismatch, the CEU or ₵ comes into play – perhaps later to be exchanged with an IMTel for something of use to the Boromites or Freeborn.

Despite this, there is one more medium through which trade is performed, one built on relationships and 'favours owed'.

Favours & Build Points

Favour are an integral part of the non-IMTel trading system. A Freeborn might 'sell' a newly manufactured component to a stranded Algoryn ship in exchange for a future service – a favour. Such favours are logged as carefully as any financial transaction, and can even be exchanged between Freeborn domas and, occasionally, between each vardos. Such favours have become firm currency, those accepting them wary of reneging on a transaction that might see them blacklisted by all the Freeborn houses.

Within the game, we give an approximate ₵ cost for many items and PCs can accumulate ₵ as rewards for services rendered. However, other personal services, training, augments and items are more easily available through favours which we abstract through Build Points (BPs).

Whilst PCs have Build Points left over from character build, mission reward should also grant one or two BPs to each PC. These BPs can then be exchanged for augments and training via one of the contacts known by a player character.

> **Gameplay:** Whether or not the GM and players wish to roleplay such exchanges is up to the detail wished for in the campaign, but often a player saying 'I want x for my PC via Contact Y' (or via another PCs Contact) is more than sufficient – all PCs have to do is spend time travelling to where the favour can be granted and then receiving the result (training, augment or whatever).
>
> Of course, PC traders and Factors bargaining for better prices or favours for their goods is all part of the game!

COMMUNICATION & SENSORS

The advanced Antarean use a wide range of communication methods, from sonar to laser, maser, quantum communication, microwave, radio (if they have to) and both shorter and longer wavelengths beyond the visible EM spectrum. Encryption is widespread, in all but deliberately open communications and system warnings.

All types of communication suffer from the same issue, which is the speed of light (FtL = Faster than Light). Even the technology we refer to as advanced quantum entanglement deteriorates with use, has minimal transmission bandwidth and collapses when taken through an Antares gate. Moreover, other FtL communication methods are all faced with the same issue: Antares is a portal through time and space. This means that messages broadcast in one system may not be picked up for years, perhaps millennia.

Isorian scientists are also becoming concerned that attempts to communicate in real-space using either FtL or exotic means of communication (such as chronophasic devices) now runs the risk of destroying the time-line on which Antarean physics depends. The Isorian experiments with chronophasic devices in previous ages and around Xilos are believed to be the cause of Antarean collapses – and the Isorians have no wish to be isolated for the thousands of years they were cut off after the 6th Age.

Experiments have tried using transmat technology for communication. All these have revealed is that a transmitter can be sent through a transmat to transmit or receive but must then be recalled through the transmat wormhole to have the received messages decoded. Whilst cumbersome, it is nevertheless used by orbiting ships, combat satellites and rear echelon units behind or over planetary battlegrounds to have secure communications with front-line units.

Communication Ranges

Unsurprisingly, the ranges of Antares transceivers depends on the technology. Whilst shipboard sensors and antenna are extremely sensitive, allowing for communication with an inner planet from around 40SAU (but suffering hours of message lag), embedded communication units are typically limited to 5-10km unless boosted by repeaters or battlefield armour to low orbit at around 150km – often enough to be picked up by a combat sat or a commsat (communications satellite). Larger communication arrays, of course, have significantly increased ranges of several thousand kilometres to ranges matching that of the starships themselves.

All such communication is limited by the medium through which the transmission occurred as well as by the speed of light; reply/respond times for communications with an inner planet from the gate horizon can take 10-12 hours.

Shipboard Sensors

Shipboard sensor sensitivity is such that unshielded fission and fusion sources could be identified from 10SAU (standard astronomical units) away, whilst EM transmissions can be sensed from as far out as most gate horizons (which are only 2-4 light-hours away from the primary, anyway). For more detail, shipboard sensors would need to be much closer than a SAU to each object, with 150,000km needed for good data on shipboard armaments or small fusion sources and as close as 50,000km to pick up infantry and battlefield weapons.

Ships can be detected by their gravitational signatures from way across a system and even ships with lesser drives could be identified from across a system depending on the originating ships and drive size and time taken to scan for them. The limits on such sensing also being dependent on orbital object positioning and the amount of chatter in the system.

TERMINOLOGY AND PLAY

In addition to the above, there are a number of general limitations that it might help prospective players and GMs to be aware of, and we include them here for reference. Some are more closely tied to the rules, but all provide a level of detail that affect play.

The Limit of Connectability

It has been mentioned already that Antareans are somewhat suspicious of many brain implants. This is primarily due to their being a prime target for hacking attempts – indeed, many otherwise highly sophisticated implants can be susceptible to battlefield electronic or nanosphere warfare (see the *Augments* chapter, below) or can be made to malfunction in a scramble field.

As a result, most Antareans will use passive implants which are limited to specific functions. An example of these are the environmental augments which alter the hosts DNA or physiology or which generate nanospore that allows the host to survive a particularly dangerous climate. Other examples are the reference augments – whilst apparently a cognitive boost, they are really a massive, fairly static knowledgebase that can only be update at the user's request and by the nanosphere that created it: all the user does is pull information from it. Prosthetic limbs have intelligence enough to react to the user's nerve input but those for use on a battlefield will not have additional, complex functionality that requires, for example, an artificial intelligence that can be exploited by an enemy.

The *Augments & Implants* chapter describes the processes around implant vulnerability.

Damage Points (Rules note)

Items of equipment like drones, buddies and even support weapons are often shot at by opponents. Instead of a combination of Ag+St+En and the Damage Track to take injuries, equipment has a number of Damage Points (DP).

Whilst a character can become unconscious, an item of equipment is unusable when its DP total reaches zero. If a piece of equipment ever takes twice the DP than it can take, it is totally destroyed.

Some items, such as the larger drones and vehicles, take damage to specific areas as they degrade. In this case, the DP is given in increments, such as '10:10:10', the DP at each increment triggering a roll on the relevant damage table (see the rule in the *Core System* document).

Object/Equipment Protection

Equipment often has an armour value reflecting its ability to ignore a degree of incoming damage before it is applied to its damage track. Equipment protection and that of other solid objects is stated the same as for characters and their armour, so has one or more of the following forms of protection:

Structural or intrinsic, which refers to the innate ability of an object to resist damage;

Shell, which is surface plating or metal around a device or person;

Field, which refers to the energy fields projected by most Antarean armour shield generators, whether primitive, reflex or sink-mass absorption fields and hyperlight fields. Armour fields have to be turned on to be effective. The field armours act in a hierarchy, with hyperlight armour fields absorbing damage first, then reflex armour fields absorbing damage, then wrap-around armour fields such as Ghar electro-magnetic fields absorbing damage last.

> **Gameplay:** We recommend GMs assume armour fields are automatically turned on unless the PC's player says otherwise. The IMTel and most combat shards automatically turn on the full complement of fields available in an effort to ensure their long-term well-being!

All three types of armour reduce an incoming shot's damage, which is also expressed as a Strike Value, or SV: in all cases an object's protection against the damage caused (SV) of an incoming hit is an SV equal to the sum of:

Structural + Shell + Field armour

Armour fields are also attacked by nearby counter-nanosphere devices like scrambler munitions. When a scrambler is in place within 3m of an armour field, the field is suppressed and no longer functions.

> *A suit of armour with Shell 8, for example, reduces an incoming shot's effectiveness by 8SV; a bulkhead or blast door with Structural 40 reduces all incoming damage by 40SV; and a reflex Field +10 adds to the underlying Shell protection and reduces incoming damage by 10SV.*

Suspensors/Manipulators

Antares equipment often has its own suspensor field that keeps it aloft, away from the ground and which provides it with motive power. Suspensor fields are not anti-gravity drives, nor do they allow hi-altitude flying: the highest its suspensor field can life an object from the ground is 5m, though it may have a lower ceiling – the exact distance stated in its description if necessary.

Like suspensor fields, manipulator fields are formed from nanospore exuded by the device but allow fine-grained control or apparent movement of objects. Not all devices have manipulator fields, but those that do have such information noted in their description. A manipulator field may have a St and an Ag: if none is stated, assume an Ag of 10 and a St of 2 – enough to pick up a light object but little else.

Imago/Holocontrol

These are grouped together as they operate on very similar principles. An imago is a semi-solid display formed from the nanospore in a given area. It is used in holodisplays – where the nanospore are focused on reproducing movement and sound (and sometimes other senses) – and in holocontrols.

Holoconsoles use holodisplays and holocontrols –projected and adaptive displays that react to a user's manipulation of them. That manipulation can sometimes be via voice, but humans are known to want to maximise their control and use a mix of fingers, hands as well as vocal commands. In the IMTel, an experienced user's use of a holodisplay seems to suggest a near telepathic communication with the device interface as the IMTel predicts much of what the user is likely to want to do next.

Outside the IMTel, a holodisplay adapts to the user's requirements and preferences, but is much more static in its responsiveness to the user's commands.

Whilst the holodisplay and holocontrols are parts of a holoconsole, imagos are built from raw nanospore. They are most often used by NuHu to communicate or demonstrate a particular image, and very occasionally by the IMTel itself to make a particular point in response to a question, but a gifted individual can manipulate the local nanosphere to form such an image.

Many devices, such as weapons, have built-in holodisplays but may not have holocontrols. Instead, they have adaptive pads (similar to touchscreens), multi-function buttons and easily-accessible and adaptable switches that might be seen as being controls by anyone familiar with Antarean technology.

More importantly, many Antarean devices talk to each other and, especially weapons, will talk to an individual's battlefield armour. Rather than aiming down the barrel of a gun, for example, an Antarean soldier will see an image of their target and where the weapon is pointing projected onto their helmet or battlefield headset.

Resharding/Desharding

Given the communications background above, it will hardly come as a surprise that captured items often need desharding and resharding. Desharding is the process of removing the affinity of an object to its original nanosphere whilst resharding is the reassignment of that item's affinity to another nanosphere or to any suitable nanosphere. The process of desharding and resharding may sometimes remove functionality provided by the original nanosphere, especially with IMTel based equipment.

> *For example, a Concord trooper's armour hyperlight provides adaptive protection based on intelligence relying on the wearer's IMTel nanosphere. When resharded, that intelligence is removed and with it the adaptive functionality.*

Most weaponry of the major nations – that of N2AS or greater – is also tied to its native nanosphere, even that of the Algoryn. This is partly to ensure better targeting and friend-and-foe identification, and certainly limits loss, prevents theft and provides better inventory control, but is also intended to confound opponents trying to scavenge and reuse that item or weaponry. Of course, fairly inert items cannot be sharded, but even items such as intelligent grenades need to be resharded before use.

Freeborn transmats that connect to non-Freeborn transmats have nanosphere-stripping technology built in and always strip visitors of extraneous nanosphere. On board their specialist diplomatic vessels, they set up barriers to prevent nanosphere spreading beyond a consulate or embassy and only allow a sparse non-Freeborn nanosphere within such areas. This prevents an IMTel nation from insinuating itself.

Whilst all nanosphere-using nations have nanosphere-free prison cells, the Freeborn excel at the construction and use of such isolation chambers. Within such cells, the captive cannot call upon their nanosphere – other than the nanites already present in their cells – and are truly isolated from any other nanosphere and from the outside world.

WEAPONS

This section contains specifications and descriptions of the most common weapons in the Antarean universe. There are many more, of course, but these are those that are most likely to be encountered – or obtained – by PCs.

THE WEAPON STAT LINE

The *Core System Guide* has presented a summary of weapon stat lines to help in understanding the combat rules. The information here extends that basic summary.

Weapon Stats: General

In the sample weapon stat lines (below), we can see that all weapons have a name, some have a **mode** of operation such as single-shot (SS) or rapid-fire (RF), then all have a number of **shots** associated with that mode. Continuing along the stat line, we have a **strike value** (SV – the damage a hit inflicts), a minimum **Ag** and minimum **St** needed to use the weapon, then a number of **range bands** showing the distances at which a weapon may be used – range penalties are incurred at different ranges for different weapons. Finally, any **special attributes** the weapon has are stated.

Each weapon is normally presented in a block that indicates the appropriate skill to be used when firing such weapons, such as Firearm.Projectile, Firearm.Energy or Melee.Primitive. Unless they are particularly exotic, primitive weapons normally use the Melee.Primitive skill, even for ranged attacks.

Both melee and ranged weapons have largely the same stats, the only major difference being in the number of shots or attacks and the declaration of, and penalties, applied to range. The ranged weapons' 'Shots' becomes '**Number of attacks**' (**Att**) and the ranges become one, with either '**Reach**' being stated for weapons that can engage enemies at a distance so might confer an advantage, or '**Contact**' for weapons which are only useful when close-in.

We'll go through each stat in a bit more detail.

Modes, Shots and Attacks

All weapons have a number of shots or attacks, normally one. 'Shots' is used for Ranged Weapons whilst 'Attacks', or 'Att', is used in hand-to-hand or for short-ranged, primitive weapons. Both indicate the maximum number of rolls to hit an attacker may make when making an attack with that weapon in that mode: any number of rolls to hit up to the maximum can be made but all must be rolled for at the same time.

For ranged weapons, the 'shots' value is not a direct count of the number of rounds a ranged weapon fires down-range, but a measure of the number of useful shots it can accurately place in that area. In hand-to-hand, 'Att' is a measure of how many potential multiples of damage the weapon may inflict.

> *For example, a mag rifle's stat line shows only a single shot; however, depending on the technology used in the mag rifle, that shot may be a short stream of lighter-weight projectiles intended to first penetrate armour and subsequently cause damage, or may be a single, heavy slug that ends up being just as effective when it hits.*

A weapons mode reflects the usage it is being put to, or one of a number of ways it can be used. A weapon that has multiple shots shoots either in **rapid fire** (RF) mode, in which many shots are counted per pull of the trigger, or in **single shot** (SS) mode. Other modes are available, but when a weapon has multiple shots it can always be used in single shot mode for greater accuracy and forego the rapid fire penalty.

The micro-X launcher illustrates the **DF** (direct fire) mode as opposed to **OH** (overhead). OH modes have a 'Min Rg' attribute stating the minimum range at which they can be used.

Switching between modes is a **trivial** action (see 'Actions' in the *Core System Guide*), merely requiring the shooter to declare which mode they are using: if no mode is stated, then the first mode in a list is used, or RF for multi-shot weapons.

> *For example, below the Mag Rifle has one Shot whereas the Mag Carbine is a multi-shot weapon (Shots 2). However, the carbine has different damage in RF and SS mode, primarily due to multiple slivers still being fired in SS mode but at a single target.*

For weapons capable of being used in hand-to-hand combat, a '**H2H**' mode is listed. This often has different damage and minimum St and Ag for ranged attacks.

Example Ranged Weapon Definitions

Weapon	Mode	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
						-----	Range	-----			
Mag Rifle		1	1D10+6	1	4	5/-1	20/+0	40/-1	80/-3	400/-5	–
Mag Carbine	RF	2	1D10	2	3	5/+1	20/+0	30/-2	50/-4	100/-6	–
	SS	1	1D10+3	1	3	5/+0	20/+0	30/-1	50/-3	100/-6	–
Compression Carbine		1	Var	3	2	5/+0	30/+0	50/-1	70/-3	200/-5	Ignore Soft Cover
Variable SV:							3D10+5	3D10	2D10	1D10+5	1D10
Ghar Lugger Gun	RF	2	1D8	2	1	5/+1	20/+0	30/-3	50/-5	70/-6	No Shard
	SS	1	1D10	1	1	5/+0	20/+0	30/-2	50/-4	80/-6	No Shard
Micro-X launchers	DF	1	1D8+5	3	4	5/-1	20/+0	40/-1	60/-3	100/-5	–
	OH	1	1D8+2	3	3	–	20/+0	60/-1	120/-3	200/-5	Min Rg 5; Sphere 3

Strike Value (SV)

Each weapon also inflicts damage when it hits, the amount of damage measured by its Strike Value (SV). This is normally a number of dice and a fixed addition. When a shot or strike hits, roll the number and type of dice indicated, sum the total and add the fixed amount to calculate the final damage (SV).

> *In the example, the Mag Rifle has one shot with SV 1D10+6 damage, and the Mag Carbine has different SV in RF and SS mode, primarily due to multiple slivers still being fired in SS mode but at a single target.*

A target's armour may absorb some or all of the SV inflicted by **each** successful shot or attack, the remainder going through to inflict physical characteristic damage on the target. On most weapons the damage is constant at any range, but weapons such as the advanced compression weapons have an SV that varies by range band - referred to as *Variable SV* (in italics).

> *In the example, the compression carbine entry has only a single mode but takes two lines as the first shows the range bands, as normal, whilst the second shows the SV inflicted at that range band.*

As well as SV damage, some weapons may have special effects – such as Ghar disruptor shells which may cause additional damage such as radiation exposure. These are listed in the 'Special Attributes' column.

Minimum Ag and St

The Ag and St columns show the minimum current characteristic score for Ag and St needed to use the weapon. If the shooter does not have the minimum, then the weapon cannot be used in that mode – or if only one mode, at all!

A ranged weapon on a stand or securely braced on an object may be used by someone with a minimum St of 1.

> **Gameplay:** There is nothing wrong with ignoring Ag and St requirements if it suits your group's style of play.

Weapon Ranges

We make a distinction between the ranges at which a shooting or throwing weapon can be used, and the ranges at which a melee weapon is most effective.

Weapons which have both ranged *and* hand-to-hand capabilities have the two entries placed on different lines and have the hand-to-hand mode 'H2H'. Primitive weapons, the default is 'H2H' if no mode is stated.

Ranged Weapon Ranges

All ranged weapons have five range bands:

Point Blank (PB), where the weapon probably does the most damage but may struggle to be wielded, depending on its bulkiness;

Effective (Effv), at which range they typically provide the most impact and are the most accurate;

Long (Lng), at which range the weapons are still useful;

Extreme (Ext), at which range accuracy begins to drop off and, for some, even damage can deteriorate; and

Max: for all weapons there is a maximum range, beyond which they are ineffective.

> **Design Note:** The ranges used in Antares RPG are longer than might be expected by players of the tabletop wargame, but are still shorter than might be expected in real life. If more 'real' ranges are required, multiply all ranges bar point blank by four (so the mag rifle would have a maximum range of 1600 metres/ground units).

Melee Weapon Ranges

Melee assumes both participants are trying to gain the advantage and put their weapon where it can be of most use. Rather than have the ranged weapon ranges and force characters to move back and forth all the time, melee weapons have two ranges: **Contact** or **Reach**.

Contact weapons can only be used effectively in H2H at close range, that is when the characters are in contact or 1m apart (closer distances are more akin to a ongoing grapple).

Reach weapons can be used perhaps up to 2m away or perhaps slightly further. The principle advantage of wielding a Reach weapon is that it can give a first strike 'advantage' in melee.

WEAPON SPECIAL ATTRIBUTES

Weapons may have one or more special attributes that indicate the type of damage they inflict or how they are used.

> **Gameplay:** Though they may seem daunting at first glance, many special attributes only apply in highly specific situations, so can largely be ignored: we've just tried to model as wide a range of weapons as possible to illustrate their capabilities. However, if the level of detail is too high for the narrative style of play your group prefers, *don't use those that don't really matter to your group.* For example, you might drop the St bonuses (+/-St), Fade, Shard, Unbalance, Reload or the Arc of fire attributes.

Example Hand-to-Hand Weapon Definitions

Weapon	Mode	Shots /Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special; Skill
Spear	*H2H*	1	1D5+1	1	2	Reach	–	–	–	–	+St; Melee.Primitive
	Thrown	1	1D5	1	2	5/+1	10/+0	20/-4	30/-6	–	Min Rg 3; +St; Melee.Primitive
Long Spear		1	1D5+2	1	3	Reach	–	–	–	–	+St; Melee.Primitive
Javelin	*Thrown*	1	1D5	2	1	2-5/+0	10/+0	20/-2	30/-4	40/-6	Min Rg 2; +St; Melee.Primitive
	H2H	1	1D5	2	1	Contact	–	–	–	–	+St; Melee.Primitive
Fist		1	1D4	1	1	Contact	–	–	–	–	±St; Melee.Unarmed
Shock Lance	*RF*	2	1D10+2	3	5	5/+1	20/+0	30/-1	40/-4	60/-6	Min Rg 3; Firearm.Energy
	SS	1	2D10+5	3	4	5/-1	20/+0	40/-1	60/-3	100/-5	Min Rg 3; Firearm.Energy
	H2H	1	2D10+5	3	3	Reach	–	–	–	–	+St; Melee.Tools

+St / ±St / ×St

These attributes indicate that the character's current St bonus affects weapon damage.

- +St indicates that the character's current St bonus should be added to the weapon damage, if it is positive.
- ±St indicates that the attacker's current St bonus should be added whether it is positive **or** negative to reflect the weakened blows of an injured character.
- ×2St indicates that twice the wielder's St bonus should be added to the damage, if the bonus is positive.

Affixed

This means the weapon must be mounted on a platform, tripod or other support. Ghar battlesuit weapons with this attribute are Affixed to a battlesuit's flexible arm. This could be applied to many more support weapons, if the GM wishes.

Arc(F | L | R | A)

This indicates where a weapon on a fixed mount can fire, such as a fusion flamer on a Virai warrior's body. The weapon can only shoot in the specified arc (F,=Front, L=Left, R=Right, A=Aft) of the weapon's facing. The default arc is F, or Front.

Breaching

Attacks against walls, bulkheads, rocks, sealed crates or similar obstacles are normally blocked by the structural armour of such items – which reflects their general toughness. The weapon may inflict more damage against buildings, in which case the damage is stated, as in Breaching 5D10+4.

Breaching weapons bypass the target's structural armour. Armour fields and shell armour, if present, are still active against such weapons.

Compound SV

If several, simultaneous hits are inflicted by weapons or attacks of the same type, all with Compound SV, and all against the same enemy, the SV from all the is combined to make a single attack at the SV of the total. In practice, given the turn sequence, this normally means that only combatants with multiple strikes are able to inflict a Compound SV wound but it can be used for grenades (see *Grenade*) where the detonation is stated to take effect at a particular point in the round.

> *For example, during a round of combat, five plasma grenades hit an Isorian trooper. The first was not declared to be delayed (see* Grenade*), one missed, but the throwers of the other three declared their grenade was timed to go off just before the Activate Baulked phase (phase 3).*
>
> *The first grenade inflicts 1D10+1 SV damage as soon as it hits – probably not enough to penetrate the trooper's armour. The other three stick to the Isorian's armour and have their damage calculated just before phase 3. Rather than calculate three, individual D10+1 SV damage, the damage of all three is accumulated to produce one hit at a combined SV of 3D10+3.*

Controlled (<faction>)

Not all weapons and equipment are available even to Freeborn: the Algoryn SD's Hazard armour and distort spinner are vigorously controlled by the Prosperate. In such cases, the faction who has access to the equipment or weapon is indicated by the Controlled special attribute and <faction>.

When the faction is blank or not present, as in Controlled or Controlled(), the device is prohibited for sale to the general public by all lawmaking factions (which pretty much accounts for everyone bar military, armed police, some mercenary companies, scruple-less Freeborn and black market sales to criminals and freebooters).

In general, for controlled goods, co-operation is withdrawn from any trader who deals with such equipment and whole Freeborn Houses can be blacklisted if any within the house fabricate such goods. Further, black market operators are often dealt with harshly by those who control such equipment. Controlled goods can typically only be gained by those forbidden to purchase them scavenging for, and repairing, such items. Even then, anyone found using the repaired, controlled goods are placed on red lists and have a bounty placed on their heads.

Red lists are an invitation to anyone capable of doing so to either capture the users of the equipment or technology, or to return the technology to the red-listing faction.

Co-ordinate

This is given to drones and special weapons that can strike at exactly the same point on a target, either due to their in-built programming or because of their natural ability to find weaknesses in armour.

Each subsequent attack in a turn on the same, stationery target increases the chance of a critical hit by 1, i.e. from 10 to 9 on the second hit, from 9 to 9 on the third, and so on. If the target moved, then the C-ordinate is reset to a normal critical hit (10).

> **Design Note:** Whilst very much a simplified effect, this attribute models the effect of Compounded melee attacks from Virai ripclaws without having to ensure close co-ordination or tracking multiple hits in a turn.

Crew n

This states the normal number of crew to operate the weapon effectively. Without this many crew, the shooters take a penalty to their shooting task check.

Disruptor

Disruptor weapons inherit the Ignore Soft Cover and Compound SV rules. Their radiation and local disruptive effect also inflicts a sink-mass pin on the target as if a reflex field had been triggered.

If the target is shot by a disruptor **and** gains a sink-mass pin from their armour field absorbing damage, then they take two pins, one from the armour field and one from the disruptor.

Fade

The weapon system is subject to frequent overloads or jams. On a mishap, the weapon is unable to fire again until cleared or reset.

To recover from a Fade takes a complex action during which a successful (and relevant) weapon task check is made.

Lock +n

Once a weapon has hit a target, if it fires at the same target with its next shot it automatically hits providing the target does not move: no shooting check is required. Occasionally, Lock has a

number after it stating the additional damage applied *accumulating per turn* the lock applies.

> **Lock example:** *a fractal weapon with 4D10 SV and* Lock+5 *would inflict 4D10 damage on its first shot, then automatically inflict 4D10+5 against the same target next turn, then 4D10+10 on the turn subsequent to that, and so on.*

Ignore <armour> armour

The weapon damage inflicted ignores any SV reduction due to the specified armour.

Ignore Soft Cover

The weapon ignores any SV reduction due to soft cover, punching through it as if it were not there.

Grenade

The advanced grenades of the more sophisticated Antarean technology are very different to those on the Retrograde Spill and Feral worlds. To reflect this sophistication, they are given the Grenade special attribute.

Antarean grenades have an adhesive film that can be activated when placed or thrown, so can attached to an object or individual; they can even be placed as mines and set to go off when their rudimentary sensors detect enemy nearby. They can be set to detonate:

- immediately on impact (with a Simple action);
- after a specific, elapsed duration;
- at a specific point in time;
- when triggered remotely, such as for use in demolitions;
- when in the proximity of an enemy, as used for mines.

These settings can be combined so a mine set to 'proximity' can be deliberately set to become live after, say, a few days. Setting any of these restrictions other than 'immediately' takes a Basic action – even the IMTel has to transmit a command to the grenade!

Grenades that detonate at the same time and at the same place compound their effect into a single blast so implicitly receive the Compound SV rule.

Min Rg n

This attribute specifies the minimum range at which the weapon can be used. This is partially to cope with arm swing and step, but is also simply to remind players of the ranges at which they are engaging: swinging back an arm to throw a javelin leaves you open for a blow!

No Shard/Shard

Advanced weapons connect to a team's combat shard, its bearer's armoured combat suit, or even other targeting assists such as spotter buddies. Primitive weapons – those given the Primitive attribute – do not have such interconnect. Rather than list this for every single weapon, assume that advanced weapons connect to an individual's combat shard and can use their helmet or other heads-up display for targeting. A sharded weapon cannot be used by enemies of the shard until it has been resharded by Freeborn or desharded completely.

No Shard is used to identify specific weapons that do not have a specific shard connection and which can operate in a nanosphere-free environment (so be picked up and reused).

(Not Wielder/Friends)

These modifiers are used for a few weapons after a given effect to indicate the wielder is either:

- immune to the effects it produces, denoted by **Not Wielder**; or
- the wielder and friends are unaffected, 'friends' in this context being those in the extended combat shard, denoted by **Not Friends**.

The attributes can also be used for other effects, such as Disruptor(Not Ghar) which shows that Ghar are not affected by Disruptor effects.

(Not <capability>)

This is used when all the effects of a given attribute apply except the capability mentioned in brackets.

> *For example* Grenade(Not Proximity) *would mean that the weapon has all the attributes of other grenades but could not be used to lay a minefield.*

Reload(Complex|Simple)

As well as support weapons, some lighter weapons also need a complex action to reload, such as crossbows. Such weapons are given the Reload(Complex) special attribute. Occasionally, a weapon may need multiple complex actions, in which case 'Complex×n' is stated, where 'n' refers to the number of whole-round, complex actions needed.

Reload(Simple) is used for the few weapons that need a simple, zero-beat action to reload.

Sphere n

For Sphere, 'n' is expressed in 1m increments and delineates the diameter of a sphere around the target point that damage from the weapon affects. When using squares, it is from the centre of the square, others the centre of the target individual, swarm or object.

Sphere 1 indicates that only the target square is affected (as opposed to not having Sphere which would indicate a hit only affects a single object).

All within the area of effect of the sphere take the damage specified.

We use 'Sphere' rather than 'Blast' or 'Radius' to show that the weapon will effect everything in three dimensions – something of distinct use in zero-g environments. Of course, on most battlefields the area of effect will be a dome above ground with minor scorch damage or a small crater (depending on the surface) to show that a grenade or similar bomb had exploded.

Stun <minutes>/<bonus>

The weapon inflicts the Stun effect as well as any other damage. The Stun effect is only triggered if it penetrates an armour field, though can act through armour up to the level specified.

In the attribute, <minutes> refers to how long a character is unconscious/Stunned for if they do not take a En check. If they do take an En check, the <bonus> value indicates how much they should add to their En bonus when making an En check to reduce the amount of time unconscious (it may increase – beware!).

Rules for being stunned are in the *Core System Guide*.

> **Stun Example:**
>
> *For example, Stun 5/+3 indicates that a stun weapon makes a character unconscious for 5 minutes but allows an En check to reduce the time with a bonus of +3 (plus any other bonus the character has from their own En, traits and implants).*

Unbalance

The weapon has a disabling effect on the target. On a hit, the damage passing through armour fields and impacting the target's **shell** or **structural/intrinsic** armour is used as a negative modifier on an Athletics check, with the target's St bonus as the Athletics characteristic modifier.

If the target fails their check they become unbalanced (see the 'Combat' section in the *Core System Guide*). If the target is already unbalanced, or they roll a mishap, then they are knocked prone, instead.

Primitive Weapons

There is a truism which, on Antarean planets, is particularly apposite so, to paraphrase: no weapon is obsolete in the hands of an enemy who wishes to use it. This is even more applicable on the primitive and resource-scarce worlds where the locals have to forge their own weapons with minimal technology or perhaps by scavenging metal from the fallen spacecraft or skeletal remains of ruined cities.

The weapon classifications are broadly straightforward. Many, however, gain a benefit from their wielder's current strength (or are penalised by weakness), and are as follows. All tend to struggle against the hi-tech armour fields and shell armour unless their attacker strikes a lucky hit.

Unarmed: an unarmed panhuman fights with a **fist** or **kick** (or elbow or knee) or can use a **martial art** to boost their range of options. Each martial art is its own, specialism but allows for greater flexibility, such as enabling attacks that stun, unbalance or floor opponents, or even immobilise them. Such martial arts are beyond the scope of this book!

Melee Weapon Definitions

Melee.Unarmed		Shots /Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special (and TL)
						----- Range -----					
Club, light or Improvised		1	1D5	1	1	Contact	–	–	–	–	±St; TL any
Dagger, knife, light axe, short sword, light mace/hammer		1	1D5+1	1	1	Contact	–	–	–	–	±St; TL P1+
Fist/kick		1	1D4	1	1	Contact	–	–	–	–	±St; TL any
Kraszaxe		1	1D5+2	2	3	Contact		–	–	–	+St; also Melee.Primitive; TL P3+
Melee. Primitive	**Mode**	**Atks**	**SV**	**Ag**	**St**	**PB**	**Effv**	**Long**	**Extr**	**Max**	**Special**
Bow, short		1	1D6	3	3	5/+0	20/+0	30/-2	40/-4	60/-6	TL any
Bow, long		1	1D8	3	5	5/-1	20/+0	30/-2	60/-4	100/-6	TL any
Crossbow, light		1	1D8	2	2	5/-2	20/+0	30/-1	40/-3	60/-5	Reload(Complex); TL P2+
Crossbow, heavy		1	1D10	2	4	5/-3	20/+0	30/-1	50/-3	100/-5	Reload(Complex×2); TL P3+
Dart/ knife	*Thrown*	1	1D4	2	1	5/+2	10/0	15/-6	15/-6	15/-6	±St; TL any
Javelin	*Thrown*	1	1D5	2	1	2-5/+0	10/+0	20/-2	30/-4	40/-6	Min Rg 2; +St; TL any
	H2H	1	1D5	2	1	Contact	–	–	–	–	+St
Spear, long		1	1D5+2	1	3	Reach	–	–	–	–	+St; TL P1+
Spear, short	*H2H*	1	1D5+1	1	2	Reach	–	–	–	–	+St; TL any
	Thrown	1	1D5	1	2	3-5/+1	10/+0	20/-4	30/-6	–	Min Rg 3; +St
Sword		1	1D5+2	2	3	Contact		–	–	–	+St; TL P2+
2H axe/club/mace		1	1D10	2	5	Reach	–	–	–	–	+2×St; TL P1+
2H sword; halberd		1	1D12	3	5	Reach	–	–	–	–	+2×St; TL P2+
Melee.Martial Art (X)	**Mode**	**Atks**	**SV**	**Ag**	**St**	**PB**	**Effv**	**Long**	**Extr**	**Max**	**Special**
Martial Art		1	~1D5	Var	Var	Contact	–	–	–	–	By art: Stun, Immobilise
Melee.Tools	**Mode**	**Atks**	**SV**	**Ag**	**St**	**PB**	**Effv**	**Long**	**Extr**	**Max**	**Special; All TL D3+**
Mass compactors	*H2H*	1	3D10	2	4	Reach	–	–	–	–	Ignore Soft Cover, Breaching
	Ranged	1	Var SV	1	4	5/+2	10/+0	15/-2	20/-4	30/-6	Ignore Soft Cover, Breaching, Ranged.Energy
	Variable SV	–	–	–	–	3D10	2D10+3	2D10	1D10+3	1D10	
Lectro lash		3	2D10	3	3	Reach	–	–	–	–	–
Lectro lance		1	2D10+5	3	3	Reach	–	–	–	–	+St (mount)
Maglash	*Ranged*	1	1D8+2	2	2	5/+1	10/+0	–	–	–	–
	H2H	2	1D8+2	2	2	Reach	–	–	–	–	–
Tool appendages		2	2D8	1	1	Contact	–	–	–	–	Compound SV
Tractor maul	*Ranged*	1	3D10+2	2	5	5/-2	10/-4	–	–	–	Breaching
	H2H	2	3D10+2	2	5	Reach	–	–	–	–	Breaching, Compound SV
Virai Melee.Tools	**Mode**	**Atks**	**SV**	**Ag**	**St**	**PB**	**Effv**	**Long**	**Extr**	**Max**	**Special** TL/Controlled(DXVI)
Fusion cutter	*Ranged*	1	Var	2	–	5/+2	10/+0	15/-2	20/-4	30/-6	Breaching
	Variable SV	–	–	–	–	3D8+4	2D8	1D8+4	1D8	1D8	
	H2H	1	2D8+4	2	–	Reach	–	–	–	–	–
Ripclaws		1	2D10+2	1	2	Contact	–	–	–	–	Breaching, Co-Ordinate

A **club** can either be improvised, such as a plank of wood or metal bar, or carved to shape such as a lightweight cudgel. In either case, they are a little better than using a fist, but for more consistent damage a carefully constructed **light mace** or **hammer** is needed, or perhaps a light **axe**. The heaviest clubs and axes do much more damage but require a little more skill and dexterity to wield than might be expected.

Bladed weapons range from simple **knives** and **daggers** through to **short swords**, long swords or longer bastard and two-handed swords. At the lighter end, they are found in many of the unkempt dives on Spill worlds, or as-yet-unassimilated worlds in IMTel territories, and are best regarded as unarmed combat weapons. At the more advanced or heavier end, some skill is needed in their construction, especially to get the balance right, and considerable skill is needed to wield them effectively – hence their inclusion into the Melee.Primitive skill. The longer bladed weapons also benefit from being able to outreach their opponents.

The modern **kraszaxe** is a ceremonial, more socially acceptable version of a cultural weapon carried by Krasz: it is no longer the lethal, long-bladed sword-cum-axe it once was (which has probably best regarded as a two-handed sword or axe). Nonetheless, it can be used with several different styles of combat used, reflected in its ability to be used with either the Melee.Unarmed and Melee.Primitive skills.

A distinction is drawn between a **javelin** – a spear-like weapon intended for throwing – and a heavier **short spear** intended for fending off enemies or prey and being used in a mass of similarly armed infantry. Both differ from the **long spears** intended purely for combat and most effective in large phalanxes. All require some training to use effectively, so are in the Melee.Primitive skill category.

TOOLS & MANIPULATORS

All the stats for tools turned into melee weapons are also to be found with the melee weapons in the table opposite.

Tools

The **lectro lash** comprises an energy field held by a nanite string of variable length and is not so much a weapon as a training tool used by Boromites to guide and train creatures such as the thick-skinned and largely insensitive lavamites - the energy transmitted down the nanite field reduces most humans to jelly! The lash is sometimes seen in the hands of other, largely feral, peoples who have to tame or handle beasts as ferocious as lavamites, or in the hands of bodyguards to the more vicious Mercenary commanders. The **maglash** is a variation of this used by Ghar Outcast masters to herd their Outcasts or by Feral skark riders to control their skarks: it can also be 'cracked' to throw the charge a short way.

The Boromites often turn their mining equipment to use in close combat when defending their claims and mines. There is a broad range of weaponry/tools here, so we have abstracted them somewhat into **tractor mauls**, which are best used in close combat, and **mass compactors** which can reach out to a longer range and use compression technology to drill into rock faces. All require a fair amount of strength to use and brace, whether for mining or for combat.

The Boromites also have a unique tool-cum-weapon that they use for control of their lavans: the **lectro lance**. Whilst not controlled by them, and only needing a D3 general technology level, no one else bar those who keep lavamites have a use for the weapon. It is a little unwieldy when used on foot, but on the back of a locomite, the Boromite cavalry use it very effectively, in the manner of a lance of ancient times.

Most drones are equipped with suspensor field projectors in order to carry out their specified task. However, when finer

Projectile Weapon Definitions

When Firearms are shot overhead, they use the Firearm.Indirect skill.

Firearm.Projectile	Mode	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special (and TL if not N0)
Feral Machine Gun		2	1D8	2	2	5/+0	20/+0	30/-2	50/-4	80/-6	No Shard; TL M2+
Feral Pistol		1	1D6+2	1	1	5/+1	10/+0	20/-2	30/-4	40/-6	No Shard; TL M2+
Feral Rifle		1	1D8+2	1	3	5/-1	20/+0	40/-1	80/-3	200/-6	TL M2+
Mag Carbine	RF	2	1D8+2	2	3	5/+1	20/+0	30/-2	50/-4	100/-6	–
	SS	1	1D8+5	1	3	5/+0	20/+0	30/-1	50/-3	100/-6	–
Mag Pistol		1	1D8+2	1	1	5/+2	10/+0	20/-1	30/-3	50/-5	–
Mag Rifle		1	1D8+8	1	3	5/-1	20/+0	60/-1	120/-3	400/-5	D3+
Micro-X launchers	DF	1	1D8+5	3	4	5/-1	20/+0	40/-1	60/-3	100/-5	–
Algoryn Overload	DF	1	3D8+3	3	4	5/-2	10/-1	20/-3	30/-4	40/-6	–
	OH	1	1D8+2	3	3	–	20/+0	60/-1	120/-3	200/-5	Min Rg 5; Sphere 3
Musket		1	1D6	2	3	5/+0	10/+0	20/-1	40/-3	80/-5	No Shard; M0+ (possibly P3+)
Spill Pistol		1	1D8	1	1	5/+2	10/+0	20/-2	30/-4	40/-6	No Shard; D1+
Spill Rifle	RF	2	1D8	2	2	5/+0	20/+0	30/-2	60/-4	100/-6	No Shard; D1+
	SS	1	1D8+2	1	2	5/-1	20/+0	40/-1	100/-3	300/-5	–
X-sling	OH or DF	1	1d8+4	3	2	5/-2	10/+0	20/-3	30/-6	–	OH: Min Rg 5; (Slingnet optional)
X-sub Gren. Launcher	OH	1	1D8+2	3	1	–	10/+0	20/-2	30/-4	50/-6	Min Rg 5; Sphere 2
Support.Projectile		Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Mag Cannon		1	5D8+4	3	4	10/-3	50/+0	100/-1	400/-3	800/-5	Crew 2, Arc(F)
Mag Light Support	RF	4	2D8+8	3	3	5/-2	50/+0	80/-1	160/-3	400/-5	Crew 2, Arc(F, R, L)
Heavy Mag Support	RF	5	3D8+7	3	3	5/-2	50/+0	80/-1	160/-3	400/-5	Crew 2, Arc(F)
Heavy Mag Cannon		1	6D8+6	3	4	10/-3	80/+0	200/-1	500/-3	1000/-5	Crew 3, Arc(F)
Spill Squad Support	RF	3	1D8+2	2	3	5/-2	20/+1	40/+0	100/-3	300/-6	Crew 2, Affixed, Arc(F); TL D1

control is required, or when the drone is expected to interact with equipment made for living species, **tool appendages** are fitted to the drones. These flexible, bio-mechanical limbs terminate in an adaptable tip that can be reshaped into a variety of tools with fine edges, or which resemble fingers or clamps for holding and restraining items. The adaptability of such tools is such that they can even create mono-molecular edges or fine cutters that can be used in close quarters – an important usage for command drones!

The Virai equip their soldier drones with **ripclaws**, large, multi-purpose, mining-tool-cum-melee arms. Virai drones can also use their everyday **fusion cutters** as weapons in hand-to-hand and at short range. Such tools are powered by the Virai's internal power source and are integral to the Virai drone, so cannot be used by others.

PROJECTILE WEAPONS

Skill: Firearm.Projectile or Firearm.Indirect
Technology: Mag = N0+ (possibly D3)

Mag Weaponry

Mag weaponry relies on the generation of a magnetic pulse along parallel, magnetic tracks or rails built into a frame, causing the projectiles, ammunition or missiles within the barrel to accelerate rapidly. It is the construction of these rails that gives magnetic weapons their distinctive length and 'boxy' appearance. Rapid firing or lighter weapons fire a burst of metallic spikes, flechettes, needles or (in the more primitive weapons) pellets or slugs – though for rules purposes sometimes consolidate these into fewer, effective hits. Alternative names such as pluggers, needlers and sluggers are used for the specific weapon types, though we consolidate these into fewer, more general classes of weapons.

In the more advanced weapons, thousands of rounds of ammunition are carried in compacted form using common compression technology built into the body of the weapon, and can be replenished from spare magazines if necessary. Over a period of several hours further ammunition can be synthesised from a hyper-compressed material core.

Mag rifles are the general class of longer-ranged weapons of such a type. **Mag pistols** are the most basic form of personal mag handgun. **Mag carbines** sacrifice some of the power and range normally attainable with a mag weapon in favour of an even greater rate of fire. Mag carbines are sometimes mounted together on personal skimmers or even in small turrets to provide a substantial number of suppressive shots.

The **micro-X launcher** is intended as squad support weapon and in addition to standard mag weapon slugs, fires explosive shells or heavier, specialised anti-personnel (slingnet) or anti-vehicle (overload) munitions, as mentioned in the army lists. As a result, it is relatively bulky.

X-slings are small, magnetic launchers that are used to hurl grenades or special munitions. They are either attached to a forearm brace or sub-mounted onto a larger weapon. The x-sling is often given to squad leaders with special ammunition particular to that army. Bounty Hunters often have customised and enhanced variants of the underslung x-sling, the main purpose of which is to boost the power to launch customised special munitions, though it can only do so in overhead mode. Despite this, elite bounty hunters such as the Hükk find them invaluable for capturing prey or making good their escape.

Inferior Projectile Weapons

Technology: M+ (possibly P3 for muskets)

There are a great many inferior slug weapons used on the Retrograde Spill and Feral worlds, but they have been grouped into three: **Muskets**; **Feral** firearms; and **Retrograde Spill** weapons. All use propellant-warhead combinations, initially with the propellant (perhaps gunpowder) being placed into a smoothbore – sometimes rifled – barrel, followed by padding and finally a slug, typically of lead. Ignition is via a flintlock or similar contraption. Occasionally, such muskets might use compressed air, so giving a little extra range and accuracy, but the compressed air cylinders do not last long and need to be pumped up again at frequent intervals.

During the age of mechanisation, a variety of more accurate pistols, rifles and automatic weapons appear. These use both propellant and slug combined into a single cartridge that, fairly quickly, ends up being used in magazines containing multiple rounds. With better manufacturing techniques comes rifled barrels to increase accuracy. Later developments of such weapons improve the range and rate of fire, and may even go to separate out the propellant or return to smooth bores, but the supply of magazines remains a critical factor in their use.

An interesting facet of such weapons is that the civilisations may have fallen behind in production infrastructure, but the knowledge of advanced weaponry often remains or is easily accessible. This allows such civilisations to bootstrap themselves into the more advanced weaponry production as soon as they are able to do so – perhaps simply by having access to better resources.

Projectile Support Weapons

Skill: Support.Projectile or Support.Indirect
Technology: D3+ (possibly D2)

The **mag cannon** is a single-shot cannon primarily used to take out tough targets such as drones and vehicles at long distances but high explosive rounds are not unknown. It has multiple internal rails that generate a single, powerful magnetic pulse to launch a projectile containing a mass-sensitised disruptor field that inverts and crushes local space so that a target struck and penetrated suffers massive internal damage. The heavy mag cannon is a larger and more powerful version of the standard mag cannon. The HE rounds use in both tend to suffer due to the high speed of the launcher; even when the rails are dialled down the HE has a tendency to embed itself too far into a target.

The **mag light support** (MLS) weapon is a long-ranged rapid-firing magnetic weapon used by a wide variety of support units. It fires a burst of metallic spikes or slivers. The **mag heavy support** (MHS) is a long-ranged very rapid firing and hard-hitting version of the mag light support gun designed primarily for vehicle mounting and fixed point defence. The MHS is sometimes built from two MLS's coupled together.

Despite their primitive technology, Feral and Retrograde Spill worlds still develop their own artillery. The development of this is roughly in line with their firearms – from muzzle-loading smoothbore to breach-loading, rifled cannon. Initially they use solid cannonballs, then explosive shells, and finally move on to armour-piercing or mixed rounds intended to destroy the armoured vehicles of the period.

Other weapons are developed from these basic principles, such as anti-structure munitions, shoulder-launched rockets and vehicle-launched rockets. Such weapons are only ever available off-planet in museums as the advanced, nanosphere nations learnt long ago to deal with such weapons through minimising target profiles, enhanced targeting (such as the IMTel taking over a soldier's suit and targeting) and using combat nanophages – or have moved on to more sophisticated fractal weaponry for demolitions.

A Design Note on Military Support Weapons

We do not yet include statistics for the more primitive support weapons available to the denizens of Antarean space, nor the more militaristic x-howitzers, mag mortars and x-launchers. This is partly because we have not playtested any; however the reason for *that* is a result of the level at which, and the locations within, the Antares RPG is most often played: starships, buildings, orbitals and at the individual and very tactical level rather than at the level of a larger battlefield.

If a GM needs to model the lower-tech weapons, we suggest taking the template stats here and reducing them accordingly. The intention is to include such stats in any scenarios written for the game taking place in low-tech worlds.

Nonetheless, we'll run over some of the descriptions for the more advanced versions of those weapons, perhaps being able to fill in the details in a later version.

The **X-launcher** or magnetic launcher is one of the most universal and adaptable support weapons. They are compact, relatively accurate, and capable of handling a variety of explosive and special ammunition where necessary. As the ammunition is relatively weighty, bulky and resists compression, X-launchers are generally team weapons with crews. The 'X' in their name refers to the four, equally spaced magnetic rails that form the barrel framework. A prime example of such a configuration is the portable micro-x.

The **X-howitze**r is a very large magnetic launcher built for lobbing an assortment of munitions over great distances. Its sturdy construction is necessary to withstand the high velocities generated by their multiple magnetic rails. It is a common crew-served battlefield heavy artillery support weapon used by many forces and is sometimes mounted onto heavy combat vehicles and used as a long-range mobile heavy artillery. Designed to operate at longer ranges than other launchers, its minimum range is correspondingly greater than that of other overhead weapons.

The **mag mortar** and **Algoryn X-mortar** are similar to the x-howitzer but are designed to lob a heavy shell at relatively short ranges. They are not used in the forces of the IMTel nations due to their short range but are frequently seen in Algoryn and occasionally in Freeborn forces.

Some nations lack long-ranged support and heavy weapons so scavenge what they can from the battlefield. Given their lack of nanosphere and paucity of knowledge about the technology, their scavenged weapons end up being somewhat inferior in performance when compared to their original specifications. These are listed in the scenarios that require them.

ENERGY WEAPONS

Skill: Ranged.Energy
Technology: Various, typically D3+

We deal here with the more common and advanced energy weapons of Antares rather than the bulky energy weapons of the Retrograde Spill states.

Plasma Weapons

Technology: N0+ (D3 have experimental types)

All plasma weapons are extremely effective for their size. Whilst details and appearance varies from model to model, plasma weapons can usually be recognised by their distinctive plasma coil: the larger the coil the more powerful the shot. Plasma weapons don't need to be especially long as their effect is not based on velocity, shooting a burst of energy that initiates an ionisation reaction – effectively a small explosion or eruption of whatever has been hit. The weapons' ability to generate energy is key to their effectiveness and over time this conversion rate declines, the plasma coils becoming less effective over time – sometimes months. The maintenance needs means that plasma weaponry is used only by the most technologically capable forces.

This aspect of the technology is the prime reason the Algoryn AI avoid plasma weaponry: the maintenance and parts overhead cannot match their more rugged, mag weaponry.

Weapons range from the **plasma pistol**, regarded as the ultimate handgun in most factions, through to the standard infantry weapon of the advanced factions, the plasma carbine, up to the potent plasma bombard.

The **plasma carbine** is capable of multiple modes of operation, combining hard-hitting, focused fire at range and a rapid scatter at closer distances, giving it a distinct advantage over similarly sized mag weapons except at extreme ranges. In IMTel infantry squads this is often supplemented by the **plasma lance** which is like the carbine but has heavier coils calibrated to operate in a further mode: the lance (anti-tank) mode, though at the cost of accuracy.

In the Concord, heavier versions of the plasma carbine and plasma lance have been extended and hardened with a hi-strength suspensor field shaped for penetration, and the rest of the weapons are physically reinforced. In hand-to-hand combat, the **Krasz** can treat their plasma carbine and lance as a hand weapon but other panhumans find the weapons difficult to lift, let alone wield, so find them of no benefit.

Isorian marksmen are given a **plasma rifle**, a longer-range, infantry-portable plasma weapon with a fixed focusing lens and technology that allows the deadly Isorian IMTel to penetrate and exploit weaknesses in enemy combat shards through a modulation in the ionisation beam before the plasma ignites. It is particularly of use in picking off threats to the infiltration squad from supporting weapons and light vehicles, as well as negating the capabilities of enemy buddy drones.

Plasma Support Weapons

The **plasma cannon** is calibrated to deliver a single very strong pulse, for which an especially long plasma coil is required. The **plasma light support** gun – often abbreviated to PLS – is the ultimate in rapid firing infantry support weapons and is the mainstay of Concord and Isorian weapon drone units. It is easily recognised by its hefty plasma coil and

substantial size as well as the characteristic double vane barrel that houses the necessary magnetic containment generators.

The **plasma bombard** is the largest and most powerful mobile plasma weapon and uses multiple-coils to generate an extraordinarily potent pulse of energy. They are constructed with multiple plasma coils, which loop together, a design that is necessary to preserve the integrity of the coils.

Demolition Weapons and Mining Machinery

Fractal weapons use molecular resonance to break apart solid material. Although slow to develop full power, once locked on to a target, then can easily break apart buildings, machines and other constructs. They are not very practical weapons on a mobile battlefield where targets are likely to be in motion, so are primarily used for attacking static defences or for urban or shipboard actions attacking fixed defences, bulkheads, buildings, etc. They are most likely to be operated by specialist engineering teams.

A **fractal cannon** (or demolitions and breaching cannon: DBC) is the basic fractal support and demolitions weapon. Boromite **frag borers** (mining machinery) have roughly the same capability once modified for battlefield use.

Fractal bombards – also known as fractal disintegrators – are the largest fractal weapons used in terrestrial warfare and are essentially siege weapons. Boromite **heavy frag borers** have comparable capability once retuned for battlefield use.

Virai also use their mining tools as weapons. Like the Boromites, once adjusted for battlefield use they have effectively the same capability as military fractal weapons.

Compression Weapons

Technology: N2+

In addition to its use in precision mining, compressor technology is adapted for battlefield use. The beam compresses much of the atmosphere, gaseous material or

Energy Weapon Definitions

Firearm.Energy	Mode	Shots	SV	Ag	St	Range PB	Range Effv	Range Long	Range Extr	Range Max	Special
Algoryn/Boromite Plasma Carbine											TL N0+; No Shard
	RF	2	1D10	3	3	5/+1	20/+0	30/-1	50/-4	80/-6	
	SS	1	2D10+2	2	3	5/-1	20/+0	40/-1	100/-3	250/-5	
Compression Carbine		1	Var	3	2	5/+0	30/+0	50/-1	70/-3	200/-5	Ignore Soft Cover; TL N3+
	Variable SV					3D10+5	3D10	2D10	1D10+5	1D10	
IMTel/Freeborn Plasma Carbine											Controlled(IMTel, Freeborn)
	RF	2	1D10+2	2	2	5/+1	20/+0	40/-1	60/-4	100/-6	Freeborn: No Shard
	SS	1	2D10+5	1	2	5/-1	20/+0	50/-1	120/-3	300/-5	
Krasz Plasma Carbine	*RF*	2	1D10+2	2	4	5/+1	20/+0	40/-1	60/-4	100/-6	Controlled(PHC, Freeborn)
	SS	1	2D10+5	1	4	5/-1	20/+0	50/-1	120/-3	300/-5	
	H2H	1	2D10+5	1	6	Contact	–	–	–	–	Melee.Unarmed or Melee.Tools
Krasz Plasma Lance	*RF*	2	1D10+2	3	5	5/+1	20/+0	30/-1	40/-4	100/-6	Controlled(PHC)
	SS	1	2D10+5	2	5	5/-1	20/+0	50/-1	120/-3	300/-5	
	Lance	1	3D10+5	3	5	5/-3	20/-1	30/-2	40/-4	80/-6	
	H2H	1	2D10+5	1	6	Contact	–	–	–	–	Melee.Unarmed or Melee.Tools
Plasma Lance	*RF*	2	1D10+2	3	3	5/+1	20/+0	30/-1	40/-4	100/-6	Controlled(IMTel)
	SS	1	2D10+5	2	3	5/-1	20/+0	50/-1	120/-3	300/-5	
	Lance	1	3D10+5	3	3	5/-3	20/-1	30/-2	40/-4	80/-6	
Plasma Pistol		1	2D10	1	–	5/+2	10/+0	20/-2	30/-4	60/-6	If not IMTel, then No Shard
Plasma Rifle		1	2D10+5	4	3	5/-3	30/+0				Exploit+2; Controlled(IIS)
Virai Fusion Flamer		1	Var	2	–	5/+1	10/+0	15/-2	30/-4	60/-6	Breaching, Arc(F); DXVI only
	Variable SV					3D8+4	2D8+4	1D8+4	1D8	1D8	
Virai STAA paint		1	Paint	–	(1)	5/+2	10/+0	20/-2	30/-4	40/-6	STAA paint only; max 3

Exploit+2: The plasma rifle has a +2 targeting bonus against buddy drones and probes. In addition, rather than destroy them, the attacker can elect to temporarily disable them on a hit if any damage penetrates the drone's armour fields and shell.

Support.Energy		Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special; GTL N0+ unless stated
Compression Cannon		1	Var	3	2	10/+0	30/+1	100/-2	200/-4	400/-6	Affixed, Crew 2, Arc(F); Fade;
Variable SV (uses D10)		–	–	–	–	6D+20	5D+10	4D+5	3D+3	3D+3	GTL N2+
Compression Bombard		1	Var	3	3	10/+0	40/+1	150/-2	300/-4	600/-6	Affixed, Crew 3, Arc(F); Fade;
Variable SV (uses D10)		–	–	–	–	7D+20	6D+10	5D+5	4D+3	4D+3	GTL N2+
Fractal Cannon		1	4D10	3	4	10/+2	30/+0	50/-2	70/-5	–	Affixed, Crew 2, Lock+5, Breaching SV 5D10+5
Fractal Disintegrator		1	5D10	3	5	10/+0	40/+0	80/-2	120/-5	–	Affixed, Crew 3, Lock+7, Breaching 6D10+5
Plasma Cannon		1	6D10+10	3	2	10/-2	50/+0	100/-1	250/-3	600/-5	Affixed, Crew 2, Arc(F)
Plasma Light Support	*RF*	4	3D10	3	3	10/-2	40/+0	80/-1	160/-3	400/-5	Affixed, Crew 2, Arc(F,L,R);N1+
Plasma Bombard		1	7D10+15	3	3	10/-3	80/+0	160/-1	320/-3	800/-5	Affixed, Crew 3, Arc(F); Fade
Virai Flamer Array	*RF*	3	Var	2	–	5/+1	10/+0	15/-2	30/-4	60/-6	Breaching, Arc(F); DXVI only
	Variable SV					3D8+4	2D8+4	1D8+4	1D8	1D8	(Affixed, but mounted on drone)
	Focused	1	Var	2	–	5/+0	15/+0	20/-2	40/-4	80/-6	Breaching, Arc(F)
	Variable SV					4D8+4	3D8+6	2D8+4	2D8	2D8	

particulates in its path so it is unsurprising that its effectiveness deteriorates at longer ranges. At the right range, however, compression weaponry can be lethal.

In general, compression weaponry comes in three main forms: the anti-personnel compression carbine, sometimes used primarily for show by personal bodyguards; the anti-drone compression cannon which can also pack a severe punch against most vehicles; and the heavy anti-tank weapon, the compression bombard.

Whilst powerful, the problem with the larger weapons is that they can suffer from overheating compression coils. Nonetheless, the Prosperate occasionally uses them, as do the Freeborn, and assault-focused mercenary forces use them to deliver a devastating punch.

Virai Fusion Weapons

Technology: DXVI
Special: Controlled(Virai) and Controlled()
Skill: Firearm.Energy or Support.Energy

The mechanical lifeform known as Virai is a curious mix of advanced digital computational hardware and armour plus compact fusion power-sources. These power sources are used to directly power their cutters and drills/weapons, leading to the **fusion flamer** and a battery of flamers together in a **flamer array.** The weapons are little more than brute force energy weapons with targeting limited to the Virai's normal sensors – so range is not so great (luckily for the other factions around the Determinate).

As Virai weapons are integral to the Virai drones and cannot be used without dismantling their drone hosts, extracting the power source, and remounting the weapons on another device. Given that most Virai implode or suffer serious damage when destroyed, this is a very rare situation: their weapons are primarily here for use by NPC Virai.

SPECIAL WEAPONS

These weapons inflict non-standard damage, are rare or encountered only rarely, or are complex to use and span multiple weapon skills.

Stun Guns

Technology: D1+
Skill: Ranged.Projectile or Ranged.Energy

On most IMTel worlds the policing function is carried out by drones, whereas law enforcement officers on Advanced Spill, Freeborn habitats, and the less primitive Retrograde Spill worlds tend to be panhumans. All have one thing in common: the use of Stun Guns to immobilise a subject.

Such weapons range from sophisticated nanosphere-enabled weapons that cause minimal damage but paralyse a target, to more primitive weapons that deliver an electric-shock.

Algoryn Distort Spinner

Skill: Melee.Distort Spinner (X)
Technology: N2AP only
Controlled: Algoryn Prosperate

Also known as d-spinners, this forearm mounted weapon links to a heavy backpack that combines a defensive distort generator with an offensive plasma shell launcher. The distort generator creates a distortion field that makes it difficult for the enemy to close, increasing the effectiveness of the trooper's defences. The weapon is used solely by Algoryn Assault troopers and their Special Division's heavy Hazard troopers: the weapon is rigged to self-destruct (2D10, Sphere 1) if pried open by a non-Algorryn.

Isorian Phase Rifle

Skill: Firearm.Phase Rifle (X)
Technology: IIS only
Controlled: Senatex

The Isorian phase rifle is a unique and complex weapon, requiring its shooter to accept numerous augments to fully integrate with the heavy, suspensored phase rifle. In a phased

Special & Stun Weapon Definitions

Firearm.Energy	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Police Stunner (N3+)	1	–	1	–	5/+2	10/+0	15/-3	20/-6	–	Stun 10/+1; ignores shell armour
Advanced Stunner (N1+)	1	–	2	–	5/+1	10/0	15/-5	–	–	Stun 5/+3, ignores shell armour
Firearm.Projectile	**Shots**	**SV**	**Ag**	**St**	**PB**	**Effv**	**Long**	**Extr**	**Max**	**Special**
Retrograde Stunner (D3)	1	1	3	1	5/0	10/-4	–	–	–	Stun 3/+4, No Shard
Stun Gun (D1/D2)	1	1	4	2	5/0	–	–	–	–	Stun 2/+5, No Shard
Firearm.NuHu Stave (X)	**Shots**	**SV**	**Ag**	**St**	**PB**	**Effv**	**Long**	**Extr**	**Max**	**Special (FTL = N2+)**
NuHu Stave *Standard*	1	3D10+5	2	1	5/+1	10/+0	20/-2	30/-4	40/-6	Sphere 3 (Not Wielder), Ignore Soft Cover, Controlled(NuHu)
Melee	1	3D10+5	2	3	Reach	–	–	–	–	Ignore Soft Cover
Focused	1	4D10+10	2	3	Reach	–	–	–	–	Ignore Soft Cover
Firearm.Phase Rifle (X)	**Shots**	**SV**	**Ag**	**St**	**PB**	**Effv**	**Long**	**Extr**	**Max**	**Special (FTL = IIS only)**
Phase Rifle *Single*	1	2D10+2	3	1	5/-2	30/+0	50/-2	100/-4	500/-6	Controlled(Senatex), Ignore Soft Cover
Multi-shot RF	D6	2D10+2	5	1	5/-4	20/+0	40/-2	80/-4	200/-6	Phase out required
Melee.Distort Spinner (X)	**Atks**	**SV**	**Ag**	**St**	**PB**	**Effv**	**Long**	**Extr**	**Max**	**Special (FTL = N2AP only)**
Distort Spinner *Distort*	2	1D10	3	3	Reach	–	–	–	–	-4 on enemy attacks; Controlled(Algoryn)
Plasma Shell	2	3D8	3	3	Reach	–	–	–	–	Compound SV

Melee.Unarmed or Athletics		Shots/ Atks	SV	Ag	St	----- Range -----				Max	Special and GTL
						PB	Effv	Long	Extr		
Fractal Charge		1	3D8+4	1	–	5/+0	10/-2	15/-4	25/-6	–	Sphere 1-3, Compound SV, Breaching SV3D10+4, Grenade; GTL N1+
Hand Grenades	*M1+*	1	2D6+2	1	–	5/+0	10/-2	20/-4	30/–6	–	Sphere 2, Not Proximity
	P3+		1D6+2					As M1+			As M1+
Implosion Grenades		1	2d8+4	1	–	5/+0	10/-2	20/-4	30/-6	–	Sphere 1, Compound SV, Breaching SV2D10+4, Grenade; GTL N0+
Plasma Grenade		1	1d8+4	1	–	5/+0	10/-2	20/-4	30/-6	–	Sphere 1, Grenade; GTL D3+ and DXGE

Grenade Definitions

* Grenades typically require the Athletics or Melee.Unarmed skill to throw or the Demolitions skill to place at a weakness on a target when being used as explosives. When being placed on an object, explosives gain the placer's Demolition's bonus as a bonus to their SV.

mode, the weapon and shooter phase out of normal spacetime and are able to fire multiple shots, seemingly simultaneously.

The act of shooting in RF (or phased out) mode is just that: the shooter has phased out, so gains a point of damage immediately and may accrue another at the end of the turn if they are unable to phase back in.

NuHu Stave

Skill: Firearm.NuHu Stave (X)
Technology: N2+
Controlled: NuHu, IS, PHC, Freeborn (only usable by NuHu)

The NuHu's stave is carried by the machine-integrated race of NuHu and is their preferred armament when engaged upon the most dangerous and demanding missions. It comes in a variety of forms and can compact down to a simple tube that can be easily fastened to a belt harness or concealed from view. The stave is as much a badge of office as a practical piece of equipment, identifying its owner as a NuHu of power and influence.

Once activated, all staves tightly bind themselves to their NuHu's personal nanosphere and become an integrated part of the individual's sharded personality. Enhanced in this fashion the NuHu is able to manipulate the local nanosphere and generate nanospore that can be directed as energy.

GRENADES

Small explosive charges or microgrenades are used in combat, for demolition, sabotage, as mines and are also projected by small launchers such as x-slings. The charges may be no larger than a pebble, are often flat like a large coin and can be carried in a small, harness-attached dispenser of twenty or more grenades. Such charges can also be fired from a x-sling or underslung launcher.

Plasma grenades are the most commonly carried kind of grenade. They consist of a small charge that can be thrown by hand, projected from a dispenser, set as mines or employed for demolitions. They are also fitted with powerful micro-suspensors that give them limited homing ability once close enough to a target, what limited intelligence they have allowing them to distinguish friend from foe.

Implosion grenades are used by engineer units to breach bulkheads or blast away rocks without creating the kind of debris left by an explosion. The grenades implode, taking surrounding matter with them, reducing it to a hyper-compressed state.

Fractal charges are used almost exclusively for breaching actions against fixed defences or to gain egress through spacecraft hulls and bulkheads. They operate on the same principles of focused molecular resonance as other fractal weapons and are also commonly used in tunnelling and demolitions work. They can vary their radius of effect from 1-3 metres, the distance having to be set by the user when thrown or set.

We also include a sample grenade definition from more primitive arms manufactures. These cannot act as the normal 'Grenade' definition, but are often thrown. The definitions could also be used as example demolitions explosives but with the breaching attribute.

GHAR EMPIRE WEAPONS

Technology: DXGE
Controlled: Ghar Empire

Lugger guns are basic assault rifles, carbines or long-range pistols with ammunition that utilises crude, chemical propellants. Ghar Outcasts are equipped with lugger guns, but the ammunition clips are almost always in short supply – mainly because priority is given to fuel and disruptor bombs, as well as ammunition for scourers. Nonetheless, when encountered outside the Ghar Empire, Outcasts prefer to stick to the lugger weapons they know.

Ghar assault troopers are equipped with a crude electro-grapnel type weapon – the **gouger gun** – which fires a crude, grapple shaped charge that spins towards its target and generates a strong series of electromagnetic pulses when it hits. Its use is to disable enemy units prior to engaging at close quarters with disruptor dischargers and plasma claws.

Scourer cannon are the main, multi-purpose weapon used by Ghar battlesuits, crawlers and vehicles. In addition to a burst of heavy fire, it can launch a single, more solid projectile or even fire a lightweight disruptor shell that pollutes and warps local space, causing considerable damage. When used on a suit, they normally use the Firearm.Projectile and Firearm. Indirect skills but can be used with the Support.Projectile and Support.Indirect skills.

Ghar assault battlesuits have built-in **disruptor dischargers** which launch a barrage of disruptor micro-shells at close range.

Disruptor cannon are support weapons that eject disruptor shells. They are normally fitted to small walkers and manned, in the Ghar Empire, by Outcasts or servitor-level Ghar. They are not seen outside the Empire. Larger versions of these are fitted to Ghar suits in the form of **disruptor bombers** and vehicles can mount **heavy disruptor bombers**.

In hand-to-hand, Ghar Battlesuits are fitted with massive, powered claws that can be devastating, whether the basic **battle claw** on scourer troopers or the **plasma claw** on assault troopers. Fartok experimented with giving his Battle Group 9 troopers versions of the massive wrecking grabber used to repair Ghar vehicles and suits – the advantage being the strength was in the grabber, not the Ghar using the tool – and trained Outcasts may still, occasionally, use them.

SPECIAL MUNITIONS

These are normally launched by x-launcher or mag mortar and are rarely seen in close combat. Just in case, however, we'll make a note of their capabilities, here.

Special Munitions Rules

Special rules applicable to such munitions are as follows.

Turn-to-Turn

Some special munitions have an effect that endures from one turn to the next, so are assigned the turn-to-turn special attribute.

Turn-to-turn munitions target an area of ground, whether a raised surface or not. Before firing a turn-to-turn munition the player or GM must nominate the point on the battlefield that is to be targeted (use a marker to show the aim point). Line of sight (LoS) is calculated in the usual way to the aim point. An aim point that is out of the shooter's LoS can be targeted using patch sighting and spotter buddies, or blind fire.

Roll to hit as for other OH shooting. Should the shot go off target then the marker is repositioned as for other OH shooting. If a hit is scored, or if the shot goes off target, position the marker to show where the shot has landed. This marker is left from turn to turn until it expires, the munition continuing to exert its influence during the course of the battle.

During the **turn end phase**, once all order dice have been returned to the bag, a test is made for each turn-to-turn munition marker on the battlefield. Each player/GM tests for each of their own markers. Roll a D10: on a score of 1–5 the munition continues to work and the marker is left in place; on a roll of 6-10, the munition has expired and the marker is removed.

Immediate

Some special munitions have an effect that is worked out immediately and have no effect thereafter. These munitions are indicated as immediate in the descriptions below.

Some immediate effect munitions are shot directly at an enemy unit whilst others shoot OH and use the standard OH template to determine if they hit their target. When the munition hits the target its effect is worked out immediately.

Effect Area

This defines the area of effect of a special munition, normally a 3m sphere. Practically speaking, this is normally a hemisphere as shots land on the ground.

Ghar Empire Weapon Definitions

Ghar scourer cannon can use either the Firearm.Projectile or Support.Projectile skills.

Ghar weapons and technology are somewhat idiosyncratic, so all have an FTL/origin of DXGE (Ghar Empire).

Ghar Outcast slave drivers also use the maglash (see *Melee Weapons*) and Outcasts and dismounted Ghar pilots often carry their own version of the plasma grenade (see *Grenades*).

Drive.Battle Armour Mode	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Disruptor Charges	1	2D8+2	1	(8)	–	5/+0	10/-6	–	–	Disruptor, Sphere 3m, Min Rg 2
Firearm.Projectile Mode	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Gouger Gun	1	2D8+2	2	(8)	–	10/-2	20/-4	30/-6	30/-6	Min Rg 5; Affixed; Unbalance; No Shard
Lugger Gun	RF	2	1D8	2	1	5/+1	20/+0	30/-3	50/-5	70/-6	No Shard
	SS	1	1D10	1	1	5/+0	20/+0	30/-2	50/-4	80/-6	
Lugger Pistol		1	1D8	1	1	5/+2	10/+0	20/-2	30/-5	40/-6	No Shard
Scourer Cannon	RF	3	2D8+4	1	(8)	5/+1	20/+0	40/-1	60/-3	80/-6	Affixed, No Shard
	SS	1	4D8+4	1	(8)	5/+0	20/+0	40/-1	70/-3	100/-6	
	Disruptor	1	2D8	1	(8)	5/-1	20/+0	30/-2	50/-4	70/-6	Disruptor, Sphere 3m
Support.Projectile	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Disruptor Cannon	1	2D8	1	(8)	5/-1	20/+0	40/-2	60/-4	80/-6	Disruptor, Sphere 3m
Support.Indirect	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Disruptor Bomber	1	3D8	1	(8)	–	50/+0	100/-2	200/-4	400/-6	Disruptor, Sphere 3m, Min Rg 20
Heavy Disruptor Bomber	1	3D8+4	1	(8)	–	80/+0	160/-2	300/-4	600/-6	Disruptor, Sphere 5m, Min Rg 30
Melee.Tools	Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special; Skill
Battle Claw	1	3D8	2	8	Reach	–	–	–	–	Affixed
Hand-held grabbers	1	2D8	3	3	Reach	–	–	–	–	Compound SV; +2 St bonus
Plasma Claw	1	5D8	2	8	Reach	–	–	–	–	Breaching, Affixed

Affects:

This states the units or shots that are affected by the munitions, such as enemy only or units from either side. By default, those affected have to enter or start within the area of effect, or must have their shots pass through any part of the area of effect. Some unit types are immune to munitions and these are mentioned in a separate 'Immune' line.

Arc

Technology: N3+, N1B
Effect area: Sphere 3m
Type: Turn-to-turn
Affects: All direct fire shots, friend or foe:
Projectile/Primitive: -5 Acc; Energy: -3 Acc

Arc special munitions produce a localised, slowly decaying sink mass that affects projectiles and energy shots shooting through its area of effect. Overhead shots are unaffected.

Arc munitions also negate the effect of other munitions, as follows:

Newly launched: If any other special munition lands within the area of an arc it is destroyed and has no effect, even if immediate.

Existing munitions: If the arc's area of effect contacts any part of a special munitions marker already fired, then the existing munition is destroyed and its marker removed.

Cancellation: If an Arc lands within the area of effect of another Arc, then both are destroyed.

Blur

Technology: N2+
Effect area: Sphere 3m
Type: Turn-to-turn
Affects: All shooters

Blur shells use a variant of graviton manipulation technology to create a localised, spatial distortion. This makes it difficult for units caught within, or drawing LoS through, the affected area to identify targets accurately.

Any shots from within or through the Blur effect suffer a random shooting penalty each time they shoot: roll a D3 and deduct the score from the shooter's task check. If a unit is within the radius of effect of two or more blur markers then roll a D3 for each and apply the greatest penalty.

Grip

Technology: N2+, N1B
Effect area: Sphere 3m
Type: Turn-to-turn
Affects: All moving

Grip shells generate a hyperlight mesh, a maze of mass sinks that triggers whenever someone or something attempts to move through it. This has the effect of slowing down or stopping an individual completely.

Anyone moving into (or within) the radius of effect of a grip must make an Athletics check with St as the characteristic bonus. If this is failed, the individual cannot move at all that action; if the test is passed, the unit can move but its pace is reduced by half for the duration of its movement through the area of effect. This test must be carried out in addition to, and before, any other test such as one required to pass through bad terrain.

Scoot

Technology: D3+
Effect area: Sphere 3m
Type: Turn-to-turn
Affects: Living creatures, from either side who start their activation or reaction within the area of effect.

Scoot shells broadcast a sub-harmonic pulse that affects the nervous systems of living creatures - it cannot affect machines - rendering targets temporarily incapable. Against drones and the well-armoured vehicles of the advanced Antarean nations it is useless, but against more primitive machines that rely on human crew and against panhumans it can be highly effective.

Those within the area of effect individuals may only move, sprint, withdraw, dodge, phase in/out, dive to the ground or drop an item even if on OVERWATCH. They may not initiate any combat, nor react other than to dodge or run away from an attacker. If engaged in melee, they may defend themselves (though note that their attacker will not be able to reach them once they enter the area of effect, anyway).

Scrambler

Technology: N2+
Effect area: Sphere 3m
Type: Turn-to-turn
Affects: Non-friendly technology.

Scrambler is an energy field dispersant that showers the immediate area with aggressive nanites called nanophages. These target an opposing nanosphere and any technology they can find, compromising its ability to generate and conduct energy. Nanophages use up all their energy quickly before they are overcome by the nanosphere's defences, but whilst they are active they wreak havoc with defensive energy fields.

Scrambler only affects enemy technology of M0+ technology models: it does not affect friends. If any part of an enemy is within the area of effect, then they are attacked by the scrambler nanophages. The effects are drastic:

- Armour bonuses and capabilities from all armour fields/ projectors are nullified, including those from vehicle projected armour such as phaseshift shields.
- Buddy drones and probes cease to function whilst affected (but note that nano-buddies exude a scrambler field to counter this). They may drop to the ground and may restart when the field drops or they are carried out of the field.
- All enemy machinery within the area suffers a -2 DM to any attempts to use it (such as shooting) and, if they do not normally require them, requires task checks to activate or operate.

> **Design Note:** Scrambler is different to *Beyond the Gates of Antares* as we assume that a more general-purpose scrambler munitions is in use. If players wish, they could have multiple different types of scrambler munitions, one for each general tech level.

Slingnet

Technology: N3+
Effect area: Sphere 2m
Type: Immediate
Affects: All within area.
Notes: Awkward to use: -2 DM when shooting Suspensor Net

The hand-held mag weapons of the advanced nations can sometimes be equipped with slingnet ammo, a small calibre version of the suspensor net ammo used by larger launchers. Although it utilises the same technology it is much less powerful than the standard suspensor net and is only effective against lightly armoured targets. It can be used in a direct fire mode and in an overhead mode, but note that if used in melee it may well affect the shooter as well as the target.

A target hit by a slingnet round suffers no damage but aquires a **single point of sink mass** on top of any it may already have.

Suspensor Net

Technology: N1+
Effect area: Sphere: 3m (x-launcher); 5m (others)
Type: Immediate
Affects: All within area.

A net shell emits a strong suspensor pulse creating a temporary suspensor net that physically constrains the target. Given the dispersal of the suspensor net, net shots are unpredictable in their effect and are a useful, supporting ammunition type rather than a means of destroying enemy outright.

There is a finite limit to the effect of the suspensor net depending on the strength of the pulse: a target that is already heavily impacted by sink mass effects will not necessarily be affected further by a net shot.

Any individual or object within the area of effect suffers no additional damage but acquires points of sink mass up to a random determined value depending on the weapon used:

* x-launchers raise sink mass to D3 points;
* heavier weapons raise the sink-mass to D5 points.

If the value rolled is equal to or less than the number of points of sink mas **already** on the individual or vehicle, then the hit has no further effect.

WEAPON COSTS

Weapon and ammunition costs vary wildly, depending on the production FTL and into which FTL they are being sold. We have some guide prices in the weapons reference tables, but these are for good weapons at their GTL or higher and include appropriate sights and targeting software. When selling to lower GTLs, multiply the cost a trader would expect for it by 100% for each GTL lower than its production GTL, and perhaps +25-50% for sales at a lower rank within that GTL.

Of course, weapons and armour may become outmoded at higher tech levels but prices decrease significantly – perhaps by 40-50% per GTL. Ultimately, though, at the level of N1+ fabricators, the cost of such equipment is little more than the metal ore, carbon, silicon and organic substances used by the fabricators – a simple favour might do the trick.

Ammunition

> **Gameplay:** In the short space of time in which *Antares RPG* combat takes, ammunition supplies – outside of single-use grenades, javelins and their ilk – are rarely needed to be tracked. As a result, we recommend players and GMs only look at ammunition and supplies where absolutely necessary. Given the extensive size of Antarean ammunition clips and micro-fabricators in weapons, ammunition tracking should only really be needed in longer campaigns where PCs will not have access to easy resupply – at which point, managing such shortages should be key to the scenarios being played, such as supply dump raids.

Most N0+ sourced weapons automatically regenerate their ammunition after a period of time in a suitable nanosphere and after being fed suitable raw material. Energy weapons recharge after being plugged into, or placed near or in, a suitable recharging point – sometimes just an intense, friendly nanosphere will do. Those weapons initially created at a lower TL (such as mag weapons) but manufactured in and designed to a higher TL's specs (such as Algoryn mag weapons) will have such ammunition-regeneration features built in.

Of course, unless stated, ammunition like arrows or crossbow bolts will not undergo such auto-regeneration but a new sheath of such ammunition is needed. As a guide, assume a sheath of 20-24 separate, physical and bulky rounds costs around 10-15% of the cost of primitive weapons, whilst a magazine for more advanced weapons might cost 5% of the original weapon cost (the number of rounds being dependent on the weapon and the TL of its manufacture).

Fabrication Guide

Most lower-tech weapons should take less than 5m to manufacture from scratch in a fabricator, though this does not include ammunition. Mag weapons would take from 5m-10m, including compactor, but not including ammunition (which takes almost double the time for a full load).

The higher tech weapons such as plasma weapons take 10m-15m depending on size and/or sophistication, including power pack, though the Isorian phase rifle is an outlier here, requiring very careful construction and tailoring to its owner over a period of 30m.

(See the appendices for approximate costs of weapons)

ARMOUR

Armour can be incredibly complex in Antarean armies, so we've tried to simplify it. Armour is generally worn by an individual, but can be fitted to a device such as a drone or carried, as in a shield. It can even be applied to a fortification.

Armour may have a minimum Str to wear and may inflict an Ag penalty. The basic format of the descriptions of each armour suit are best seen in an example:

Example Reflex (ER)

Technology:	N2AS
Field:	+10 Sink
Shell:	8
Restrictions:	Min St 4+; Pen Ag-1
St bonus:	None
Cost:	¢500/1BP

Text…

This defines **Example Reflex** armour and gives a commonly used acronym, ER. The first line in the definition indicates where the armour is manufactured and can be found using a faction or general TL – in this case the Advanced Spill regions. This is also sometimes listed as 'Availability'.

The second line, Field: +10 Sink, shows the bonus protection given when the armour field is turned on and is active: in this case a reflex sink mass for 10SV. This line may state the type of field such as **HL** for hyperlight and **Sink** for reflex.

The third line, Shell: 8, shows the plating value – how well the underlying suit or armour shell can withstand damage on its own, in this case with a reduction of 8SV.

The Restrictions line details anything that prevents or limits the armour's use, such as a minimum St or other characteristic required to use the armour.

- Min St 4+ indicates a normal minimum Strength of 4 or more is needed to move well in the armour. If a character fails to meet the minimum characteristics at any point (such as through injury), they must make a St-based Athletics check **every** time they try to do something strenuous in the suit, otherwise suffer a penalty to the activity equal to the result of the failed check.
- After a semi-colon is listed the penalties a character suffers whilst wearing the suit irrespective of whether or not the armour is switched on. Pen Ag-1, for example, indicates the penalty is a reduction in Ag of one point whilst wearing the suit. Where a characteristic is reduced by armour, it is merely an *effective* reduction or maximum affecting the characteristic bonus: the full characteristic is still available for taking damage.

For example, the effective reduction to Ag 6 from Ag 7 by donning ASR means the character's normal Ag of 7 can still be used to soak up damage but their Ag bonus is based on Ag 6, giving +1 rather than +2.

The St bonus line indicates any additional benefits the armour might grant to its wearer, typically bonuses to St checks or absolute St. Such characteristics and bonuses are purely from the suit and may not be used to take damage.

The Cost line give a rough guide to the purchase price of the equipment from a typical Freeborn market or the number of Build Points that must be spent persuading contacts to provide the armour or equipment. The ¢ cost could vary widely if there are few sellers of the product or the armour is readily available; it may also be cheaper at higher tech levels (though this is not always the case as an ancient suit of armour would still be pricey!).

Game play: There is nothing wrong with GMs deciding to ignore this level of detail or even just ignoring the minimum St limits and applying the Ag penalties – as we often did in the playtest! Ultimately, it's the shell or intrinsic armour and the armour fields that count.

ARMOUR CAPABILITIES

We'll summarise some of the generally-available add-ons to each suit of armour. Much of the guidance here is just that: narrative guidance for a GM or player to reference when dealing with damaged equipment rather than absolute rules.

Conflict and Technology Guidance

We could go into huge detail here, but found it bogged the game down too much (too much grit). As a result, we recommend the following rules to reflect the advantages better.

- Apply a **-2 penalty** or **a +2 bonus** to interactions between weapons/armour across *each* technology boundary. This should include shooting and Perception/Stealth checks at ranges 20m or higher but could apply to other checks as appropriate; it should not apply to hand-to-hand combat.
  - The bonus/penalty should be reduced to **-1/+1** for ranges within 10m.
- Apply a **-1 penalty** or **+1 bonus** to interactions between the highest and lowest bands in a GTL (such as D0 to D3), or if handling an extreme set of differences between bands such as (say from D0 to N4).

For example, a Concord trooper in hiding shooting at a Retrograde Spill N0RS would gain a +1 penalty on their targeting, whilst the Retrograde Spill trooper would receive a -1 penalty to their checks to locate the trooper.

If the Retrograde Spill trooper had D3RS equipment, they would have a -2 penalty on trying to locate the Concord trooper in their chameleoflage-laden armour. The Concord trooper's targeting systems would also have an easier job locating the enemy trooper so would receive a +2 bonus to shooting.

At the same range, a shot from an M0 musketeer on the Concord trooper should incur a -4 or even a -5 penalty!

Chameleoflage

Advanced Antarean armour has adaptive camouflage called chameleoflage. This attempts to adopt the background radiation for all types of sensors, sometimes even fooling motion sensors depending on what they are triggered by.

Self-repair

When not being used or stressed in combat, the armour or item of equipment can repair itself providing it is within a friendly technological environment, such as a friendly combat shard. The minimum level such self-repair capability takes place is D3RS though Virai command drones are known to carry a repair micro-swarm that can repair their own armour or that of any drone within 10m.

The rate of repair is typically 10% per hour, plus twice the nanosphere technological level (so N4 or IMTel-based armour recovers at $10+4\times2 = 18\%$ per hour).

A suit of armour that has been virtually destroyed cannot self-repair.

Self-seal n

One of the perils of vacuum and environment suits is that their bearer is likely to die if the suit is punctured. Self-seal means the suit automatically and immediately seals any minor gashes of up to n% of the suit's surface. If the suit suffers more damage, it will have to wait for the suit to self-repair in the damaged area but can still self-seal elsewhere.

'n' is typically 5% at least, representing minor punctures, going up to 10% for the more advanced environment suits. Suits without self-seal leak and allow the outside, toxic environment into the suit or leak air out into a vacuum.

Sensors

The multitude of sensors on Antarean armour is baffling and we cannot hope to cover them all. The basic types we reference are as follows. All give a bonus to sensing in the stated band, potentially wiping out the benefits from chameleoflage or similar. On the more advanced suits, the sensors are also coupled with the suit's targeting array.

When not using the GTL difference rules above, sensors give an assist bonus of:

- +1 at D0/D1;
- +2 at higher D- GTL and up to N1;
- +3 at N2+; and
- can receive an IMTel bonus +4 if IPHC and IIS.

The types of sensors typically cover the following:

Visual or optical sensors typically also have a magnification to allow for telescopic enlargement of distant objects. **Lidar** uses invisible lasers to map out an area immediately around a suit's position. Appropriate sights on weapons are automatically assumed at the TL of the weapon and has factored in to the ranges and range modifiers. Advanced targeting such as sniper sights might increase the range bands.

IR sensors operate in the infra-red bands to sense heat.

UV operate in the ultra-violet bands and are perhaps not as effective as IR but often the presence of an object or person creates a shadow in the background UV radiation.

EM sensors look for the EM output of a suit of armour or equipment. **Radar** generally searches through the EM spectrum but can give away an individual's position so is not always used. Counter-EM capabilities (CEMA) try to block opponent's use of the EM spectrum.

Nanospore sensors are implicit in the advanced combat shards as the shard tries to connect to whoever it comes across.

Transponders with **IFF (Identification of Friend or Foe)** is a transmitter/receiver pairing that exists on almost all armour and communications equipment from D2RS+ and is often present on D1RS comms kit. It broadcasts the bearer's allegiance in response to a signal. IFF is implicit in nanosphere-level armour where a combat shard will always be identifiable simply from its nanosphere.

Armour Manufacture

Most higher tech (D3+) armour takes 15-20m to manufacture in a fabricator from scratch, including embedded power supply units (PSUs), comms and sensor capabilities, though this would not include any tools or ancillary equipment.

Lower tech armour typically takes 5m-10m in a fabricator, depending on sophistication.

As always, mass production requires more complex setup and configuration, as well as a great deal more space for the various feeds and logistics for the raw material and delivery of the finished products.

PRIMITIVE ARMOUR

A number of different types of personal armour were developed over the centuries and can still be found on Feral worlds. If wished, it can be purchased, typically using a single Build Point to do so along with any shield that is appropriate.

Where a helmet is mentioned but is not worn or available, reduce the SV by 1. Primitive armour is not affected by Scrambler and is invulnerable to EM, nanosphere or similar attacks unless stated otherwise. Shields only grant their bonus on a successful Primitive or Athletics task check.

Costs are stated here for comparison: the actual cost can vary by as much as +/-50%, depending on the scarcity of the materials.

Leather

Technology: Primitive P0
Shell: 3
Restrictions: Minimum St 3+
Cost: ¢25

This is a very primitive yet relatively easy to come by armour consisting of treated and shaped leather covering head, arms, legs and torso. It could be made by someone with a suitable Survival skill. It is a little cumbersome.

Padded

Technology: Primitive P1
Shell: 4
Restrictions: Minimum St 3+; Ag-1, maximum 8.
Cost: ¢35

Padded armour consists of heavy cloth enclosing plates or metal or similar and which covers much of the torso and thighs, like a hauberk, and with sleeves. Padded trews are often worn and a decent helmet is assumed.

Mail and Scale

Technology: Primitive P2
Shell: 6
Restrictions: St 4+; Ag-1, no Sprint
Cost: ₡300

Mail is a primitive suit of armour made from interlocked rings or circles of steel. It is flexible, but heavy. Scale armour consists of overlapping smaller pieces of metal sewn onto a leather or padded backing. It is tough, but flexible, and bearers often wear banded leg and arm protection. Some versions of scale armour are made from horn and have Shell 6, but are otherwise the same as scale armour.

Banded

Technology: P1
Shell: 6
Restrictions: St 5+; Ag-2 or maximum 6, no Sprint
Cost: ₡250

Banded armour consists of longer metal plates sewn onto a supporting substrate. Whilst less flexible than mail and scale, it at least allows some movement at joint but at the cost of less protection – joints typically being protected by little more that the leather or a few extra pieces of metal sewn on.

Plate

Technology: Primitive P2
Shell: 7
Restrictions: St 5+; Ag-1 or maximum 6; no Sprint
Cost: ₡750

Well-made plate armour consists of shells and overlapping solid pieces of metal that provide good mobility as well as excellent protection – though a full sprint is still not quite as easy to perform as many might have their minions believe. The suit comes with a padded inner garment to stop chafing and distribute the weight and, in many cases, strips of mail to protect the joints.

This level of plate must be made to roughly fit the bearer's size and cannot be readjusted.

Artisanal Plate

Technology: Primitive P3
Shell: 8
Restrictions: St 4+; Ag-1 or maximum 7; no Sprint
Cost: ₡1500 (3BP)

This differs from standard plate armour in that it is a later development, crafted by those who have many years of experience and centuries of steel development and armour design knowledge behind them. It is crafted to fit an individual and is unlikely to fit any who do not have the exact same physical characteristics as original owner.

Artisanal Plate is designed such that a shield is not needed: any shield used has it's shell protection bonus reduced by 2 (so only heavy shields can add to protection). It is costly, however, typically used only by the leading nobles and rulers of the primitive worlds on which it is used.

Small Shield

Technology: Primitive P0
Shell: +1
As weapon: 1d5, Contact
Restrictions: St 2+; Ag 3+
Cost: ₡15

Bucklers and small shields are an easy addition to the protection sought by lower order warriors on primitive worlds. Though light and easy to wield, they require some dexterity in order to fend off a blow. Their advantage is that they can be used as a melee weapon instead of protection, with d5 damage – such an attack replaces any attack the character would have with (for example) a ranged weapon in their off-hand.

Heater/Medium Shield

Technology: Primitive P1
Shell: +2
As weapon: 1d5+1, Contact
Restrictions: Ag-1; Min St 3+
Cost: ₡40

Such shields are larger and offer more protection, but can still be used in combat if necessary. Like small shields, they can be used as a melee weapon instead of protection – such an attack replaces any attack the character would have with (for example) a ranged weapon in their off-hand.

Large Shield/Pavise

Technology: Primitive P1
Shell: +3
Restrictions: Ag-2; Min St 4+; No Sprint; No check
Cost: ₡80

Still larger shields offer substantial protection but at the cost of being a little unwieldy. They cannot be used as a melee weapon – other than counting as an improvised weapon, simply because they are too bulky – but can be crouched behind with no task check required for them to add their shell bonus.

MID-TECH ARMOUR

The armour here is more advanced than the crude, primitive armour above but does not generate any protective field. It is generally available from Retrograde Spill worlds onwards, though is often unavailable in the advanced Antarean factions.

Ballistic

Technology: D1+
Shell: 4
Restrictions: St 2+
Cost: ₡250/0.5BP

Ballistic armour is seen on the more developed primitive worlds or on Retrograde worlds. It is typically constructed from a mix of materials that are meant to spread the weight of an incoming shot. They have limitations, some struggling with energy weapons whilst others struggle with blades, but this version combines defence against both ranged and melee fire and covers the whole torso and stomach, with optional components for limbs. In the field, they are accompanied by a steel or composite helmet which, in military versions, might even have built-in comms and cameras.

Heavy Ballistic

Technology: D2+
Shell: 6
Restrictions: St4+; Ag-1 or maximum 8
Cost: ¢600/1BP

This is a high-tech armour issued to front-line assault troops of Retrograde Spill worlds. The helmet it comes with has inbuilt comms and cameras, and may have IR, sometimes UV, and a heads-up display (HUD) on which maps and sensitive information can be displayed. The armour contains ceramics or alloys that offer decent protection against projectiles. The helmet is Vulnerable to Operations attacks and typically uses primitive radio frequencies: there is little that can be done to the helmet except to the data on the HUD.

Spill Combat Suit

Technology: D3+
Shell: 6
Restrictions: St4+
Cost: ¢1500/1BP

This is a highly advanced, full-body armoured suit from old-technology Spill worlds made from a mix of materials. The suit provides excellent protection whilst being light and easy to don. It contains some environmental controls, and can assist the wearer with its built in hostile and rarefied atmosphere breathers and filters (HAA, RAA equivalents - see the *Augments* chapter). When activated, its surface and heat capacitors offers some chameleon coating, providing a +2 equipment bonus to Stealth checks, the heat being reused to power the suit or extracted into a heat sink. After a few hours of use, however, the suit has to dump the excess heat: small, replaceable heat sinks are available but the user is visible whilst replacing or discharging the heat sink.

The suit has a basic self-repair capability, and is fitted with extensive HUD, sub-orbital comms, cameras and imaging technology, allowing an augmented reality to be displayed for the wearer as well as maps, selective, secure channels to squad, individuals or command personnel. The helmet has built-in zoom (digitally enhanced up to 100×) as well as limited vision into the IR and UV spectra, as well as enhanced audio and a light filter that reacts immediately to light that can damage the wearer's vision.

Like many lower-level technological devices, the armour is vulnerable to an Operations attack from superior technology operators. Whilst there is little that can be done to the helmet except to corrupt the data displayed on the HUD, its comms and other devices could, feasibly, be hijacked. The resulting false or missing intelligence is one reason that the advanced functions are kept for lower-technology worlds and deactivated when facing IMTel opponents.

Some Algoryn militia use field armour as do a few mercenary companies and some Feral troops in Freeborn employ. It is available from the Freeborn.

Heavy Field Armour

Technology: M,D0
Shell: 8
Restrictions: St5+; Ag-1 or maximum 7; No Sprint
Cost: ¢1500/1BP

Heavy field armour is an attempt by some Spill civilisations to upgrade their armour to offer more protection. However, the result is bulky and unwieldy and can significantly slow down its wearer. As a result, it is only used by heavy infantry when in the field against a like-armed enemy.

It should be considered to have much of the same technology built-in as Heavy Ballistic armour.

ZERO-G/SPACE SUITS

From humanity's first journeys into space, protection against the cold, heat and vacuum was needed. All such suits protect the wearer against the temperature extremes and light of space and the nearby sun, and also have built in comms and camera equipment – though such technology is typically unable to connect to technology of other periods. All have some means of human waste disposal or recycling and basic tools, simple survival items and repair kits are built into pockets in them all. All such suits have rescue beacons to signal their location should the wearer fall unconscious.

All such suits also offer protection against hazardous or toxic atmospheres, though corrosive atmospheres will eat through the components in times varying from one to six hours, depending on the corrosivity of the atmosphere and the self-repair capabilities of the suit – even if such self-repair is a pressure-seal above a serious rip in the suit.

Space Suits

Technology: D1+ (Retrograde Spill) to N0
Shell: 2
Restrictions: St 4+; maximum Ag 5, no Sprint
Cost: ¢3000 @ D1 to $300 @ N0RS

There are a wide variety of unarmoured space suits built by primitive worlds when they first journey into space. Such suits are bulky and restrict the wearer's movements and dexterity. Helmets are often cumbersome, often contain a limited water supply, and may have a HUD or internal readouts as well as chin- or eye-movement operated controls for lights or comms.

Such suits do not automatically repair themselves though most offer self-sealant capabilities in case of small punctures. Batteries can last up to 6 hours, maximum, though strenuous activity can reduce this.

Basic space suits are unavailable from any faction other than that at which they were first constructed.

Decompression suits

Technology: N1+
Shell: 3
Cost: ¢250/0.5BP

These are advanced, lightweight, vacuum or low-pressure environmental suits specifically meant for emergency use – IMTel ships carry them even in cabins – but which are often used when exposure is expected for short periods. Faceplates are clear but solid with edges that merge themselves onto the remainder of the damage-absorbing helmet to form an atmospheric seal and links to an oxygen supply and miniature breath recycling. Likewise, the boot soles are solid, magnetised and have micro-velcro to match with most airlock and moving surface exteriors. Built-in heaters and compression bands keep the wearer warm and help aid breathing.

Providing activity is kept to a minimum, the suit's batteries and air supply can last for up to 12 hours, though activity can

significantly reduce this. Swap-in recharge packs are available, each of which extends the life of the suit by another 12 hours. The suit helmets are often recharged via recharge points near emergency stations or airlocks. The suits can survive minor knocks and have self-repair capabilities that can cope with punctures or even tears up to the length of a finger.

The Concord and Senatex versions also have built-in, long-range (100km) IMTel connectivity.

Ghar Vac Suits

Technology:	DXGE only (Controlled DXGE)
Shell:	4
Restrictions:	Maximum Ag 5; no Sprint
Cost:	Not for sale (Ghar Empire only)

Ghar technology is primitive at the best of times, and their vac suits are one such example. Whilst they have all the functions one might expect, they are unreliable and require maintenance every time they are used (a Repair check). Whilst they are built for Ghar, so can take almost any small human, they are unpleasantly smelly (Ghar are none too clean, being resistant to much disease). As they are only used by maintenance techs and starship construction workers, Ghar vac suits have copious pockets and straps for tools and spare parts.

Very occasionally, they are used by Outcasts on or from ships as a form of armour. With their extended care towards Outcasts, it is not surprising that Ghar Exiles make as much use as they can of Ghar vac suits.

Ghar Flight Suits

Technology:	DXGE only (Controlled DXGE)
Shell:	3
Cost:	Not for sale (Ghar Empire only); 1BP for serving Ghar

Within their battlesuits, Ghar soldiers wear armoured flight suits. These are one-piece suits that provide connections with the armour for waste as well as allowing easy connection to the pilot's Spinal Plugs. The advantage is that the suits have a breather, which can protect against low atmosphere for a while, and provide some protection against cold and heat. The suits have a few pockets and come with a lugger gun in an in-built holster and ammo pouches for two reloads of 10 rounds each.

Ghar Battlesuit

Technology:	DXGE (Controlled Ghar)
Field:	+5
Shell:	12 (structural 20, damage points 15:15:20)
Restrictions:	Must be Ghar sized; spinal plugs; Max movement 4; Ag bonus for Movement=-2, shooting=+0; St bonus for H2H attacks = +5; vehicle
St bonus:	Equivalent St of 15+ (+5 St bonus)
Cost:	Not for sale

The Ghar battlesuits are three-legged, zero-g weapon systems with compressed gas jet outlets across its surface. They provide a sealed, though uncomfortable working environment for their Ghar operators. The suits have internal supplies for up to a week, more if organic material can be fed into the suit's food processing hopper (it tastes foul but is edible for a Ghar). The air supply is recycled and reprocessed and can last for up to a week if the compressed air is not used excessively.

The suit has basic chameleoflage and stealth coating, and offers superb protection. It also offers integrated targeting and sights (+1 when using the built-in weapons), a 'combat array' with friends/foes marked on an unwieldy but effective HUD.

The suit's biggest drawback is that it can only be used by a Ghar and is difficult to maintain for non-Ghar (a -4 Origin penalty, not -2). The St and Ag bonuses are integral to the suit, irrespective of the wearer's current damage, and the suit's integral St of 15 gives a normal +5 bonus to St checks.

A Ghar battlesuit can be fitted with a battle claw or plasma claw on one of its arms and either a gouger gun, scourer cannon or disruptor bomber on the other. On suits with gouger guns, there is spare power capacity to mount disruptor dischargers – the other weapons use the same space and power for disruptor ammunition supply.

REFLEX ARMOUR

Reflex is a projected, permeable, low density hyperlight armoured field – sometimes called an envelope or shield – that extends around the bearer or carrier. Reflex armour absorbs energy, stopping physical objects as well as pure energy-based weapons by converting kinetic energy into a mixture of light and sink mass. This limits their effectiveness because sink-mass itself poses dangers, a recoil that can knock a character over or cause internal damage.

A reflex field's sink mass absorption on panhuman armour is limited to just below the maximum level a panhuman can carry without being crushed. This is sometimes enhanced if the suit has a supportive strength boost or power enhancement. The strength support is taken to its limit in Algoryn Hazard armour where multiple reflex generators are layered on top of one another.

Embedded reflex emitters (as implanted by Boromites) are also reflex armour (see *Reflex Plates, below*). The Vorl's synthesis armour is thought to operate in a similar fashion to reflex but receives a significant boost from other Vorl in close proximity to the wearer, distributing the sink mass load amongst all in the immediate combat shard.

Reflex Environmental Protection

Reflex fields on their own – that is, without any underlying shell – can retain enough air and provide isolation from hot or frigid environments for up to 30 minutes before the air and temperature deteriorates beyond panhuman.

If GMs wish to determine a more exact time before the temperature/air is too poor, assume a base of 15 minutes plus the character's En stat, plus five minutes for either a HAA or RAA, and two minutes for each of: a Zero-G bonus; a Rugged(vacuum) trait; and a relevant ESA, such as (arctic) or (vacuum) (or perhaps desert if exposed to substantial heat).

The result should be reduced by five minutes if the character is undergoing substantial exertion during the period such as being involved in combat or running.

> *For example, Tyrett is ejected into space following a shipboard attack. Luckily, she has some Freeborn armour with reflex emitters, which was already active when she was ejected from the ship (no doubt picking up a Sink Mass point from being protected from the explosion).*
>
> *Continued…*

> *Example, continued…*
>
> *Tyrett has an En of 6, an HAA and RAA, plus an ESA 1(Arctic), Zero-G+2 and Survival(Arctic)+4. The Survival skill does not count as Zero-G effectively being the survival skill required for the purpose of surviving in a vacuum.*
>
> *With her Reflex armour turned on, Tyrett could survive for a total of 15 minutes plus:*
>
> *+6 from En;*
>
> *+5 from RAA/HAA – only one counts;*
>
> *+2×(ESA 1(Arctic) +2 (Zero-G));*
>
> *for a total of 32 minutes. She has time to call for help or perhaps find an emergency lifeboat amongst the wreckage into which she can crawl.*

Reflex Sink Mass Rule

A point of sink mass is accumulated every time a shot hits an active reflex armour field, irrespective of how much damage hits the field.

The sink mass is not activated if a higher-level armour field, such as accompanying hyperlight, absorbs all the energy (damage) of the incoming shot before it reaches the reflex.

For each point of sink mass, penalise all tasks involving Ag and St with a DM of -1, including shooting or hand-to-hand.

Sink mass is reduced by 1 for each round of combat the armour is not hit or if the armour field is turned off, then on, again (a simple action, for each). A shot half-way through recovery merely adds a point of sink mass to the current total.

> **Game play:** Small markers or chits or 'pin' markers from the tabletop wargame are useful for showing the amount of sink mass a character has accumulated.

> *For example, an Advanced Spill Reflex suit hit four times would have a sink mass total of -4, and would take 4 combat rounds of not taking a hit before functioning, again: it may be easier to switch it off and on! If hit half-way through the recovery, say when it was at -2, the sink mass penalty would just increase to -3 (just add another marker).*

Iso-suits/Enviro-suit

Technology: N1
Field: +8 Sink (Iso-suit only)
Shell: 3 (Iso-suit, Enviro-suit)
Cost: ¢500/1BP

> **Design note:** Enviro-suits are used as a template for many armours at N1+ TL. Though not stated, the more advanced the technology, the longer the ranges of comms and transmitters, even within the Nanosphere GTL

Environment support suits of some kind or another are used by all the major panhuman factions for planned or frequent excursions into vacuum, toxic, low-pressure and corrosive atmospheres and even underwater. Though the suits have HAA (hostile atmosphere augments) and RAA (rarefied atmosphere augments) to extend life support time, they can provide insulation, life support and recycled rations, air and water for up to 24 hours, with a week's replacement atmospheric replenishment unit kept in the suit's built-in compactor (it takes a Basic action to replace the packs and another to decompact or compact the spare). Also in the compactor are limited energy snacks which can be consumed using the suit's food exchange, should food be needed.

Much of these suit's functionality is provided by the Antarean nanotechnology and includes everything described in the decompression suits, and more. The more extreme morphs such as Boromites, Krasz or Shen-lat, need the suits to be tailored to them, a task taking about 12 hours to complete whilst the suit grows or contracts, but otherwise the suits quickly adapt themselves to most other morphs similar to the Vyess, Hantale or Gyohn. Aliens such as Krasz, Askar or Tsan have to have their own, purpose-built iso-suits whilst the Vorl rely heavily on armour fields. Once moulded to the bearer, any of these nanosphere-tech iso-suits adapt quickly to the wearer's needs and actions.

The suit's boots have intelligent 'adhesive' capability, whether magnetic, hook-style links or adjustable pads to cope with low gravity. Strong umbilicals are also a built-in part of the suit, the primary being 40m and the secondary 20m long, both of which are able to transmit and receive comms, computing results and power if plugged into a suitable ship surface socket; otherwise, the umbilicals are useful to tether to a surface mount or something similar (many ships have at least surface hooks to tether to).

The built-in multi-band, encrypted comm units enable a wide range of secure communications and comms boosters (up to 100km) with sub-vocal or MyIMTel/MyShard implant modes of operation. Locator, IFF and distress beacons are standard, as is HUD geolocation, mapping and target acquisition, small holodisplay projectors, tool interfaces. IMTel connectivity and nanosphere generation is standard in IMTel-built suits.

The suit is self-repairing to a large extent. The power supply can keep the Reflex field operational for four days without needing to be recharged or replaced, but advanced N2+ models (such as from the IMTels, Freeborn and Algoryn) can recharge themselves using the heat, light movement and whatever external energy source or differential the energy nanospore can use: a trapped, shaded suit could not make much of an improvement beyond a week. Alternatively the suit can be plugged in to a power supply (PSU) or placed beside a nanosphere recharger and recharged within 15-30 minutes, depending on the FTL of the suit.

The suit is festooned with sealed pockets in which is stored a wide range of compacted repair tools and medical equipment, including 20m of 1 tonne cable and terminator hooks/seals, a 2-person pressure tent with a supply of compressed air for two inflations (it can be connected to another to allow for a partial air lock), and three plastic explosives (equivalent to plasma grenades) to use for clearing rubble. It also carries a flare pistol with five rounds of combined light/noise/comms beacon ammunition – the maximum height of the flare on a normal gravity world is 50m and it descends slowly in the grip of a microsuspensor-chute.

Iso-suits are often found aboard military ships of frigate size or above and are provided to those crew who do not need armour but have to work in hazardous and potentially dangerous environments.

Enviro-suits are a cheaper and unarmoured version of iso-suits that are standard equipment aboard all survey ships of N0+ or above. Non-military ships and Freeborn ships that are expected to send away teams into difficult environments often carry enviro-suits.

Advanced Spill Reflex (ASR) Armour

Technology:	N2AS, N3V
Field:	+8 Sink
Shell:	6
Restrictions:	St4+; Ag-1
Targeting:	Assist bonus to shooting +1
Cost:	¢1200/2BP

This extremely common reflex armour used by the more advanced Spill nations is overlaid onto an underlying shell that helps distribute the sink mass around a wearer's body so it is not too burdensome when triggered. It has similar capability to the iso-suit reference template, though survival capabilities have been extended to 48 hours on each PSU.

ASR armour has chameleoflage, a bulky compactor, plus numerous external storage areas for items that cannot be compacted such as the spare power supply. The primary PSU can be switched over to the backup with a Complex action. Typically, the unused PSU is then recharged whilst the other is in use

Sensors include optical enhancement, multi-spectrum EM, UV, IR and low-light, and the helmets have external cameras and recording capability. When not wearing the retractable helmet on the battlefield, the elite vardanari tend to wear the suit's head-gear as a badge of office with an augmented reality eye-patch; vardanari equipment (not for sale!) gives them a +1 targeting bonus when shooting weapons linked to their armour.

Advanced Spill reflex armour is available on any Advanced Spill world or from Freeborn at a very reasonable price.

AI Armour

Technology:	N2AP, Controlled(Algoryn)
Field:	+8 Sink
Shell:	9
Restrictions:	Max Ag 8
St bonus:	Assist bonus to St checks of +1
Targeting:	Assist bonus to shooting +1
Cost:	Not for sale

This is similar to the ASR above with the addition of additional equipment to aid battlefield survival or wild living, plus a 96-hour 'live reflex' window for each of the PSUs.

The AI battlefield extensions gives Algoryn infantry a +1 targeting bonus when shooting weapons linked to the suit.

> **Gameplay:** When it comes to an Algoryn who has happened to retain their armour (which should be very difficult in the first place and only likely for a stranded and isolated soldier), we recommend a GM just says 'yes' to an appropriate tool a player may claim is in his AI armour.
>
> Ma'Req try to obtain as much black market AI armour as they can, so it could be argued that an unscrupulous Algoryn from the Ma'Req could obtain AI Armour – but perhaps at the cost of 2BPs or several favours.

Algoryn SD Hazard Armour

Technology:	N2AP (SD only)
Field:	+8 Sink; plus +8 Sink; plus +8 Sink
Shell:	10
Restrictions:	Max Ag 5, Max Mv 4
St bonus:	Assist bonus to St checks of +3
Targeting:	Assist bonus to shooting +1
Cost:	Controlled(Algoryn SD) – not for sale

This is a secretive armour produced by the Algoryn's Special Division scientists to help the Prosperate fight the Ghar. Built into a Hazard suit are power feeds for a distort spinner and an Algoryn-pattern plasma carbine. The suit is otherwise equipped as for AI armour but only lasts for four days before needing recharge and is complex (-2) to maintain if damaged – the main reasons for it being left in the hands of the SD, irrespective of the SD's secretive nature.

Note that the suit has three sets of armour fields, each of which soaks up damage in turn, potentially leading to +3 sink mass pins from a single hit. This means that whilst the suit protects well, it can slow down its users if they take too much damage too quickly. The base shell armour bonus of 10 points is not to be sniffed at, however.

Embedded/Boromite Reflex Plates

Technology:	N1B, N2+
Field:	+10 Sink (Boromite); +8 (Other)
Shell:	0
Restrictions:	St6+, maximum Agility 8 (Boromite); St5+, maximum Agility 9 (Other)
Cost:	¢300/1BP

These are armour projectors which project Reflex armour around the bearer. The individual must already have substantial body plating to support the Reflex emitters without them ripping off the bearer's skin or causing burns: the Gnarly trait would be sufficient, for example. Bearers must have a good, normal St to withstand the pressures of the sink-mass.

The nodes need to be recharged after a week of regular use, typically from a standard recharger field from the recharger carried by most Boromites – unfortunately not from a nanosphere field. After running out of charge, the plates can generate small fields based on recharging from body heat and movement, but the sink is only +2.

When a Boromite receives the Embedded Reflex Plates benefit during character generation, they can choose either type of reflex plates.

Freeborn Composite Shell

Technology:	N3V
Shell:	6
Restrictions:	St3+; Ag-1
Cost:	¢200/0.5BP

Whilst not reflex armour, this is a basic shell given to domari onto which Freeborn reflex nodes can be placed. It otherwise resembles a smooth shell adapted to the bearer's torso with leg and arm attachments and a collapsible/retractable helmet. It provides basic comms and locator beacons.

Most Freeborn domari use such a shell, adding reflex nodes as and when they can afford them, and adding in a combat helmet to aid with shooting.

Freeborn Reflex Nodes

Technology: N3V, N2AS
Field: +9 Sink
Shell: 0
Cost: ₡350/0.5BP

A light reflex field generator consisting of a number of nodes that are easily attached to or detached from any underlying substrate, whether a shell, a uniform, clothing or similar.

The nodes are powered from an in-built nanosphere-based generator that can function for two weeks without recharging, but which can recharge itself providing it has something to use: motion, temperature differential, radiation (even relatively harmless, like strong light). The nodes come with a spare, fully-charged generator, however, which can be recharged from almost any power source on ship.

Impact cloak/web

Technology: N3V, N2AS
Field: +6 Sink within 3m only
Cost: ₡250/0.5BP

Impact cloaks and webs impose a reflex shield over a small area that is imprinted with multiple node channels. This is typically on Freeborn impact cloaks, on physical shields given to Feral warriors or onto clothes or even plain armour where the field generator lines can be worked into an intricate pattern.

Impact cloaks are powered from the same type of nanosphere based generator used for reflex nodes – and, indeed, are often powered from the same generator rather than force several to be carried at once. Whilst this can shorten the power life of the generator to a week, the advantages are easier field maintenance and supply.

It is worth noting that an individual wearing an Impact Cloak or shield over their normal armour would receives a point of sink mass from damage absorbed by the cloak and, if that is penetrated, from any underlying armour, as well.

HYPERLIGHT ARMOUR

A hyperlight field converts incoming energy to light – a flare – that dissipates the energy. Hyperlight overlays a reflex field and relies on the underlying reflex field, so cannot be taken independently.

Hyperlight generators are typically complex, big and bulky – only the IMTel nations have made them man-portable (and the Freeborn have stolen the plans).

Hyperlight Fields

A hyperlight field converts incoming energy to light and radiation, including near-visual wavelengths such as infra-red and IR. A bearer of hyperlight feels nothing, but those around them may feel warmer – unless armoured, of course.

If incoming damage is such that the hyperlight field deflects it all, then the underlying reflex field is not effected, so no sink mass is generated. As soon as any damage goes through to the reflex field, then sink mass is generated, as normal.

Hyperlight Range Limitations

Hyperlight fields do not work if the target is not prepared. This limits its effectiveness to handling shots from ranges beyond **5m**.

Vehicles dropped by orbit with a hyperlight field are well aware that the ground is 100km away and approaching fast so is well-prepared!

Each time a hyperlight field is hit, it generates a burst of light – called a flare – which pinpoints the bearer's position. Add +2 situational bonus to any Perception checks made to pinpoint the bearer within a round of the bearer's armour flaring. Whilst this flare makes detection easier, the problem with flare of light is that it is too intense, somewhat nullifying this advantage!

Mixed Hyperlight and Reflex

Hyperlight suits have both underlying reflex and the overlaying hyperlight armour fields. The suit users can turn off their overlaying hyperlight fields, should they wish, and also both their reflex and hyperlight fields. The reflex field cannot be turned off separately as the hyperlight field relies on its existence.

Hyperlight armour is always hit, flares and soaks damage first, before reflex armour.

NuHu and Armour Fields

When equipped with a combat-enabled nano-buddy, a NuHu generates an armour field covering them and their buddies appropriate to the faction to which they belong (see below):

- Concord NuHu have armour fields matching C3 Hyperlight Armour with EFR;
- Senatex NuHu have fields matching Isorian Phase Armour with Phasing; and
- Renegade or Rogue NuHu have armour fields matching Freeborn Resharded Hyperlight.

C3 Hyperlight Armour

Technology: IPHC (Controlled Concord)
Field: +10 Sink ;
+8 HL;
+8 Enhanced Field Response HL@>=10m or vs Sphere/blast effects
Shell: 8
St bonus: Assist bonus to St checks of +2
Targeting: Assist bonus to shooting +2 (including +1 IMTel); extend range bands by 20%
Cost: Not available for sale

Hyperlight is a purely Concord armour that relies on the IMTel and a C3 shard to operate. The enhanced field response (EFR) function is a result of the IMTel being able to predict the effects of a blast effect such as from Sphere, or a long-distance or an overhead shot, so focuses the HL and reflex fields to compensate, adding an extra +8 to the normal HL field bonus for 32 points of protection.

C3 Hyperlight armour is much more than just protection. It offers substantial protection from the environment (+5 DM to resist the effects of adverse environments), and has minor servos in the suit joints adding extra strength.

The suit has all the capabilities of an iso-suit mentioned in the *Reflex Armour* section, plus: almost unlimited audio-visual recording; long range shard connectability; extensive comms to 10km on the ground or 300km+ line of sight with some atmospheric layer reflection. It also has built-in EM and counter-EM emitters, substantial magnification, plus the Concord's Weapon-Armour Synchronisation and Targeting Enhancements (WASTE), giving a +1 targeting bonus on top

of an IMTel bonus, with another +1 when at least one aim action is used to fire a linked weapon.

The suit automatically records sensor images which it normally uploads to an orbiting C3 ship.

The generator is said to last for weeks without refueling or recharging, but the suit also has internal rechargers from solar and radiated energy as well as from leeched physical activity.

C3 Hyperlight Armour will not function without a Concord IMTel shard to enable its advanced functions or to identify the user as IMTel.

Isorian Phase Armour

Technology:	IIS (Controlled Senatex)
Field:	+10 Sink;
	+8HL;
	OR Phasing
Shell:	10
St bonus:	Assist bonus to St checks of +2
Targeting:	Assist bonus to shooting +2 (including +1 IMTel); extend range bands by 20%
Cost:	Not available for sale

Phase armour is identical in many respects to C3 Hyperlight Armour except that in place of EFR it allows a user to phase out and back into our dimension. Phasing is extremely wearing, however: every round spent out of phase **reduces the user's In by one** until they become unconscious. When the suit senses a user passing out, it drops the phase field and returns to normality. Though there are numerous safety features, it is theoretically possible to leave a user (and the suit) permanently phased out of normal existence.

Whilst phased out, a user cannot move, shoot nor carry out any action that affects normal reality – not even medic checks. The advantage is that most of the energy of a shot passes right through the suited person, excepting damage from high-energy weapons like plasma weapons and directed-energy weapons. Such weapons only do half damage to the phased individual but, as the hyperlight and reflex armour fields do not function whilst phased out, they cannot be used against the shot: the composite shell is still partially effective, however.

Phasing in and out is a **simple action** in combat, normally carried out as a reaction. When phasing in, the reflex and hyperlight fields are restored to their previous setting (on/off).

Resharded Hyperlight

Technology:	N3V only
Field:	+9 Sink;
	+8 HL
Shell:	8
St bonus:	+1 assist to St checks
Targeting:	Assist bonus to shooting +1; extend range bands by 20%
Cost:	₡3500 or 3BPs

Freeborn resharded hyperlight armour is IMTel armour that has had its nanospore and generators replaced with neutral alternatives. It loses the advanced functions, such as IMTel connectivity, WASTE, EFR and phase capabilities, but is otherwise identical to the original armour with a slight lessening of PSU lifetime (two weeks).

Freeborn Head Comm System

This is worn by Boromites and Freeborn and mercenaries who prefer to go bareheaded or retract their armour's integral helmet. If not linked to a suit of armour, it provides binocular vision×100, a battlefield HUD display and target assist when tied into a weapon (+1, typically). It also has near-field connections to a wearer's jaw and throat that allow near-subvocal communication.

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BUDDIES, DRONES AND PROBES

Buddies and probes are small, semi-intelligent drones designed to perform a specific task, whether on the battlefield or in everyday life. Larger drones, such as the Concord's multi-role D1 series, have a machine intelligence approximating that of a human and are given additional capabilities to match their role, such as squad close support (C3D1) or demolitions (the D1/GPD). Other drones have mindstate recordings downloaded into their logic matrices so that an individual can either continue their life temporarily in an artificial body whilst a clone is grown or, in rare cases, live a new life in an artificial body – as epitomised by the Senatex' drone commander, Xan Tu.

This chapter mostly deals with the equipment that PCs are most likely to want to obtain and use, though we'll run through a brief history and overview of Antarean drones.

DRONE EVOLUTION

Buddy drones are an integral part of the more advanced civilisation's everyday life. They carry out specialised, useful functions; indeed, many individuals amongst the Concord, Freeborn, Senatex, Prosperate and Boromite clans have their own, limited intelligence, helper buddies (see *Helper Buddy*, below) to assist them in their day-to-day tasks. Helper buddies, in particular, are a common site around ships' crew, assisting with the day-to-maintenance, repair and operation of a ship.

Drones with advanced machine intelligences are most likely to be seen amongst the Concord, Freeborn and, to a lesser extent, the Senatex, the Tsan Ra being uncomfortable around drones. Drones are most prevalent within the PanHuman Concord and the C3. For the Algoryn, the lack of intelligent drones is primarily cultural as opposed to a lack of manufacturing capability.

In N0 and D- rated GTLs, the main problem with intelligent drones has been one of miniaturisation. Whilst drones of one type or another have been around from as far back as GTL D0, early drones were typically tracked and remotely operated robots. As technology improved, increasing amounts of reasoning was able to be placed on board but it was still constrained by the huge amounts of training and computing power needed for the complex and often dangerous tasks to which they were put. It is not until GTL D2/D3 that smaller, adaptable machine intelligences were created with the ability to learn from the world around them.

Development of machine intelligences branched off into several different directions. The IMTel nations and their peers used designs that enabled smaller, capable buddies and highly intelligent, larger drones. The Ghar's battlefield flitters reflect their DX origin, needing careful direction and, occasionally, control from a remote operator – their bomb buddies are directed from the squad to which they are assigned. In contrast, the more advanced Virai have fewer, general intelligences coordinating a great many, capable, but still limited, worker drones.

The interstellar ships of Antares could be seen as drones in their own right. The ships of the Freeborn and IMTel nations have their own personalities and, in the IMTel nations, have their own IMTel shard, co-opting other machine intelligences in the ship and their crew to shape a unique subset of the IMTel.

BUDDY & PROBE OVERVIEW

Before we explain drones, probes and buddies in more detail, it's useful to go over a few terms:

Buddy drones or buddies are personal assistants assigned to an individual or small group and given a particular task depending on the equipment and algorithms they are given;

Probes are semi-independent drones about the same size as buddies and with similar equipment and intelligence – they perform a specific task on the battlefield and can be easily taken over by a remote operator;

Drones are larger, general purpose machines with broader purpose machine intelligences supported by specific battlefield functionality and supporting routines, be they tactical or strategic in nature – it could be said that their current function is dictated by their bodies but they could turn their manipulators to other tasks;

Virai drones are slightly different in that their worker and combat drones take a great deal of direction from their controller drones, or architectors – whilst an individual's intelligence and capabilities is high in the role it is assigned (mining, scavenging or combat), it is less flexible beyond that role and needs guidance.

The primary difference between civilian grade buddies and probes and those in the military have an outer, armoured shell and are hardened against infiltration. Here, we reflect general usage by using the suffix '-drone' for civilian probes, though this is a colloquialism eschewed by military personnel.

This chapter deals primarily with buddy drones and probes.

DEFAULT DRONE STATS

Probes and buddies are given a BP and ¢EU cost. Most one-build-point (1BP) probes and drones are issued to combat teams on the basis of need, such as spotter buddies for IMTel combat teams, but personal variants of any probe or buddy may be acquired during gameplay or at the end of character generation.

In general, to acquire a personal probe or buddy, a character need only spend a BP to persuade a provider to give them one.

Up to a complete shard of personal buddies and probes can be stored in a buddy compactor or larger (see *Compactor pads/blocks*, below), though any built-in compactor must be removed and stored separately – compactor devices cannot be stored in compactors!

Probe Stats

In combat, probes receive their own order dice and act independently, able to perform any actions within their operating boundaries and have two Beats and a Free action.

A probe:

- has **Mv10**, though this may be reduced by any sink-mass the probe receives;
- has suspensor technology, operating at a maximum height of 5m above the ground (which drains the PSU within 30 minutes), normally 2m (which has no additional drain);
- is a tiny target (-2 to hit);
- has one or more skills with which it can perform Task Checks or Assists;
- typically operates in an independent combat shard with up to 9 other probes – each shard is activated on a single action dice, but note that transmitting data is still required, which may hamper movement;
- cannot perform any action that can or must move into contact with enemy;
- cannot defend itself in hand-to-hand (so cannot melee);
- has the equivalent of **Ag 12 (+4 bonus)** when attempting to dodge incoming fire or to calculate its sequence of activation in a round;
- lasts for four days before needing a recharge.

Unless stated otherwise, assume probes here are military grade, intended for battlefield use and so are combat-shelled.

- **All combat-shelled or military probes** are Vulnerable-4 to Ops.Remotes attacks (that is, a **Tough** task check), but if compromised the probe self-destructs – the self-destruct cannot be bypassed as it is essentially electro-mechanical rather than reliant on a nanosphere.
- **Civilian probes** are Vulnerable+0 to Ops.Remotes attacks, but shut down as soon as they are compromised.

Buddy Stats

Buddy drones are generally just referred to as 'buddies'. A buddy must be assigned to a character and moves when they move and acts when they act. There are some general rules around buddies, so unless stated otherwise a buddy:

- has **Mv5**;
- operates at a maximum height of 5m above the ground – normally 2m;
- is a tiny target (-2 to hit);
- lasts for a week before needing a recharge;
- has one or more skills with which it can perform Task Checks or Assists;
- operates within a combat shard consisting of a squad of living beings, a weapon team or a vehicle;
- cannot perform any action that can or must move into contact with enemy;
- cannot defend itself in hand-to-hand (so cannot melee);
- has the equivalent of **Ag 10 (+3 bonus)** when attempting to dodge incoming fire
- must be assigned to a member of the team and must remain within 5m of the character to whom it is assigned.

Buddies are activated and move when their current controller is activated. Assigning the buddy to another or taking control from another is a Free action. The buddy can still only be activated once per round, so if it has already been activated, it cannot then be reassigned in this round.

Unless stated otherwise, assume buddies here are military grade, intended for battlefield use and so are combat-shelled.

- **Combat-shelled or military buddies** operating within a combat shard are Vulnerable-6 (Challenging) to hostile Ops.Remotes attacks, but give out a warning as soon as they are compromised – normally, they require a complete shutdown (a **Transmit** task from an Ops.Remotes or similar skill) and a reboot from manufacturer's defaults. If isolated, they are treated as probes as it is the proximity of a friendly nanosphere shard that boosts their immunity.
- **Civilian buddies** are Vulnerable+0 to hostile Ops. Remotes attacks, but also give out a warning when compromised as for combat buddies.

A buddy is treated as any other individual in combat but with two beats and no Free Action. They can: Move; Sprint; Shoot (if it has a weapon); perform a Basic or Complex Activity or Assist (one or two-beat) related to their tasking; Transmit; or use a beat to Dive or Drop to the floor.

Sacrificial Buddies

Instead of **reacting** with a return shot or a dive to cover, a NuHu can sacrifice a buddy in their combat shard to absorb the impact of incoming shots. This is called a **Sacrificial Buddy** reaction and only one buddy can be used per incoming shot.

To make a Sacrificial Buddy reaction, a NuHu must succeed at an Ops.Remotes or a Nanospore.Control/IMTel check. On success, a friendly buddy within 5m of themselves and 2m of the line of fire (LoF) of the incoming shot is moved into the LoF and the shot hits the buddy. If the buddy is destroyed (any field armour + Shell 10 + Damage Points 10), any damage remaining is applied to the NuHu, as normal.

If the sacrificial buddy is covered by the NuHu nano-buddy's armour field, care should be taken to not apply the field's protection twice – it only applies to the initial hit on the sacrificial buddy: after that it is within the armour field.

PROBES

What Antareans now regard as 'probes' first made their appearance during the early digital/late mechanical ages with remote-controlled, tracked devices. There are probes built for a number of specialised tasks, but the most common are as follows.

Medi-buddy / -probe / -drone

Technology: D3+
Shell: 10 combat; 2 civilian
Damage Pts: 10DP
Benefit: +2 assist to Medic checks in 3m
Cost: ¢1,000/2BP (combat medi-buddy/medi-probe);
¢500/1BP (civilian medi-drone)

A medi-buddy, medi-drone and medi-probe are virtually identical other than one has buddy stats and acts as a buddy, the other two are probes and act as probes, though the medi-drone is a civilian colloquialism for an unshelled medi-probe. Both are designed to offer battlefield first aid and symptomatic relief, but civilian versions are used in hospitals for assists during surgery or recovery.

All such drones have a hand compactor into which is stored a wide array of medication, antiseptic and healing/sealing sprays, analgesia, antibiotics and even anti-virals. Medi-probes and buddies have manipulator arms and injectors but

are also equipped with a few manipulator fields which are also used to deliver stored medications to those in need.

A medi-drone, -buddy or -probe has the following benefits to allied personnel, each of which is considered a 'use' for replenishment purposes unless stated otherwise:

- automatically grants a +2 assist bonus to medic checks within 3m without having to make an assist check – this also uses up stored supplies;
- grants a +1 assist bonus to medic checks within 5m without using stored supplies, though this cannot stack with bonuses from cognitive implants;
- can act as a dedicated assistant for long-term recovery (see 'Long Term Care' in the *Core System Guide*);
- Refer to the medi-kit rules on p.51 for rules on 'units of assistance' for Medic checks, but the medi-drones have enough supplies to give 15 units of assistance.

From GTL N0+, the -drones, -probes and buddies can also:

- give personnel within 5m a +1 DM to any rolls on the Serious Injury table – this also uses 5 units of stored supplies that are decompacted onto the patient's;
- be classed as carrying their own Combat Medi-kit (see p.52) that allows the drone to move alongside a dangerously injured or dying individual then use its manipulator fields and stored supplies to make First Aid, Stabilise or Revive actions;
- carry out longer-term, post-combat Medic checks with a total bonus of +6 (+4 skill/machine intelligence, +2 for internal supplies) with a possible +1 for any IMTel assist allowed.

A medi-probe or medi-buddy takes around a 30m to construct in a suitable fabricator – though many are available from stock. Equipment refills are a negligible cost for members of the IMTel nations or Freeborn, though may cost ¢50-¢100 from an appropriate vendor for other nations (the compacted supplies pack are designed to be replaced completely).

Medi-drone

A medi-drone is a civilian version of a medi-buddy. It has the same capabilities and is Vulnerable+0.

Scout Probe/ Spotter Buddy

Technology:	D1+
Field:	+6HL (if N3+);
	+8 Sink (if N1+);
Shell:	4 (10 if N1+)
Damage Pts:	10DP
Benefit:	+1 assist on direct fire shots in shard within 5m (spotter buddy)
Cost:	¢400/1BP

Scout probes are built for forward observation and scouting work in hazardous environments, particularly where it would be dangerous to send in a living person. Spotter buddies are similar but are attached to a combat shard.

Scout probes/spotter buddies have Perception+6 for the purposes of seeing hidden opponents or objects. They do not have a characteristic bonus to add to this, but may add a +1 IMTel bonus in the field, or +4 if in an IMTel- saturated nanosphere (as opposed to the normal +2: the nanospore itself responds to the buddies requests for information). Rarely, however, do spotters and scouts operate in an IMTel-saturated nanosphere.

Scout probes can be sent out into the field on a patrol route (Ops.Remotes is useful, here) and subsequently returning to its operator or within comms reach of a control point. When requested, they will transmit information on everything they saw and filmed during their patrol.

Both may transmit the co-ordinates of something they can see (typically using an Analyse-Transmit order pair), either:

- for **scout probes**, to a scout or spotter buddy within 40m (patch sighting), the recipient then forwarding the data to its team, or
- for **spotter buddies**, to their combat shard or to another spotter buddy.

This patching may be used for OH fire – a spotter buddy or scout probe with LoS to an enemy can patch sight to a weapon in its combat shard if the firing weapon has LoF.

Spotter buddies also provide an equipment bonus of +1 to each shot from a LoS weapon in its combat shard and within 5m against a target the spotter can see.

Both are useful in that anything within 10m of a camo-field can see whatever or whoever is disguised within it: a scout probe can transmit the location to a spotter-equipped squad beyond that distance so they may engage the target.

Targeter Probe

Technology:	D2+
Field:	+8 Sink (N1+);
	+6HL if N3+
Shell:	4 (10 if N1+)
Damage Pts:	10DP
Benefit:	+1 assist on direct fire shots to target
Cost:	¢400/1BP

Targeters have a rudimentary hunt-and-seek programme to find and identify targets and transmit their location back to their parent combat shard. They move within 3m of a target and broadcast the exact details of its location, elevation and protection. Anyone in the targeter's shard shooting at an enemy within LoS and 5m of the targeter gains a +1 targeting assist bonus to their ranged attack roll (one/target).

Virai STAA Probe

Technology:	DXVI only – Controlled(Virai)
Field:	+6 Sink
Shell:	10
Damage Pts:	10DP
Benefit:	+1 assist per STAA tag on target
Cost:	Unavailable

Using their targeting sensors, Virai STAA probes gather a broad range of target acquisition and location data and feed the information into their swarm's shared target acquisition algorithms (STAA – hence the name). The usefulness of such information is short-lived in a rapidly-moving combat situation, but can be useful if other Virai quickly react to the information.

Vira STAA probe weapon stats											
STAA Tag	Mode	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Virai STAA targeting	Tag	1	Tag only	–	–	5/+2	10/+0	20/-2	30/-4	40/-6	STAA Tag only; max bonus +3

On the battlefield, the probes can be seen seeking out enemy positions and 'tagging' them using a broad range of EM wavelengths. For each STAA 'tag' on a target, an allied Virai drone shooting at that target gains a +1 to their ranged weapon check up to a maximum of +3.

STAA tags are easily removed by a target moving away from the location where the STAA probe first applied the tag. The STAA probe's tag has a ranged attack bonus of +5 and has the stats in the box below.

BUDDY DRONES

The varieties of buddy drones far exceeds those we have here, though we have tried to allow for a catch-all with the Helper Buddy definition (such as starship mech buddies, perhaps).

μ-nano Buddy

Technology:	N0+; Controlled(NuHu)
Field:	+8 Sink (N2+)
Shell:	4
Damage Pts:	10DP
Benefit:	Various, see text
Cost:	Free to NuHu from own faction; unavailable to/from other factions

This is a buddy drone built specifically for each NuHu and is closely enmeshed with the owner and their personal nanosphere. Many NuHu regard their A μ-nano buddy as a friend or even a close pet, mourning their loss when a replacement has to be made. Indeed, a NuHu with a nano-buddy should always raise warning flags as it shows they are either in distress, or are injured, or are mentally off-kilter.

Rather than act independently, the nano-buddy should be considered part of the NuHu and moves when the NuHu moves or is activated, and must not stray more than 2m from its NuHu. When within 2m, a μ-nano buddy grants the following to its NuHu:

- **Nanospore+2:** automatically gives a +2 equipment bonus as an assist to any checks using the Nanospore skill;
- **IMTel assist+1 (IIS and IPHC only):** a permanent IMTel connection and its own databanks, granting a +1 μ-nano buddy boost to any IMTel assist the NuHu claims – this is valid even when the pair are isolated and would not otherwise qualify for an IMTel assist;
- **Mv6:** a nanosphere suspensor field generator suitable for transporting the NuHu at Mv6, even across bodies of water;
- **Single-use Stave charge:** an energy-nanospore factory which stores enough of a reserve for one empowered use of a NuHu stave the NuHu may be carrying – this reserve takes 20 hours to recharge once used;
- **Self-repair:** unless destroyed outright, the buddy can repair itself should it ever be damaged, taking 1 hour to repair each point of damage.

A μ-nano buddy is not battle-hardened but is Vulnerable-4 to hostile Ops.Remote attacks. Such attacks must be opposed by the NuHu making their own Remote.Ops, Nanospore.Control or Nanospore.IMTel task check (with the nano-buddy's bonuses).

In a military or combat situation, a μ-nano buddy is given a combat shell with larger generators, battle hardening and a built-in scrambler to become the eponymous – or infamous – nano-buddy. Inside the shell, though, there is still the same μ-nano buddy.

Replacement nano-buddies are complex, requiring a factory scale or specialised fabricator 2 hours to construct and a wide variety of raw materials, some relatively rare. Tuning it to a NuHu takes another 2 hours. As a result, factions and houses with NuHu tend to keep a few spares in secure storage on the NuHu's own ship or on homeships or squadron flagships. A NuHu's own faction will replace them for free whilst others are unlikely to do so.

Nano-buddy Combat Shell

Technology:	N3+
Field:	+8 Sink (extensible to 3m); +6HL
Shell:	10
Damage Pts:	10DP
Benefit:	Various – see text.
Cost:	Free to combat NuHu from own faction; unavailable to/from other factions

The nano-buddy, or more correctly the nano-buddy combat shell, is a military-grade shell for a μ-nano buddy. It protects the μ-nano buddy from infiltration events, boosts its power and ability to generate nanospore and protects the NuHu.

The nano-buddy shell **adds** the following to a μ-nano buddy:

- **Fast Recharge:** a greater power reserve, enabling the Stave's boost function to once per 5 melee turns.
- **Hardened:** a nano-buddy combat shell completely removes the μ-nano buddy's Vulnerability.
- **Armour:** generates a hyperlight (Concord), phase field (Senatex) or resharded hyperlight (Freeborn/Renegade/ Rogue) around its NuHu and accompanying buddy drones;
- **Kinetic shield:** the kinetic shield component of the armour (Sink Mass 8) extends for up to 3m radius around the NuHu, any sink mass pins are applied to the nano buddy. Such a kinetic shield will soak up damage like a sink mass but before it hits the NuHu, so bypassing armour will be ineffective.
- **Scrambler field:** a boosted combat nanosphere around the NuHu that acts as a Scrambler field to all enemy within 3m;
- **Enhanced self-repair:** unless destroyed outright, the buddy can repair itself, taking 10 minutes to repair each point of damage;
- **Enhanced sensors/comms:** the buddy uses its own sensors to provide direct, visual displays and augmented reality matching an equivalent armour across the IR, UV, low-light and broader EM and lidar spectra (as well as saturation filters to protect the NuHu's eyes). The communications are combat command level, allowing instant switching on secure channels to squads, individuals or command personnel – though the recipients have to have armour or equipment to match the encryption!

Batter Buddy

Technology:	N1+
Field:	+8 Sink; +6HL (N3+)
Shell:	10
Damage Pts:	10DP
Benefit:	Sink 10 kinetic dampener in 5m quarter arc from point within 2.5m of the buddy
Cost:	¢600/2BP

A batter buddy is little more than a powerful generator coupled with a reflex shield generator. Like other buddies, it has limited intelligence but unlike other buddies it has no skills of its own and gives no assists. Instead, the buddy projects a combined kinetic armour field +10 in a 5m quarter arc around a given point within 2.5m of the buddy.

Shots through the batter field have their SV reduce by the field. The mass sink temporarily affects the buddy as normal for sink-mass armour fields.

A batter buddy within the zone of a scrambler field cannot generate a batter shield.

A batter buddy takes 1 hour to build in a suitable fabricator.

Camo-buddy

Technology:	N0+
Field:	+8 Sink (N1+); +6HL (N3+)
Shell:	10
Damage Pts:	10DP
Benefit:	5m radius imago
Cost:	¢1000/3BP

A camo-buddy projects a camo-field or nanite imago – a nanosphere-based holofield – of the surrounding countryside and heat signatures onto a shell surrounding all within a 5m radius sphere centred on the camo-buddy. If those within the field move, however, the imago is disrupted, giving away the presence of all within the camo-field.

A camo-field is active when half or more characters and buddies in the camo-buddy's combat shard take no more than a Free (0 beat) Action in a turn. The field is disrupted as soon as any make more than a Free Action.

The 5m radius mirage prevents any from shooting into or observing the occupants of the field unless they are within 10m of anyone or anything in the camo-field. It is for this reason that Isorian phase sniper's camo-buddies are so hated and why the Algoryn have experimented with giving camo-buddies to their special ops Infiltrator teams.

A camo-buddy can be obtained from the Freeborn or an Advanced Spill nation and takes around 1.5 hours to build in a suitable fabricator. It is not available from any other supplier as it is deemed military use only.

Compactor Buddy

Technology:	N1+
Field:	+8 Sink and +6HL (N3+) – combat only
Shell:	10 combat; 4 civilian
Damage Pts:	10DP
Benefit:	Compactor store up to 4m range
Cost:	¢100/0.5BP (200 combat)

This buddy contains a compactor that can store much of what a mobile squad needs. When attached to suspensor bike units,

it anchors itself to a suspensor bike (like other buddies) as its own speed cannot match that of the fast, personal skimmers.

The range of the compactor is 4m and the maximum size item is 4m×3m×2m. A maximum of 5-20 objects can be stored, depending on size and volume (so, loosely, 5 at maximum, 10 at 50%, and 20 at around 20% of the total volume *and* dimensions).

See *Compactor pads/blocks*, below, for details.

A compactor buddy takes 1 hour to build in a fabricator.

Gun Buddy

Technology:	D1+
Field:	+8 Sink (N1+); +6HL (N3+)
Shell:	10
Damage Pts:	10DP
Cost:	¢1200/2BP

A gun buddy is a standard combat buddy drone fitted with a weapon, typically a plasma carbine though mag carbines can also be fitted. It fires either as directed by a character with the Ops.Remotes specialism or with the Nanospore.Control or Nanospore.IMTel specialism, **otherwise** at the nearest, most potentially dangerous enemy it can identify. As it is a fairly low-intelligent buddy, its F&F identification priority is not as strong as better drones, so typically just chooses the closest clear enemy with the most potent SV weapon.

Gun buddies shoot with a total ranged weapon bonus of +6 and can take advantage of targeting boosts from spotter buddies. Alternatively, one could be used to drop grenades on a target.

Freeborn captains and many mercenary command units make use of gun buddies. Some IMTel commanders and almost all NuHu have gun buddies within their combat shard to boost the firepower of individual squads with minimum risk to (their own) life.

A gun buddy takes around 30 minutes to build in a suitable fabricator, with an attached weapon, PSU and compactor unit – though without rounds or charge (time is longer for D GTL areas). As ever, mass production could speed up such times after a massive investment in the production line! A gun buddy must be built to accept and fire a specific type and source of weapon at the TL of its construction: a C3 gun buddy, for example, needs to be resharded to accept a Freeborn plasma carbine and could not use a mag rifle.

Helper Buddy

Technology:	D1+
Field:	+8 Sink (N1+) and +6HL (N3+) – combat only
Shell:	10 combat; 2 (D1/D2) or 4 (D3+) civilian
Damage Pts:	5DP (D1/D2) or 10DP (D3+)
Benefit:	+12 in domain or load carriage
Cost:	Variable (see text)

The various sized helper, assistant or worker buddies are ubiquitous throughout the advanced factions in Antarean space though are less likely to be used amongst Algoryn and are discouraged – in favour of living people – within the Algoryn Prosperate. They range in size from spheroids approximately 10-12cm across to buddies the size of medi-buddies – who are a specialised form of helper buddy with additional machine intelligence to allow a degree of autonomy.

Some primitive buddies have limited lifting power or are on tracks or wheeled carriages and are used for logistics or load carriage purposes.

Helper buddies are built and programmed to perform specific tasks. This can include the addition of manipulator fields, simple cutting or welding tools and tool arms on the larger buddies, or low-end manipulator fields or a simple pincer on the small buddies. The larger buddies also have an in-built, hand compactor for minor amounts of equipment needed to carry out their task. Most have suspensor fields, only the very specialised being given other forms of propulsion.

A helper-buddy has the following benefits to allied personnel, each of which is considered a 'use' for replenishment purposes unless stated otherwise:

- is programmed with an area of knowledge called a domain, best seen as a standalone skill or specialism and not a skillset;
- is fitted with basic limbs/tools or manipulator fields to assist in such tasks (unless purely load carriage);
- grants a +1 assist bonus to domain checks within 5m without using stored supplies, though this cannot stack with bonuses from cognitive implants.

In addition, at FTL N0 and above:

- automatically grants a +2 assist bonus to relevant domain checks when carrying out a task, without the drone having to make an assist check – this also uses stored supplies – but this cannot apply to In- based tasks that have no need of supplies, such as Astrogation;
- can carry out a relatively straightforward task in its domain, using stored supplies if not an In- based check, with a total task bonus of +4 (2 skill, +2 in-built assist).

> An Astrogation buddy, for example, is tiny and has little more than a manipulator field and external connector to manipulate holocontrols, a suspensor field, and a limited Astrogation database. In contrast, an Engineer's Power buddy is the size of a medi-buddy, has some small, oft-used components and tools within a built-in compactor, and has manipulator arms and fields as well as a suspensor field: in many ways it resembles a medi-buddy.

A small, simple, helper buddy can be obtained for 1BP or ¢300 and takes around 15m to build in a suitable fabricator. Larger and more complex helpers with more manipulators, arms and internal storage can take up to an hour to construct and cost 2BP/¢1000. Equipment refills are at no cost for members of the IMTel nations and often at negligible cost for Freeborn, depending on the domain and availability of raw materials, but cost ¢50 from an appropriate vendor for other nations.

Infiltration Buddy

Technology:	N2+
Field:	+8 Sink;
	+6HL (N3+)
Shell:	10
Damage Pts:	10DP
Benefit:	+2 assist to relevant infiltration checks
Cost:	¢2,000/4BP

This is a specialised form of helper buddy used by those wishing to infiltrate installations with sparse nanospheres (say Boromite or similar) or those with no real nanosphere. It includes a complete climbing kit, rope, a personalised imago

projector like a camo-buddy, and basic technology and kit to hack or open doors and other items.

Otherwise, treat an infiltration buddy as a *Helper Buddy* (see above).

Infiltration buddies are typically banned on most worlds and in most societies except for never-admitted and specialised military use (it is used by the SSIC, for example).

Augments and Implants

Whilst the IMTel and nanosphere based civilisations of Antares can make numerous implants, there is a tendency amongst the front-line personnel from the more advanced nations to only use artificial prostheses for a short period of time until replacement limbs or body parts become available. Such replacements come from cloning the original body so rejection is not an issue. At times, a completely new body can be regrown and the mind of the original implanted before the clone becomes self-aware.

Implant/Augment Limitations

There are some limitations to many augments that cannot be avoided. Whilst many cranial or cognitive implants are invisible, a lot of body implants not only give benefits but also alter their host's body and can even put too much strain on the organs, heart and body as a whole, irrespective of alterations to connective tissue and the musculo-skeletal frame.

For this reason, the advanced factions – especially the IMTels – do not allow some augments to be fitted to their citizens. The IMTels also insist such augments are removed from their citizens (for free) if, somehow, they are applied by an external organisation.

Rephenotyped or Augmented?

Augments can be enabled through genetic restructuring and chimeric alterations (geneering), or can be the result of artificial implants or nanospore infusions. IMTel societies and advanced nanospore technology nations such as the Algoryn Prosperate or Freeborn Houses tend to go with genetic restructuring or rephenotyping; those from other backgrounds tend towards artificial implants from complex metals.

In general, geneered implants show themselves in visible changes to the bearer's body.

Premature Ageing

The strain of some implants is too much for the body to take for long and cause what is best seen as premature ageing: in the augment definitions, these are shown in the Impact line.

An augment or implant that may cause premature ageing is marked with Premature Ageing <n>, where <n> is the number of ageing **intervals** by which a character's Ageing Threshold and Life Expectancy is reduced (see ageing and the ageing thresholds in the *Players' Guide* and *Core System*).

> *For example, a Hantale gains a Maxstamina augment at age 25. This has* Premature Ageing 2 *as an impact so has their Ageing Threshold (50) reduced by the Hantale Ageing Interval (5 years) to 40. At this point, their life expectancy is 120+ (two intervals off their normal life expectancy of 130).*
>
> *Similarly, a Gyohn taking a Hypereact augment at age 25 has their Ageing Threshold reduced to 70 (80 minus 2×their Ageing Interval of 5 years) and their life expectancy is 150+ (160+ minus a similar amount).*

If the artificially reduced Ageing Threshold is reduced to a level beneath the character's current age, the character immediately suffers premature ageing for the intervals they are now beyond the threshold – such ageing being applied to their **base** characteristic so the augment may still operate as normal. Premature ageing may reduce the character's base characteristics to a level where an augment is below the level at which it can operate (a bearer's minimum Ag, for example) such that it has reduced effectiveness or is completely ineffective.

Augments/implants that cause premature ageing have some availability restrictions, as follows:

IMTel: Augments causing premature ageing are not available on IMTel worlds because they cause such damage.

Algoryn Prosperate: Whilst available in the Algoryn Prosperate on the black market, such augments are felt to be contrary to the longevity needed from troopers so are never available to Algoryn in good standing – or who wish to remain in good standing. Algoryn taking such implants have their social standing reduced by two points and may not be promoted above the rank of Sub-Officer.

Shen-Lat only take such implants when separated from their kind, at which point they have severe emotional problems and can never return: their Em is reduced by two points.

Ghar cannot take any augments apart from those they already have.

Vorl and Askar can only take cognitive implants and augments.

Hükk and many other, rare species can take a wide range of implants and augments though all such typically costs twice the normal price.

Vulnerable (all equipment)

The Vulnerable trait can be applied to all equipment if the GM and players feel they wish to go to such detail. However, it is most dangerous or noticeable in the case of augments, so could just be applied to the augments and implants that are stated as being Vulnerable.

The principle reason for shunning artificial prostheses is nothing to do with disquiet over the limbs or organs, many are much more sturdy, long-lived and more capable than the organ or limb they replace. Despite many layers of protection, the avoidance of advanced prostheses is more to do with the usurpation of control of the limb, particularly through IMTel infestation and subversion or through attacks from a foreign combat – with potentially deadly results!

This leads to the interesting situation that on the interfaces between each faction, regrown and natural bodies are more common than even short-lived artificial limbs, implants and augments. Fully-artificial bodies, temporary drone bodies and more complex augments are more likely on each faction's core worlds and orbitals.

Where an augment or implant is subject to takeover, it is noted as being Vulnerable<+n>. The bonus, <+n>, is that which a hostile shard receives on any attempts they make to control the augment or implant, perhaps through an Ops.Control or Nanospore.Control check.

Hostile subverter matrixes automatically attempt to take over a vulnerable augment alongside their attacks on probes and drones. They make an attack with a Nanospore.Control skill of +6 (+4 skill, +2 In bonus).

NuHu and Augments

NuHu cannot gain combat or bodyboost augments as they interfere with the NuHu's natural surge of nanospore.

NuHu can take survival and environmental augments, even if such augments are also classed as combat augments, though in their case it is typically the implantation of an additional nanospore micro-factory and the training of their own brains and nanospore to accomplish the same effect. This means that such upgrades are not visible on a NuHu except to someone making a successful Nanospore.Nanotech check against them.

In the advanced factions such as the Freeborn or IMTels, NuHu who need replacement limbs or organs have new limbs replaced with regrown or grafted limbs or organs.

COGNITIVE & SENSORY IMPLANTS

These implants all boost one or more aspects of sensory input that a living creature may bear, or else may assist with cognitive tasks: in essence, they affect the brain. Those outlined here are predominantly meant for panhumans, though similar implants or augments for non-humans would be available (for greater cost if not an animal).

Most of these implants are explained by their title.

Enhanced Auditory Processing

Availability: D3+
Restrictions: Vulnerable-2
Cost: 1BP

This innocuous and barely-detectable implant gives a +1 assist to the host's Perception checks where hearing is involved.

Enhanced Vision

Availability: D3+
Cost: 1BP

These overlays and augmented eyes give a +1 assist to relevant Perception checks. They also contain a package of embedded signal processors so also grant:

- low-light vision (no low-light penalty);
- vision into the close UV & IR bands;
- a reduction in range penalties of one band;
- retinal display (of images, text, broadcasts and such);
- full virtual and enhanced reality (VR &ER) overlays.

Contact lenses can be worn to hide the sheen to the eyes and given their enclosed nature are not Vulnerable.

Visual Sensors

Availability: N0+ (not Algoryn Prosperate or Boromite)
Restrictions: Vulnerable+0
Cost: 2BP

This augment consists of visually artificial eyeballs, though specialised contacts can be worn to disguise them, but even then they may be detected by someone trying to see them (a Perception check, perhaps).

The visual sensors have the same benefits as Enhanced Vision plus 100×zoom, extended EM spectrum adaptability (UV/IR/Light Intensifier), microscopic capability and a full visual transmit and record package.

Reference(<Skill/Specialism>)

Availability: N0+
Restrictions: Character must already have the base skill or a specialism +2 or above
Cost: 1BP

Reference Augments are a database of information in a brain implant that connects with a Personal Assistant, MyShard or MyIMTel implant. It grants a +1 assist bonus to an In based skill check in the base skill or specialism specified.

There are no Gatebuilder-related reference augments – knowledge on the subject is too dispersed and vague!

> *For example, a Survey ship pilot's 'Astrogation Reference Augment' grants a +1 bonus to In based Astrogation skill checks. A crew member's Ops.Remotes Reference Augment adds +1 to all their Ops.Remotes checks.*

Up to three Reference and Knowledgebase augments can be borne, though existing augment may be replaced by another.

Reference augments have limited use for skills like Athletics or Weapon skills as they typically use Ag; similarly, Pilot Reference augments are typically only of use when repairing the ship's controls! Further, their use for active skills like Perception is impossible, even though the check may be In-based.

As this predominantly contains masses of encrypted date it is not vulnerable.

> **Gameplay:** When recording a Reference Augment or Knowledgebase we recommend you do not add the assist to the skill record on the character sheet as this can act against the character, preventing subsequent skill bonus development! Instead, record them to one side in the augments area and, if necessary, put an asterisk by the skillset/specialism to indicate it is enhanced.

Knowledgebase(<Skill/Skillset>)

Availability: N1+
Restrictions: Character must already have the skill or a specialism in the skillset at +4 or above
Cost: 2BP

This implant provides copious information for a whole area of knowledge, giving a +1 assist to In-based checks in a complete skillset, such as Social Science. It passes information through a character's PAI, MyShard or MyIMTel implants.

In addition, this compounds its effects with a Reference Augment to boost the assist bonus to +2 in the RA's specialism or base skill.

As this predominantly contains masses of encrypted date it is not vulnerable.

> *For example, a pilot's Knowledgebase(Astrogation) implant grants a +1 bonus to In based Astrogation skill checks or, if they already have a Reference(Astrogation) implant, a total of +2.*

> *The other crew member with Reference(Ops.Remotes) could acquire a Knowledgebase(Ops) implant and receive a +1 assist to all their other, In-based Ops checks but a +2 assist bonus to their Ops.Remotes checks.*

Personal Assistant

Cost: Free for society members, else 1BP

Referred to as a PA implant or PAI, this is a semi-intelligent, embedded communicator and organiser for nanospheres and, in some cases, pre-nanosphere technology. It provides semi-autonomous search and tracking, delegated task initiator/tracker, buddy and servitor drone control, organiser, comms (in an a normal nanosphere or to a nearby booster station), a basic retinal display with lightweight enhanced reality and can be loaded with a wide array of useful apps.

Connector Implant

Cost: Free for society members, else 1BP

This is only used by Boromites and advanced Spill regions. It is an embedded communicator which also enables buddy and servitor drone control.

MyShard

Availability: F2AS/F3V only
Cost: Free for leadership, else 1BP

A Myshard implant is similar to a PAI but is upgraded with a near-general intelligence. As a result, it is sometimes allowed separate security access or is given such access independently of its host. It also enables bonuses from local nanospheres and combat shards, and can help in giving a +1 assist bonus to Medic checks on the host.

MyIMTel

Availability: IPHC / IIS / N3VO only
Cost: Free/automatic for society members (only)

Rather than a specific implant, this is an invisible saturation of the host with IMTel or IMTel-like nanospore. This allows control of, and interfaces to, IMTel interfaces through virtual and holographic displays, access to the IMTel assist bonus (+1 or more), especially to Medic checks (which compounds with other implants); and grants IMTel assist bonuses for training.

MyIMTel also provides excellent communications to others with the same faction's MyIMTel implants. The range is shouting distance if not in an IMTel nanosphere (the IMTel predicts and enhances the words) or can be up to orbiting spacecraft if on a world with a good IMTel nanosphere. It also has personal assistance and organiser apps. However, the apps and comms are largely invisible to the user as the IMTel predicts, preempts and supplies much of what they need or wish.

MyIMTel implants of competing IMTels are incompatible and will advise their bearer to flee or kill or capture nearby hostile IMTels personnel. A MyIMTel can tell if an opponent is from a hostile MyIMTel simply by their bearer seeing, hearing or sensing the hostile, or by the nanospore sensing the presence of a hostile nanosphere exuded by a MyIMTel. The range of such nanospore sensors is around 2-3m of its host, but visual and audio sensors are within normal range for such senses on a panhuman.

Spinal Plugs (Ghar only)

Availability: DXGE only and only Ghar
Cost: Free/automatic (at birth/decanting)

Inserted into the spinal nerves of all Ghar immediately after they emerge from the breeding tanks, these connectors allow the Ghar to have physical and cognitive control of Ghar devices. Without these, a character cannot control the more complex equipment manufactured by Ghar.

NuHu

Availability: N0+; NuHu only
Cost: Free (integral)

This is a codification of the innate ability for a NuHu to control a nanosphere environment (see Traits in the *Players' Guide*). It gives NuHu a +1 bonus on any IMTel assisted checks (effectively a minimum of +2); even with a limited IMTel nanosphere such as that from their μ-nano buddy then the bonus is +1.

Freeborn and Renegade NuHu gain an automatic +1 assist for information recall or potential assists from the local nanosphere. Freeborn NuHu can also create a nanosphere isolation barrier between themselves and an unfriendly nanosphere (but not against a saturated hostile nanosphere for more than a few hours).

All NuHu also gain a +1 bonus to any Nanospore.Control check; Rogue NuHu may have other abilities, as well.

Mindstate Backup

Availability: N2+
Cost: 1BP/Variable

This is a recording of the character's brain, learning, thoughts, memories and character at a point in time. It is, in effect, a brain snapshot which can be used as a basis for creating a replacement clone or an artificial body. It is offered to IMTel troopers, senior vardanari, and senior Algoryn and Freeborn – though it is also purchased by particularly well-off mercenaries. Once given to senior Freeborn and AI personnel, it is a regular appointment, normally annually; when given to serving members of the armed forces, a backup is taken before each deployment, overwriting any previous Mindstate Backup.

Mindstate Backups can only be performed by the IMTel nations and the more advanced Freeborn houses (of which there are many). The Mindstate recording itself is performed by a full head-body scanner and requires specialist data storage. Unfortunately, the devices are rare in the Algoryn sphere, the only known devices on the eleven core Algoryn worlds, hence the option only being offered to senior Algoryn – politicians, generals and such.

When a Mindstate is restored to a clone body, it is a relatively exact copy. In contrast, a Mindstate restored into a drone suffers glitches in the transference and in functionality due to the differing storage and processing approaches of biological brains vs Antarean machine intelligences. When being installed into a drone body, roll a D10 and consult the Mindstate Transference Penalties table, overleaf. Similarly, consult the table when transferring a Mindstate from a drone body into a human body. The potential loss is the reason that biological Mindstate restorations are downloaded from the original recording and the recipient has to update themselves on their activities in the previous six months!

Mindstate Backups are frequently offered to core world IMTel citizens who are dying and wish to stay alive, or to senior Freeborn and Algoryn personnel. Algoryn and Freeborn are never restored to drone bodies, only to clones.

A Mindstate Backup has limited external communication but pre-death instructions can state that the backup should be transferred into a temporary drone body (see *Cloning*, below). Temporary drone bodies are obviously artificial, are humanoid, have St, En and Ag 6 but only have 15DP and Shell Armour 10 – the capabilities deliberately set to minimise psychic shock to the new host.

Mindstate Transference Penalties	
D10	**Result**
1	Randomly lose 1d10 skill bonuses and 1d5 characteristic points across Em and In.
2	Randomly lose 1d5 skill bonuses and 1d3 characteristic points across Em and In.
3	Randomly lose 1d5 skill bonuses and 1 characteristic point from Em or In.
4	Randomly lose 1d3 skill bonuses.
5	Randomly lose 1 skill bonus and attitudes may have changed: discuss the effect with your GM.
6-10	The transfer apparently worked with no errors.

MI Backups

Machine Intelligence Backups are the machine equivalent of Mindstate backups: snapshots of a drone or shipbrain's personality, training, skills and experience databases, as well as a map of the MI's current processing architecture (which are otherwise constantly undergoing reconfiguration). The MI Backup can be restored to a new drone body or ship, providing the receiving MI architecture is large enough.

Sometimes Concord or Freeborn ships request to be retired into a smaller drone body. They lose much of the outlying data specific to the functioning of a ship, but otherwise retain much – if not all – their former character; few return to ship life.

Stemsnap

Availability: N2+
Cost: 1BP/Variable

The Stemsnap skull implant is particularly gruesome in that it contains a transmat distress/homing beacon plus a small stasis field projector. If an individual with Stemsnap dies, the distress/homing beacon is triggered, allowing the brain and much of the stem to be put into stasis and transmatted to a ship in low orbit – the homer beacon allowing a transmat up to 1000km/200kyan away as opposed to the normal 300km/ 60kyan. Once aboard, it is transferred to a small stasis pod to await regrowth and reattachment into a cloned body.

A Stemsnap can also be transmatted to a field hospital on the same planet that is up to 100kyan away.

The Stemsnap stasis field can only be maintained for 24 hours before collapsing and destroying the contents. Otherwise, if a Stemsnap malfunctions or the contents are in too poor a state, a Mindstate Backup is attempted on what is left of the brain but the scan can have problems: use the Mindstate-to-drone Transference results, above, but rolling 1d10+2.

The advantage of a Stemsnap over a Mindstate Backup is that it retains the experience, knowledge and information the individual has acquired right up to the time of the Stemsnap being triggered.

Pheromonal Emitters

Availability: D3+
Benefit: +2 Presence vs targeted species
Cost: 1BP

The entry-level pheromonal emitters must have a species stated on install but may be returned and programmed to emit a different species' pheromones. They give a +2 assist to Presence or similar checks used to influence the species they are meant to target.

It is of significant use in communicating with scent-based communicators such as Vorl or Tsan and may overcome some language difficulties with both species (if programmed for them).

Pheromonal Emitters, Enhanced

Availability: N1+
Benefit: +2 Presence vs any known species
Cost: 3BP

The enhanced emitters are multi-species pheromonal effectors, able to adjust the pheromonal output depending on the known species the bearer wishes to target (they take two minutes to switch species). They give +2 to Presence or similar checks against a species for which the relevant pheromonal settings and chemical generators have been previously loaded into the emitter's datastores.

This has visible signs on the recipients body which can be easily discerned by a body search.

REJUVENATION AND REGROWTH

These augments and implants typically affect the torso and limbs of those who have them, or affect the DNA or allow for cloning and re-implantation of a bearer's memories and thought processes.

Cosmetic Rephenotyping

Availability: N1+ (including N2AP but not Algoryn; not Boromite)
Cost: ¢250-$1500/0.5BP-2BP depending on extent

This is scarcely considered an augment by members of the more technologically advanced societies, concerned as it is with the purely physical characteristics of an individual rather than any radical altering of the body or mind. In such societies, cosmetic rephenotyping is often thought of as a fashion trend along the same lines as clothes or accessories.

The extent of the alterations drives the cost: simple skin colouration (blue, perhaps?), hair and eye colour changes or (say) cheekbone sculpting would be considered a simple purchase one might make in an afternoon, the changes gradually coming in over the coming months. In contrast, more extensive rephenotyping such as feathers, a beak or a coxcomb might involve a longer stay in a clinic of a few days to a week, with careful monitoring over the next few weeks to ensure the recipient is comfortable with the changes and they were coming through correctly.

Much as IMTel tries to suggest otherwise, some individuals rephenotype themselves to match the facial features of a famous holo-star or sports celebrity. Whilst this can be confusing for onlookers, the IMTel itself is never confused as the individual's unique IDs remain the same.

Regrown Limbs/Organs

The advanced nations of Antares can regrow limbs and organs. The time to do so is covered in the *Core System Guide*, under injury, but advanced medi-kits can do the same (but to a lesser degree of fidelity).

For the Freeborn and IMTel nations, no loss of functionality is experienced for those regaining a limb or organ, though the limb will lack any of the scars or changes in skin colouration of the original. In other nations, the new limb typically may have a slightly reduced functionality – typically modelled by a loss of -1 to a physical characteristic.

Algoryn and Advanced Spill nations also allow senior officers (O/4 or above) to have replacement limbs in an identical fashion as for Freeborn or IMTel individuals.

Boromites also have such functionality that they grant to those of suitable social rank – typically SP8 or higher. The limb typically replaces the Boromite's En or St to 6 and Ag to 4, depending on what was first lost.

Cloning & Implantation

Availability: N2+
Cost: Variable

Complete clones or replacement bodies are available for those with a Mindstate Backup or Stemsnap: their memories and skills are awaiting transfer into a new clone after their death. It takes six months for a cloned body to be accelerated to adulthood and ready for transference in contrast, a Stemsnap'd brain is placed into a coma and the new body grown around it, the brain being brought back to wakefulness when the regrowth is complete.

For both an inserted Mindstate or a regrown Stemsnap, the new body has the same characteristics as the original, with the same morph, SP, Mv and natural Traits but minus any implants. Not all cellular deterioration can be compensated for, so when the body is activated it has an age equal to the youngest of either:

- the character's body age at death; or
- half the species normal ageing threshold;
- **plus** an ageing interval for **each** previous clone or regrown body the character has had before.

The term 'body age' is used to refer to whatever age the physical body is at death; 'real age' refers to how long the character has been conscious and alive. The distinction between 'real' age and 'body' age is important as a long-lived panhuman could well be 200 years old but living in a cloned body that is only 50 years old.

> For example, Sentar, a Vyess aged 32, suffers a traumatic injury and dies. Luckily, they had a Mindstate Backup, so can be downloaded into a clone. Their normal ageing threshold is 50, so the cloned body is the youngest of 32 (their age at death) or 25 (half the ageing threshold) plus the Vyess' ageing interval (5 years) for every previous clone. This is the first time Sentar has been cloned so they are downloaded into a 25-year-old body.

> The next time their body dies – perhaps at the new body's physical age of 29, the age of the clone would be the youngest of 29 or 25, plus 5 years – in this case giving a final body age of 30.
>
> Of course, Sentar's 'real' age is 32 plus the four they spent in the cloned body, or 36. The time their mind was spent in storage/stasis is not included as they were not aware.

Aged DNA Resequencing (ADR)

Availability: N2+
Cost: Variable

An option for ageing individuals is to have the gradual deterioration of their cell DNA repaired. Whilst this is an in-patient procedure, it only lasts a few days under the care of a resequencing / repair expert then – at times – an uncomfortable six months whilst the individuals cells are replaced with younger versions.

The IMTel offers the process to all individuals who ask for it providing they are close to the natural limit of their body's body deterioration. The Freeborn offer the process to all officers or senior (E5+) vardanari, as well as to all Factors, and at the same age.

The process is not perfect: even panhuman bodies are incredibly frail. Natural ageing can cause almost impossible-to-overcome deterioration without the DNA kickstart that occurs with cloning.

For some, a downside is that any scars or signs of battle that they had accumulated over the previous few years are erased. Another risk is that, after receiving ADR, an individual has to stay alive for six months in order for it to be effective!

The ADR process is only given when an individual has started to age or is within one ageing interval of ageing. ADR returns an individual to a body age equal to:

- **half** their species normal ageing threshold, **plus**
- **one ageing interval** for each **two** previous ADR sessions or bouts of ageing they have undergone during this body's lifetime (count fractions).

On top of this, they have aged six months due to the ADR process.

> For example, Ghashtuk is an ageing Krasz of 57 who decides to undergo ADR. He has already undergone two bouts of ageing, one at 50 and one at 55, but has not undergone ADR before.
>
> After six months, Ghashtuk's new body age is equal to half their normal ageing (50/2 = 25), plus one ageing interval for having already aged twice (5 years), plus the six months giving a total of 30 and six months.
>
> The next time Ghashtuk goes for ADR, they do not leave it so long and attend the ADR clinic at age 49. This time, their body age is reset to 33: 25 (normal ageing/2) + 3×5/2 (7.5 years due to the previous ADR session and those earlier bouts of ageing – it's catching up with them) + six months due to the therapy.

> **Gameplay:** Of course, for simplicity's sake, you may want to just state the revitalised body is half the host's real age, and similarly with clone bodies. Just decide with your GM.

PHYSICAL AUGMENTS – OVERVIEW

Combat augments are those typically obtained through the military or via Freeborn mercenary contracts. Bodyboost implants are more specialised and are targeted at particular security or bodyguard markets in the Advanced Spill regions. Environment & Survival Augments are modifications that help in recovery or help the bearer survive in particular circumstances.

It is important to track combat augments and bodyboosts as they may add to a character's effective age or may reduce their ageing threshold.

Combat Augments

The Combat Augments below come in a variety of versions, the exact version specified as a value or modifier after the name of the augment. For example, Whipcord 6/+1 comes in two forms: Whipcord 6, which elevates a character's normal Ag to 6; or Whipcord+1, which grants a character a +1 bonus to Ag checks if their Ag is 6 or more.

Though not, in itself, a Combat Augment, the Revival implant can also be taken as a Combat Augment during character generation or as a boon from a military force. Likewise, the bodyboost Embedded Reflex Plates can also be taken as a Combat Augment by those capable of doing so (Boromites, really!).

Bodyboost Augments

Whipcord (Ag), Ripped (St) and Grit (En) and similar augments are also classed generically as bodyboosts. These may be referenced in ageing rules or in character generation.

Combatant

Availability: D2+
Class: Combat
Benefit: +1 physical checks for 5m, 1/day
Cost: 1BP

Combatant temporarily boost response times, strength and endurance. The bearer gains a +1 assist bonus to physical checks for a contiguous 5 minutes once per day.

Subdermal Armour +1/+3

Availability: D3+
Class: Combat
Benefit: +1 or +3 structural armour
Cost: Subdermal+1 = 1BP;
Subdermal+3 = 2BP

Subdermal armour effectively is the insertion of a layer of armour plates beneath the skin, either fully artificial or built from natural fibres. It gives a **structural** armour bonus at the level stated but at the cost of a stocky or bulky look to the body. Those with the Gnarly trait (such as Boromites) or an exoskeletal frame (such as Askar or Vorl) cannot have subdermal armour implanted.

Exoskeletal Armour +2/+4/+7

Availability: D3+
Class: Combat
Benefit: +2 / +4 / +7 shell armour
Cost: Exoskeletal+2 = 1BP;
Exoskeletal+4 = 2BP;
Exoskeletal+7 = 4BP;

Causes a keratinous shell to grow in places around the body or fixes plates in place. Exoskeletal armour gives a **shell** armour bonus at the level stated but at the cost of obvious armour plating. This can be installed without subdermal armour in place but blocks any subsequent subdermal install. Exoskeletal Armour causes premature ageing by one band and is highly visible.

Limitations:

- Exoskeletal Armour+2 is incompatible with Gnarly hide;
- Exoskeletal Armour+4 sets the maximum Ag bonus a character can use to +2; and
- Exoskeletal Armour+7 sets the maximum Ag bonus a character can use to +1.

For example, a PanHuman with Exoskeletal Armour+7 and Ag 7 – a +2 bonus – can only apply a +1 bonus to Ag based checks. Their Ag is still 7, which is important for injury, but the armour plating prevents them using it properly!

Whipcord 6/+1

Availability: D3+
Class: Combat, Bodyboost
Benefit: Min Ag 6 OR +1 Ag
Cost: 2BPs

Whipcord is a Bodyboost and Combat Augment that boosts Ag to a minimum of 6 or, if Ag is already 6 or more, gives a +1 equipment bonus to Ag checks. This bonus applies even if the character's current Ag is reduced due to injury. Whipcord 6 is incompatible with Whipcord+1 and whilst either can replace the other, they must be reinstalled.

Ripped 6/+1

Availability: D2+
Class: Combat, Bodyboost
Benefit: Min St 6 OR +1 St
Cost: 2BPs

Both a Bodyboost and a Combat Augment, Ripped boosts St to a minimum of 6 or, if St is already 6 or more, gives a +1 equipment bonus to St checks, the bonus applying even if the character's current St is reduced due to injury. Ripped 6 is incompatible with Ripped+1 and whilst either can replace the other, they must be reinstalled.

Grit 6/+1

Availability: D2+
Class: Combat, Bodyboost
Benefit: Min En 6 OR +1 En
Cost: 1BP

Both a Bodyboost and a Combat Augment, Grit boosts En to a minimum of 6 or, if En is already 6 or more, gives a +1 equipment bonus to En checks, the bonus applying independently of the character's own En bonus even if the

character's current En is reduced due to injury. Grit 6 is incompatible with Grit+1 and whilst either can replace the other, they must be reinstalled.

Hypereact 8/11

Availability:	AS, D3RS+, Freeborn; not available in IMTel systems, AP or Boromite
Class:	Combat, Bodyboost
Benefit:	Min Ag 8 if Ag 5-7; Min Ag 11 if Ag 8+
Impact:	Premature Ageing 2
Cost:	3BPs

Hypereact either boosts Ag to 8 if the bearer's natural Ag is 5+ (Hypereact 8), or boosts it to 11 if their Ag is already 8-10 (Hypereact 11). Hypereact is incompatible with Skelemetal and Maxstamina and causes premature ageing by two bands. This cannot be used by characters with natural Ag of 4 or less.

Skelemetal 8/11

Availability:	AS, D3RS+, Freeborn; not available in IMTel systems, AP or Boromite
Class:	Combat, Bodyboost
Benefit:	Min St 8 if St 5-7; Min St 11 if St 8+
Impact:	Premature Ageing 2
Cost:	3BPs

Skelemetal hardens an individual's skeletal frame and adds artificial muscle fibre, ligaments and tendons. It either boosts the bearer's St to 8 if their natural St is 5+ (Skelemetal 8), or boosts it to 11 if their St is already 8-10 (Skelemetal 11). Skelemetal is highly visible, incompatible with Hypereact and Maxstamina and causes premature ageing by two bands. This cannot be used by characters with natural St of 4 or less.

Maxtamina 8/11

Availability:	AS, D3RS+, Freeborn; not available in IMTel systems, AP or Boromite
Class:	Combat, Bodyboost
Benefit:	Min En 8 if En 5-7; Min En 11 if En 8+
Impact:	Premature Ageing 2
Cost:	3BPs

Maxtamina alters its hosts metabolism and oxygen processing rates, as well as adding additional muscle fibres and chemical factories. It either boosts the bearer's En to 8 if their natural En is 5+ (Maxtamina 8), or boosts it to 11 if their En is already 8-10 (Maxtamina 11). Maxtamina is incompatible with Skelemetal and Hypereact, and causes premature ageing by two bands. This cannot be used by characters with natural En of 4 or less.

Embedded Reflex Plates

Availability:	N1B (see Armour)
Class:	Combat, Bodyboost
Benefit:	Reflex field armour

These are physical augments, armour projectors which project Reflex armour around the bearer. They are most often implanted by Boromites but other species may also use them. This is described in detail under Armour.

Environmental & Survival Augments

Environmental and Survival Augments are known as ESAs. All must be tailored to a specific climate or effect as noted in the Survival skill and Rugged trait (see the *Core System Guide*). All also require extensive body alterations and a week or so in a suitable hospital.

Each ESA augment builds on a previous augment and cannot be stacked. For example, a character with ESA 1 (radiation) cannot then obtain ESA 1 (arctic) – they would have to get ESA 2 (arctic, radiation).

ESA 1(<clime>)

Technology:	D3+
Class:	Environmental/Survival
Benefit:	Rugged(<clime>+2)
Cost:	¢600/0.5BP

ESA 1 gives the bearer Rugged(+2) in a specific clime or effect, such as Rugged(arctic+2) or Rugged(radiation+2). A Medic or Hard (-2) Perception task check against the character to assess their physical build or features could discern if they have such augments but not necessarily what specific types they are.

ESA 2 (<climes>)

Technology:	N0+
Class:	Environmental/Survival
Benefit:	Rugged(<two compatible climes>+2) or Rugged(<clime>+4)
Cost:	¢1000/1BP

ESA 2 grants the bearer Rugged(+2) in two specific, non-contradictory climes, such as Rugged(arctic+2, radiation+2) or a double bonus in one clime, such as Rugged(arctic+4) or Rugged(radiation+4). A Hard(-2) Medic or Tough (-4) Perception task check against the character to assess their physical build or features could discern they have such augments: only if the Rugged bonus was at +4 (as in ESA 2 (arctic)) would the climate be able to be determined, however.

ESA 3 (<climes>)

Technology:	N1+
Class:	Environmental/Survival
Benefit:	Rugged(<one to three compatible climes> @+6 total bonus)
Cost:	¢1500/2BP

ESA 3 noticeably rephenotypes or alters a character's physical appearance to be able to survive in the given climate or mix of climates. Gain Rugged(+2) in up to three specific, non-contradictory climes, such as Rugged(arctic+2, radiation+2, desert+2) or Rugged(arctic+4, radiation+2) or a triple bonus in one clime or effect, such as Rugged(arctic+6).

For ESA 3, when specifying the bonuses for only only climes, it can help to state the bonus explicitly to avoid confusion, as in ESA 3 (arctic+4, radiation+2).

Hazardous Atmosphere Augment (HAA)

Technology:	D3+
Class:	Environmental/Survival
Cost:	¢500/1BP

Allows the bearer to breathe tainted or poisonous atmospheres. A character with both HAA and RAA is noticeably rephenotyped or augmented and might struggle in the long-term in less-corrosive atmospheres without regular medical attention.

Rarefied Atmosphere Augment (RAA)

Technology: D3+
Class: Environmental/Survival
Cost: ¢500/1BP

An RAA enables the bearer to breathe thin atmosphere up to approximately 20% that of Old Earth standard. Such an augment is only noticeable in situations where the bearer's activity gives it away. A character with both HAA and RAA is noticeably rephenotyped or augmented.

Revival

Technology: N0+
Class: Combat, Survival
Cost: ¢300/1BP

This augment is linked to extensive internal health monitoring as well as seed nanocytes that trigger a rapid response in the bearer's body to aid healing. It gives:

- a +2 equipment bonus to Medic checks on the character;
- a +1 equipment bonus on any daily recovery checks without a Medic; and
- a +1 DM to any rolls on the Serious Injury table;
- Rugged(disease+3, shock+3).

Revival is also classed as a **combat augment** as well as a survival augment.

OTHER EQUIPMENT

This chapters covers a range of specialised and common equipment seen throughout Antarean space. Some of the devices are unique to a faction or specific set of Handlers whilst others are common to many of the major factions.

In addition to the Technology/Availability, Bonus, Costs and Restrictions data provided in earlier equipment stats, we show here the shell armour and damage points of the equipment, where appropriate. The shell armour is that of the object: it does not protect anyone behind or within the object!

> **Gameplay:** By no means is this – or the previous chapters – an exhaustive list of all equipment available to adventurers in the Antares universe. There may be specific or unique augments, weapons or armour that may be able to be purchased, or truly strange items of equipment they come across.
>
> Rather than not use such new devices, we recommend GMs make up their own prices and capabilities using what we have presented here as a template.

LAVAN HIBERNATION INDUCERS

Technology: D3+
Shell: 15+, Lavan repellent
Damage Pts: 15DP
Cost: ¢500/1BP; free to Boromites

Hibernation inducers are even more robust than other Boromite devices, their final shells hardened and coated with a mineral combination that lavans find extremely distasteful. The emitters are bulky, the smallest around 30cm square by 15cm and weighing around 20kg, – when activated this size emitter produces a hibernation field in an area 5m in radius. Larger versions are typically fitted to the cargo holds of ships equipped with lavamite stables and (such as Boromite vessels and many Freeborn transports) and cover an entire hold (up to 15m radius).

Perhaps more correctly termed a 'lavan hibernation-stasis inducer', the device triggers the lavan's normal hibernation behaviour, slowing them down and finally putting them into hibernation very shortly after the field is activated (within 1-4 minutes). The field does not work well on matronite brood mothers, if at all, but can be used to place other lavans into their hibernation-stasis.

When the field collapses, the lavans wake but are sluggish, moving at -2Mv and having an Ag 2 lower than normal; they take around an hour to come round. On waking, they often feel an urge to seek out the minerals they might normally need after a hibernation, so many Lavan Breeders lay out a few tasty gemstones or precious metals – the wakened lavans' appetites not quite as urgent as when they normally wake from their hibernation (when they eat almost anything).

All lavan hibernation inducers have multiple failover technologies built-in to ensure the devices continue to operate. The rare times a device does fail has resulted in sometimes catastrophic damage to the lavan storage facility – and to much of the surrounding area (including starship holds and pens)! As a result, hibernating lavamites are still kept in armoured crates, the crates often having the hibernation inducers built into the top where the lavans are unlikely to be able to reach.

COMMON ITEMS

Many of these could be found almost anywhere or could be part of a character's starting equipment.

Compactor pads/blocks

Technology: N1+
Shell: 3-10
Damage Pts: 3-10DP
Cost: Varies (¢5-1000/0.5-2BP)

The advanced Antarean societies use compactor technology to store objects in a small compactor block for easy transport.* The blocks also carry compensators to minimise the impact of the mass of the items being stored – the need for the compaction store, mass compensator, de/compaction field, and compacted storage sets a minimum size on the compactors.

In addition, the bulk of the mass on smaller devices is on a protective shell to insulate them against being dropped or accidentally damaged and releasing their stored items. Most civilian compactors lose the contents on being destroyed and forego the safeties, whilst military field compactors are bulkier and contain failover technology to ensure the contents are not lost if the compactor field is destroyed.

Compactor blocks range from small, belt-worn pads around 10cm × 5cm × 4cm, which can store a few personal items such as clothes, handguns, small tools and even rations, to large, wall-mounted compactors installed in the holds of Freeborn ships or in shuttles.

On being decompacted, the objects appear on the ground or where directed by their user: in IMTel and Freeborn decompactors, the objects can appear or be compacted from almost anywhere in range and LoS of the device but cannot appear within any solid object, including soft cover. The ranges vary by size, the smallest having a range of 0.5m and are often held over the object to be scanned whilst the largest can scan and compact objects up to 5m away. The primary restriction is the size of the field and the size of the compacted objects.

On being destroyed, military compactor pads have a 80% chance (3-10 for each item) of automatically decompacting their contents.

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* The term 'store' is used very loosely, here. An often overlooked, vital component of a compactor is its mass compensator which, it is believed, transfers the mass into a type of temporary transmat fold so it does not impact the bearer. Reconstruction calls on this mass to rebuild the original object (which also, perhaps, demonstrates the compactor's similarity with fabricator technology).

All compactor pads need to be accessed via an external interface, typically a holodisplay or nanosphere control. This shows the current, compacted contents and is keyed to the owner's personal ID (typically using DNA) or to a combat shard. Most pads also have controls that can be activated by law enforcement agencies.

Whilst not an exhaustive list, it is worth noting that compactor technology cannot compact:

- living tissue;
- explosives;
- active power packs/batteries;
- datapads/datachits containing data (indeed, anything relying on an EM field rather than, say, a crystal lattice to hold data);
- active transmat pads;
- fabricators that are not empty;
- unstable/fissionable material; and
- devices with compactor fields built-in.

This means that many replacement ammo packs and some probes and buddies cannot be compacted without being disassembled as they carry compactor fields to compact ammunition or supplies!

It is possible to turn off a compactor pad's field and store it in another compactor pad, but it typically takes 5-10 minutes for the pad to fully charge its field generators and rebuild the compactor field.

Readily Available Compactors

Civilian Hand/Belt Compactors. With shell 3 and 3×DP, the normal size of such devices is 10cm×5cm×4cm. They contain up to 10 objects, though they can typically only compact items up to 10cm×60cm×60cm.

Military hand compactors are around 10cm×7cm×6cm with shell 5 and 5×DP. They tend to be carried at the bearer's waist, either on a shoulder strap or on a belt, quite which depending on the bearer's cultural and clothing preferences. The compaction limit is around 20cm×40cm×1m, allowing for a weapon to be compacted.

Buddy sized compactors are typically shell 10 and 10×DP, able to compact a maximum sized object of 4m×3m×2m, with from 5–30 objects being compacted, depending on size (so 5 at maximum, 10 at 50% those dimensions, 15 at 25% of those dimensions). The equivalent of a buddy compactor are used in weapons lockers to cut down on space, the only items being stored externally being power packs and explosives, plus a few weapons ready and charged for instant use. Buddy-size compactors are also provided in back-packs or in bulky shoulder-bags – the Freeborn particularly keen on storing trading goods in such packs.

Chest compactors are often placed in cabins to store the owners clothes and possessions, the primary difference with the smaller devices being that they have excellent, built-in, full-scale holoprojectors to shown the contents – such as clothes, especially with ER imagos to show the wearer what the ensemble would look like. Ranging from small suitcase-sized objects the size of a double wardrobe, they are also sometimes called locker or wardrobe compactors. Chest compactors are used throughout Antarean space and to store almost anything required: they could be considered the primary storage lockers of Antares. Many shuttles – especially cargo shuttles – have compactors to store equipment and minimise the size of the shuttle.

Factory-scale (industrial) compactors are seen in planetary factories, on fleet auxiliaries, on the larger trading ships or on almost all Freeborn traders from armed trader size (200m) upwards – several would be on a trading frigate for example. Such compactors are massive and need access to a large area to decompact their interior items. On power supply failure, they dematerialise much of their compacted items, as might be expected, but limiters prevent such failure from overcrowding the decompaction space and any excess is produced as simple, compressed (not compacted) blocks of mixed raw materials.

Datachits/datapads

Most devices communicate through nanosphere or, if that is absent, through more primitive means of comms. But a huge variety of devices do not take reprogramming from other comms so are equipped with datapads – contact or contact-less reader pads that can take templates and data (but not algorithms) from smaller datachits.

Datachits are small data storage devices, typically a few millimetres thick and 2cm×2cm up to 5cm square, depending on use and storage. They cannot be compacted but can hold substantial amounts of data.

Many Advanced Spill societies and travellers use credchits, specialised datachits about 5cm square and 3mm thick customised towards the exchange of ¢EU. Most such chits from the Freeborn, Advanced Spill worlds or advanced digital civilisations upwards are tied to an owner's DNA and the chits scan what identifiers they can – including DNA, fingerprint and voice – before accepting a transfer request. The datachits can directly exchange small amounts of up to ¢1,000 between each other, on contact, but the more normal use, especially in high value transactions, is to use a small data terminal to securely effect and record the transfer. The record of the transfer is then kept on a central databank, on both datachits **and** on the trader's own data storage devices.

Refugee equipment often has datapads to allow the uploading of templates needed to support specific morphologies or alien physiology, especially that for food and medical supplies.

Devices such as refugee food recyclers normally come with datachits and inbuilt datapads. These contain basic food templates that provide nourishing food and drink and which do not rely on an IMTel or other health monitoring nanosphere. Additional templates can be uploaded to refugee food recyclers (they are just food recyclers, after all) such that the equipment can dispense specialised food for the malnourished or medicines to individuals in need.

Medi-kits

Medi-drones of various types have already been mentioned, as has some of the augments and armour capabilities. However, in the armed forces of less-sophisticated factions or of those who have less trust in technology, these automated devices are supplemented by straightforward medical supply packs for use by combat medics or the like. Further, rather than let troopers die, even the advanced factions have a need for kits able to carry out extreme surgery in emergencies.

Rather than have too many variations, or list everything in a medi-kit and risk over-tracking, we measure kit capacity by the number of checks it can perform – assist units, if you will. As a general rule-of-thumb, a First Aid task check will use up one such unit, Revive one or two depending on the severity and type of injury (average it to 1.5 if you wish), whilst a Stabilise will use up at least three such units of assistance.

Most medi-kits carry three assist units.

No medi-kit

If emergency care is carried out without even a basic medi-kit, then we recommend a Hard (-2) DM is applied to a Medic task check. This could be degraded to Tough (-4) or Challenging (-6) if the trauma is particularly severe, such as a Stabilise Medic check when a character has become Seriously Injured (see the *Core System*).

Basic Medi-kit

The contents and size of a basic medi-kit varies at all GTLs – at higher GTLs it will be small and no doubt compacted into a belt pouch, whilst at lower GTLs it will be carried in a bag and may weigh a few kilograms. Irrespective of the GTL, its medic capacity should be three assist units.

Combat Medi-kit

Technology: D1+
Benefit: +2 to Stabilise, First Aid and Revive
Cost: ¢200/0.25BP – though rarely charged for on N2+ installations

Containing a broad range of items from GTL D1+, combat medi-kits allow a +2 assist to Medic checks to Stabilise, Revive and First Aid Medic task checks. The kits are typically smaller as the GTL advances and, at higher GTLs (N2+) will become a little bulkier as they have with them their own micro-fabricator to replenish items – providing there is a suitable mix of organic and mineral resources to feed the replenisher.

Advanced Emergency medi-kit

Technology: N2+
Benefit: +2 to Stabilise, First Aid and Revive; Allows limb reattachment
Cost: ¢3500/3BP + ¢1000/1BP a refill

These bulky contrivances are so large they are built into emergency combat field modules, shuttles and vehicles. Not only do the advanced emergency medi-kits give the same benefits as combat medi-kits, but have five times as many units of assistance (15) and have a number of limbs in stasis storage grown from culture that can be reattached to a baseline human (or whichever human form the unit is loaded with and set to support). The reattachment takes 12 hours, at least, and the limb is not fully functional even at the end of that time (-4 Ag for fine motor or relevant Manipulation or Athletics tests), requiring another 36 hours to bed in to just a -1 Ag. The reattached limb will look different to the bearer's initial limbs but has its DNA adjusted and maintained by nanospore to be acceptable to the new host's immune system.

Jump Harness/S-Chute

Technology: IPHC (Controlled Concord)
Benefit: +2 Athletics; Jump capability; suspensored
Restrictions: St-1
Cost: N/A

The C3's drop troops are well-known for their ability to 'drop' into a battlespace from low orbit using their bulky s-chutes or 'jump harness'. When coupled with a suit's adaptable hyperlight field, the harnesses effectively provide the ability to make HALO drops with minimal risk. The harnesses also allow a 10m high ×15m suspensor 'jump', with a sustained ground clearance of between one and two metres, depending on the underlying surface. This suspensor capability also adds a +2 assist to a wide range of Athletics checks such as for climbing higher than the harness can jump (agree between GM and player).

The weight of the harness is generally encumbering, inflicting a -1St penalty on the wearer (which doesn't count towards injury, as with all such restrictions). As a result, C3 drop troops are only taken from the strongest, near-baseline panhumans.

The harness generates a substantial suspensor field and uses whatever surface it can sense to fine tune its suspensor field generation – including air resistance. Still, when dropped from on high, the harness relies on its IMTel integration, machine intelligence and C3 enhanced hyperlight field to absorb any remaining kinetic energy from the drop or from the jumps. As a result, it is not available to those outside the C3.

FABRICATORS

Whilst the IMTel nations and Algoryn have fabricators, it is the Freeborn fabricators that are the most comprehensive in their capabilities. Fabricators take raw materials and create custom objects or goods – and containers for such objects if they need it – the objects required being limited only by the templates that provide the specification for the materials needed and the output item.

The Retrograde Spill and Digital technology worlds have very crude fabricators which are little more than 3D printers, in a limited range of materials and to smaller scales than those of the more advanced nations. Such printers even have to print their own support struts for objects whereas the more advanced fabricators use nanosphere-based suspensor fields to support an object internally and externally whilst it is being built.

Many of the advanced, nanosphere-technology nations (N1 or above) range in size from refrigerator-sized food synthesizers and personal fabricators up to huge, industrial machines. All starships of such nations carry a fabricator and a backup that are used to process raw materials, which could even be gas from an atmosphere, to produce fuel blocks and power cells and even spare parts for starships.

The industrial-scale fabricators of the Freeborn are capable of manufacturing a huge variety of equipment, from space-worthy drones and missiles, to combat vehicles and weaponry, shield generators, armour, and pre-fab building components. The Freeborn have also spent vast resources I optimising the size and power of their fabricators such that a Freeborn factory fabricator is not only half the size of an IMTel equivalent but also an eighth of the mass and is limited only by the space or area in which it can build; some Freeborn not being adverse to building material outside their ship's hull or in vacuum as

many Freeborn fabricators are located near the ship's exterior and have access to external projectors to enable such an approach.

All fabricators are only really limited by the templates they are given and input materials – which is where the Boromites come in as the Boromite allies of the Freeborn normally paying for passage with rare raw materials. Such materials are stored in the Freeborn's extensive cargo holds or their similarly industrial-scale compactors.

Freeborn fabricator templates are the most extensive and are a closely-guarded secret: their templates for a given device accept an extraordinarily wide combination of source or raw materials to produce a device that acts and appears to be identical to any other device of its type. In contrast, the fabricators of other nations produce a less diverse range of product and rely heavily on a fixed set of raw material.

At a pinch, however, a fabricator can take a mix of raw material and separate it out into its constituent components to produce ingots of different metals – or even alloys – plus a mound of waste or unwanted material. This is the basis behind the Boromite ore processors and ore scanners: the latter effectively being an ore processor combined with a transmat field for sending the refined ore to a storage area.

It is the provision of the raw material for fabricators that tends to be one of the drivers for trade. Much of the raw material required – such as iron, titanium or aluminium is often readily available, perhaps even easily obtained from asteroids, and so is almost never in demand; in contrast, more scarce elements, minerals and materials are often in demand to speed the manufacture of the goods (the fabricator could build them, but this can be time-consuming). It is in the provision of such materials, especially to the Freeborn, that the Boromite excel.

This demand is one of the governing aspects of the curious Antarean economy. When everything can be fabricated, nothing is truly scarce, so the Freeborn trade in items that need specialist templates, or which can be constructed even when the raw materials do not appear to be available. They may even trade in the templates themselves, offering a construction template based around locally-available raw materials (Freeborn will never trade a generic template!).

Whilst the Freeborn sometimes trade for raw material, they often trade for non-fabricated luxuries such as foodstuffs, wines or natural fibre cloth and clothing. Whether or not true, there are those throughout the non-IMTel and fringe IMTel worlds who still claim 'natural is best' and that the taste or quality of such goods cannot be beaten.

All Freeborn, Algoryn and IMTel ships and villages have small-scale fabricators that can fabricate items of up to D2 drone size, including spare parts for the starships. The length of time taken to produce one such item in such shipboard fabricators depends hugely on its complexity and density, so can vary from 2-3 minutes for items approximately 5cm square, perhaps 5-10 minutes for a complex item of around 10cm square, to 20 minutes for items up to 1m×25cm×25cm and 45 minutes to an hour for most larger items.

Specialised fabricators for foodstuffs are called **food synthesizers**. Industrial scale fabricators can certainly produce foodstuffs but it is considered a waste of power, time and resources to use a general-purpose factory fabricator to produce a dinner for two!

The main issue with the larger-scale drones that depend on machine intelligences is the additional post-production training and uploading of a complex machine intelligence into the object's processors. Whilst the objects are created with the nanosphere of the manufacturing device, so automatically has external links to the local intelligences, a machine brain is a highly complex device that requires numerous checks and tests to ensure it is installed and functioning properly, perhaps taking several days despite a 30-minute construction time.

Factory-scale fabricators are seen on Freeborn ships of trading frigate size or larger (300m+) and on their homeships and a very few factory ships. IMTel auxiliary cruisers and factory ships have such large scale machines whereas they only otherwise appear on the larger Algoryn orbitals or in planetary factories. Non-Freeborn fabricators at this scale are often dedicated to a particular task so are much more efficient (faster) at producing such equipment and are linked into a logistics chain that can supply the specific raw materials needed; in contrast, no Freeborn would even consider specialising their fabricators in such a fashion, preferring to dynamically build supply chains for contracts as and when they occur. Of course, a Freeborn house with a large contract might temporarily optimise their general-purpose fabricators for the contract and, when they do so, produce items two or three times faster than even the most advanced factions.

Shipboard-scale fabricators can replace almost any component on a Freeborn ship up to 30m long and about 10m in diameter. They often need external space to manufacture such items – as they are otherwise limited by the cargo hold size – but are connected directly to the ship's onboard raw material holds and compactors.

Equipment fabricators can produce most items needed for day-to-day use, including weapons and lesser spare parts, and can produce drones and buddy drones. Such fabricators can be up to 2m long but smaller versions do exist, the size often being limited by the input hoppers for the materials needed. Repair Fabricators are even smaller, specialised versions of these for engineers and maintenance crew, able to produce hand weapons such as pistols and most of the smaller parts needed to repair damaged kit.

Food Synthesisers

Food synths are fabricators specialising in the production of food, drink and the accompanying cutlery and crockery needed to eat or drink them from.

By default, the crockery is deliberately easily recyclable and is normally returned to the device's input hopper after use. However, Freeborn synths meant for visiting dignitaries or diplomats have a food warming area, a compactor and a small fabricator for more glamorous tableware such as metal, glass and even wood-feel items. Indeed, an assistant may make a special order of wine in a 'glass, bottle, wine, artistically labelled, dusty' – as opposed to a 'bulb' of such wine – to receive an item that looks as if it came from a cellar and which is filled with wine that looks and tastes virtually identical to the original (dependent on template, of course).

There are always those who believe the original, 'natural' item is better than synthesised items; many Freeborn specialise in the growing, transportation and bottling or production of such items (Prince Batu Delhren's wineries and wine, for example, is known and praised throughout the north-west Determinate).

The Freeborn make great use of **synthscanners**, small devices that analyse an item of food, break it down into its constituent textures, odours, flavours and molecular structure and store the result as a template – or report it as potentially containing poisons. Trade in the **food templates** generated by such a scan is a lucrative sideline for the Freeborn, foods from off-world being much sought-after by the 'in' or high society social groups of many Spill worlds (and even within the IMTel nations – Algoryn food tends to be very spicy, for example, but otherwise lacks visual excitement and is only appreciated by those seeking extreme taste sensations).

SURVIVAL KITS

Survival kits vary widely by technology and faction, but we can present a typical set of contents for a N1+ survival pack which can be adapted as required.

Two-Person Survival Pack

Technology: N1+
Damage Pts: 10DP
Cost: Varies (¢250-500/0.5-1BP)

This two-person survival kit is packed into a single backpack and assumes the partner is likely injured. The contents are largely compacted, except for the power supply, though water is an issue, and is as follows;

- Two-person, insulated tent;
- Two sleeping/survival bags, able to keep the individual within insulated from the extremes of hot and cold;
- Two survival suits, with integrated helmets with RAA/HAA breathers, boots and gloves, able to keep the wearers at a constant, comfortable temperature and wicking away sweat into processing pockets;
- Nutrition packs for two people for a week;
- Water and containers for two people for a day (providing it is rationed carefully – water does not compact well);
- Water purifier with expandable funnel;
- Emergency food synthesiser, able to produce small nutrition bricks from foliage or meat input;
- Basic medical supplies (basic medi-kit);
- Power supply, able to continue for four days before needing recharging (rechargeable from movement and solar power as well as battery backs);
- Torch, lightweight tools, entrenching tool/pickaxe, 20m of 500kg cable with terminator hooks/fasteners, a flare pistol for visual location;
- A visible/audible signal beacon and transponder, able to be switched to friendly as well as 'any' with a short period range of orbital but a continual longer period (eight days) of up to 50km range – this can be recharged;
- A basic comms unit built into the beacon.

N0, D2-3 and even more primitive variants of the survival backpack are available but with substantially less equipment, less effective thermal insulation (at greater weight) and less environmentally insulated tents and survival suits. All lower-GTL packs suffer from a substantial increase in weight due to the lack of a compactor and the use of heavier materials.

APPENDIX A: QUICK REFERENCES

The following pages contain some quick references for various aspects of the material available here, whether stats, costs or basic functionality. If there is a conflict, use the main rules for the definitive answer.

Given the highly variable cost of manufacturing the equipment here, the suggested prices are those at the item's original TL or those which Freeborn are likely to charge. A campaign based on trading might not be particularly enjoyable in a near-post-scarcity society and this is where favours (in the form of missions) and Build Points are useful!

Rather than spam every weapon, we have taken out the more esoteric weapons or those only used by NPCs and put them separate to the generally available weapons.

The costs listed here for weapons include a cartridge (sheaf, clip, charge) of ammunition. Most N0+ weapons automatically regenerate their ammunition over a period of time and energy weapons need only be plugged into (or placed by) a suitable power source to regenerate their shots.

To save space, we do not include faction-automatic capabilities or single-point augments, implants or activities, including: MyShard implants/personal assistants and similar; cloning; rephenotyping; ADR resequencing; and Mindstate Backups. This is primarily because they have minimal immediate impact (or are recorded on the character sheet after a disaster) or are a function of character generation, so are rarely looked at in-game.

Melee Weapon Definitions

Melee.Unarmed	¢EU/FTL	Shots/Atks	SV	Ag	St	----- Range ----- PB	Effv	Long	Extr	Max	Special
Club, light or Improvised	1/any	1	1D5	1	1	Contact	–	–	–	–	±St
Dagger, knife, light axe, hammer, short sword, light mace	5-20/P1	1	1D5+1	1	1	Contact	–	–	–	–	±St
Fist/kick	Any	1	1D4	1	1	Contact	–	–	–	–	±St
Kraszaxe	50/P3	1	1D5+2	2	3	Contact	–	–	–	–	+St; also Melee.Primitive

Melee. Primitive	Mode	Cost	Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Bow, short		30/any	1	1D6	3	3	5/+0	20/+0	30/-2	40/-4	60/-6	–
Bow, long		80/any	1	1D8	3	5	5/-1	20/+0	30/-2	60/-4	100/-6	–
Crossbow, light		60/P2	1	1D8	2	2	5/-2	20/+0	30/-1	40/-3	60/-5	Reload(Complex)
Crossbow, heavy		150/P3	1	1D10	2	4	5/-3	20/+0	30/-1	50/-3	100/-5	Reload(Complex×2)
Dart/ knife	Thrown	5/any	1	1D4	2	1	5/+2	10/0	15/-6	15/-6	15/-6	±St
Javelin	Thrown	10/any	1	1D5	2	1	2-5/+0	10/+0	20/-2	30/-4	40/-6	Min Rg 2; +St
	H2H		1	1D5	2	1	Contact	–	–	–	–	+St
Spear, long		30/P1	1	1D5+2	1	3	Reach	–	–	–	–	+St
Spear, short	H2H	20/any	1	1D5+1	1	2	Reach	–	–	–	–	+St
	Thrown		1	1D5	1	2	3-5/+1	10/+0	20/-4	30/-6	–	Min Rg 3; +St
Sword		70/P2	1	1D5+2	2	3	Contact	–	–	–	–	+St
2H axe/club/mace/halberd		120/P1	1	1D10	2	5	Reach	–	–	–	–	+2×St
2H sword		150/P2	1	1D12	3	5	Reach	–	–	–	–	+2×St

Melee.Martial Art		Cost	Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Martial Art		–	1	~1D5	Var	Var	Contact	–	–	–	–	By art: Stun, Immobilise

Melee.Tools	Mode	Cost	Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Mass compactors	H2H	200/D3	1	3D10	2	4	Reach	–	–	–	–	All: Ignore Soft Cover, Breaching
Ranged (Ranged.Energy)			1	Var SV	1	4	5/+2	10/+0	15/-2	20/-4	30/-6	As H2H
Variable SV			–	–	–	–	3D10	2D10+3	2D10	1D10+3	1D10	
Lectro lash		150/D3	3	2D10	3	3	Reach	–	–	–	–	–
Lectro lance		–/D3	1	2D10+5	3	3	Reach	–	–	–	–	+St mount; Controlled(N1B)
Maglash	Ranged	75/D3	1	1D8+2	2	2	5/+1	10/+0	–	–	–	–
	H2H		2	1D8+2	2	2	Reach	–	–	–	–	–
Tool appendages		–	2	2D8	1	1	Contact	–	–	–	–	Compound SV
Tractor maul	Ranged	250/D3	1	3D10+2	2	5	5/-2	10/-4	–	–	–	Breaching
	H2H		2	3D10+2	2	5	Reach	–	–	–	–	Breaching, Compound SV

Projectile Weapon Definitions

When Firearms are shot overhead, they use the Firearm.Indirect skill.

Firearm.Projectile	Mode	¢EU/TL	Shots	SV	Ag	St	----- Range ----- PB	Effv	Long	Extr	Max	Special
Feral Machine Gun		*120/M2*	*2*	*1D8*	*2*	*2*	*5/+0*	*20/+0*	*30/-2*	*50/-4*	*80/-6*	*No Shard*
Feral Pistol		80/M2	1	1D6+2	1	1	5/+1	10/+0	20/-2	30/-4	40/-6	No Shard
Feral Rifle		*150/M2*	*1*	*1D8+2*	*1*	*3*	*5/-1*	*20/+0*	*40/-1*	*80/-3*	*200/-6*	*–*
Mag Carbine	RF	200/N0	2	1D8+2	2	3	5/+1	20/+0	*30/-2*	*50/-4*	*100/-6*	–
	SS		1	1D8+5	1	3	5/+0	20/+0	30/-1	50/-3	100/-6	–
Mag Pistol		150/N0	1	1D8+2	1	1	5/+2	10/+0	20/-1	30/-3	50/-5	–
Mag Rifle		250/D3	1	1D8+8	1	3	5/-1	20/+0	60/-1	120/-3	400/-5	–
Micro-X launchers	Direct	350/N0	1	1D8+5	3	4	5/-1	20/+0	40/-1	60/-3	100/-5	–
	OH		1	1D8+2	3	3	–	20/+0	60/-1	120/-3	200/-5	Min Rg 5; Sphere 3
Algoryn Overload Direct		*+30per*	*1*	*3D8+3*	*3*	*4*	*5/-2*	*10/-1*	*20/-3*	*30/-4*	*40/-6*	*–*
Musket		75/M0	1	1D6	2	3	5/+0	10/+0	20/-1	40/-3	80/-5	No Shard (possibly P3)
Spill Pistol		120/D1	1	1D8	1	1	5/+2	10/+0	20/-2	30/-4	40/-6	No Shard
Spill Rifle	RF	300/D1	2	1D8	2	2	5/+0	20/+0	30/-2	60/-4	100/-6	No Shard
	SS		1	1D8+2	1	2	5/-1	20/+0	40/-1	100/-3	300/-5	–
X-sling	OH or Direct	120/N0	1	1d8+4	3	2	5/-2	10/+0	20/-3	30/-6	–	OH: Min Rg 5; (opt. Slingnet)
X-sub GL	OH	80/N0	1	1D8+2	3	1	–	10/+0	20/-2	30/-4	50/-6	Min Rg 5; Sphere 2

X-Sling grenade rounds are plasma grenades at 30 ¢CEU each; X-sub GL rounds are 25 each

Support.Projectile		¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Mag Cannon		1000/N0	1	5D8+4	3	4	10/-3	50/+0	100/-1	400/-3	800/-5	Crew 2, Arc(F)
Mag Light Support	RF	750/N0	4	2D8+8	3	3	5/-2	50/+0	80/-1	160/-3	400/-5	Crew 2, Arc(F, R, L)
Heavy Mag Support	RF	1800/N0	5	3D8+7	3	3	5/-2	50/+0	80/-1	160/-3	400/-5	Crew 2, Arc(F)
Heavy Mag Cannon		1500/N0	1	6D8+6	3	4	10/-3	80/+0	200/-1	500/-3	1000/-5	Crew 3, Arc(F)

							----- Range -----					
Spill Squad Support	RF	800/D1	3	1D8+2	2	3	5/-2	20/+1	40/+0	100/-3	300/-6	Crew 2, Affixed, Arc(F)

Energy Weapon Definitions

Firearm.Energy	Mode	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Algoryn/Boromite												
Plasma Carbine	RF	400/N0	2	1D10	3	3	5/+1	20/+0	30/-1	50/-4	80/-6	–
	SS		1	2D10+2	2	3	5/-1	20/+0	40/-1	100/-3	250/-5	–
Compression Carbine		1500/N3	1	Var	3	2	5/+0	30/+0	50/-1	70/-3	200/-5	Ignore Soft Cover
Variable SV							3D10+5	3D10	2D10	1D10+5	1D10	
IMTel/Freeborn Plasma Carbine KAC												Controlled(IMTel, Freeborn)
	RF	500/N3	2	1D10+2	2	2	5/+1	20/+0	40/-1	60/-4	100/-6	
	SS		1	2D10+5	1	2	5/-1	20/+0	50/-1	120/-3	300/-5	
Plasma Lance KAL	RF	–/N4	2	1D10+2	3	3	5/+1	20/+0	30/-1	40/-4	100/-6	Controlled(IMTel)
	SS		1	2D10+5	2	3	5/-1	20/+0	50/-1	120/-3	300/-5	
	Lance		1	3D10+5	3	3	5/-3	20/-1	30/-2	40/-4	80/-6	
Plasma Pistol		250/N1	1	2D10	1	–	5/+2	10/+0	20/-2	30/-4	60/-6	
Plasma Rifle		–/N4IS	1	2D10+5	4	3	5/-3	30/+0				Exploit+2; Senatex only

KAC/KAL Krasz Assault Carbine and the Krasz Assault Lance do the same damage as the C3's standard plasma carbine and lance, require Ag1/St 6 to wield in H2H, but can also be used in H2H with 2D10+5 damage with the Melee.Unarmed or Melee.Tools skill. KAC/KAL are only available to troops in the Concord or (KAC only) to independent purchasers from the Freeborn.

Exploit+2: The plasma rifle has a +2 targeting bonus against buddy drones and probes. In addition, rather than destroy them the attacker can elect to temporarily disable them on a hit if any damage penetrates the drone's armour fields and shell.

Support.Energy	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Compression Cannon	2500/N2	1	Var	3	2	10/+0	30/+1	100/-2	200/-4	400/-6	Affixed, Crew 2, Arc(F);
Variable SV (uses D10)		–	–	–	–	6D+20	5D+10	4D+5	3D+3	3D+3	Fade
Compression Bombard	4000/N2	1	Var	3	3	10/+0	40/+1	150/-2	300/-4	600/-6	Affixed, Crew 3, Arc(F);
Variable SV (uses D10)		–	–	–	–	7D+20	6D+10	5D+5	4D+3	4D+3	Fade
Fractal Cannon	650/N0	1	4D10	3	4	10/+2	30/+0	50/-2	70/-5	–	Affixed, Crew 2, Lock+5, Breaching SV 5D10+5
Fractal Disintegrator	1000/N0	1	5D10	3	5	10/+0	40/+0	80/-2	120/-5	–	Affixed, Crew 3, Lock+7, Breaching 6D10+5
Plasma Cannon	900/N0	1	6D10+10	3	2	10/-2	50/+0	100/-1	250/-3	600/-5	Affixed, Crew 2, Arc(F)
Plasma Light Support RF	1250/N1	4	3D10	3	3	10/-2	40/+0	80/-1	160/-3	400/-5	Affixed, Crew 2, Arc(F,L,R)
Plasma Bombard	1500/N0	1	7D10+15	3	3	10/-3	80/+0	160/-1	320/-3	800/-5	Affixed, Crew 3, Arc(F); Fade

Special & Stun Weapon Definitions

Firearm.Energy	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Police Stunner	300/N3	1	–	1	–	5/+2	10/+0	15/-3	20/-6	–	Stun 10/+1; ignores shell
Advanced Stunner	200/N1	1	–	2	–	5/+1	10/0	15/-5	–	–	Stun 5/+3, ignores shell
Firearm.Projectile	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Retrograde Stunner	180/D3	1	1	3	1	5/0	10/-4	–	–	–	Stun 3/+4, No Shard
Stun Gun	150/D1	1	1	4	2	5/0	–	–	–	–	Stun 2/+5, No Shard
Firearm.NuHu Stave (X)	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
NuHu Stave *Standard*	–/N2	1	3D10+5	2	1	5/+1	10/+0	20/-2	30/-4	40/-6	Sphere 3 (Not Wielder), Ignore Soft Cover, Controlled(NuHu)
Melee		1	3D10+5	2	3	Reach	–	–	–	–	Ignore Soft Cover
Focused		1	4D10+10	2	3	Reach	–	–	–	–	Ignore Soft Cover

Grenade Definitions

Melee.Unarmed or Athletics	¢EU/TL	Shots/Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Fractal Charge	75/N1	1	3D8+4	1	–	5/+0	10/-4	15/-4	25/-6	–	Sphere 1-3, Compound SV, Breaching SV3D10+4, Grenade
M0-D2 Grenades	50/M1+	1	2D6+2	1	–	5/+0	10/-3	20/-4	30/-6	–	Sphere 2, Not Proximity
	40/P3+	1	1D6+2	1	–	5/+0	10/-3	20/-4	30/-6	–	Sphere 2, Not Proximity
Implosion Grenades	50/N0	1	2d8+4	1	–	5/+0	10/-3	20/-4	30/-6	–	Sphere 1, Compound SV, Breaching SV2D10+4, Grenade
Plasma Grenade	30/D3 & GE	1	1d8+4	1	–	5/+0	10/-3	20/-4	30/-6	–	Sphere 1, Grenade

Esoteric/NPC Weapon Definitions

Firearm.Phase Rifle (X)		¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
IS Phase Rifle	*Single*	–/IIS	1	2D10+2	3	1	5/-2	30/+0	50/-2	100/-4	500/-6	Ignore Soft Cover
	Phased RF		D6	2D10+2	5	1	5/-4	20/+0	40/-2	80/-4	200/-6	Phase out required
Melee.Distort Spinner (X)		¢EU/TL	Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
AI Distort Spinner	*Distort*	–/D2AP	2	1D10	3	3	Reach	–	–	–	–	-4 on enemy attacks
	Plasma Shell		2	3D8	3	3	Reach	–	–	–	–	Compound SV

Ghar Weapons

Ghar weapons and technology are somewhat idiosyncratic, so all have an FTL/origin of DXGE (Ghar Empire): prices for small hand weapons reflect their black market, collector value or original Ghar weapons, as they are not otherwise available.

Drive.Battle Armour	Mode	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
							----- Range -----					
Ghar Disruptor Charges		–/DXGE	1	2D8+2	1	(8)	–	5/+0	10/-6	–	–	Disruptor, Sphere 3m, Min Rg 2

Melee.Tools	¢EU/TL	Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Ghar Battle Claw	–/DXGE	1	3D8	2	8	Reach	–	–	–	–	Affixed
Ghar Hand-held grabbers	–/DXGE	1	2D8	3	3	Reach	–	–	–	–	Compound SV; +2 St bonus
Ghar Plasma Claw	–/DXGE	1	5D8	2	8	Reach	–	–	–	–	Breaching, Affixed

Firearm.Projectile	Mode	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Ghar Gouger Gun		–/DXGE	1	2D8+2	2	(8)	–	10/-2	20/-4	30/-6	30/-6	Min Rg 5; Affixed; Unbalance; No Shard
Ghar Lugger Gun	*RF*	1500/DXGE	2	1D8	2	1	5/+1	20/+0	30/-3	50/-5	70/-6	No Shard
	SS		1	1D10	1	1	5/+0	20/+0	30/-2	50/-4	80/-6	
Ghar Lugger Pistol		1200/DXGE	1	1D8	1	1	5/+2	10/+0	20/-2	30/-5	40/-6	No Shard
Ghar Scourer Cannon	*RF*	–/DXGE	3	2D8+4	1	(8)	5/+1	20/+0	40/-1	60/-3	80/-6	Affixed, No Shard
	SS		1	4D8+4	1	(8)	5/+0	20/+0	40/-1	70/-3	100/-6	
	Disruptor		1	2D8	1	(8)	5/-1	20/+0	30/-2	50/-4	70/-6	Disruptor, Sphere 3m

Ghar scourer cannon can be used with either the Firearm.Projectile or Support.Projectile skills.

Support.Projectile	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Ghar Disruptor Cannon	–/DXGE	1	2D8	1	(8)	5/-1	20/+0	40/-2	60/-4	80/-6	Disruptor, Sphere 3m

Support.Indirect	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Ghar Disruptor Bomber	–/DXGE	1	3D8	1	(8)	–	50/+0	100/-2	200/-4	400/-6	Disruptor, Sphere 3m, Min Rg 20
Ghar Heavy Disruptor Bomber	–/DXGE	1	3D8+4	1	(8)	–	80/+0	160/-2	300/-4	600/-6	Disruptor, Sphere 5m, Min Rg 30

Virai Weapons

All Virai weapons have a DXVI origin, are integral to their drones and cannot be bought as weapons. They are sometimes sought-after by collectors who pay substantial prices (or favours!) for mint-condition versions of such weapons – not attached to a functioning Virai drone, however!

Firearm.Energy	Mode	¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Virai Fusion Flamer		–/DXVI	1	Var	2	–	5/+1	10/+0	15/-2	30/-4	60/-6	Breaching, Arc(F)
	Variable SV						3D8+4	2D8+4	1D8+4	1D8	1D8	
Virai STAA paint		–/DXVI	1	Paint	–	(1)	5/+2	10/+0	20/-2	30/-4	40/-6	STAA paint only; max 3

Support.Energy		¢EU/TL	Shots	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Virai Flamer Array	*RF*	–/DXVI	3	Var	2	–	5/+1	10/+0	15/-2	30/-4	60/-6	Breaching, Arc(F)
	Variable SV						3D8+4	2D8+4	1D8+4	1D8	1D8	Affixed, but drone-mounted
	Focused		1	Var	2	–	5/+0	15/+0	20/-2	40/-4	80/-6	Breaching, Arc(F)
	Variable SV						4D8+4	3D8+6	2D8+4	2D8	2D8	

Melee.Tools		¢EU/TL	Atks	SV	Ag	St	PB	Effv	Long	Extr	Max	Special
Virai Fusion cutter	*Ranged*	–/DXVI	1	Var	2	–	5/+2	10/+0	15/-2	20/-4	30/-6	Breaching
	Variable SV		–	–	–	–	3D8+4	2D8	1D8+4	1D8	1D8	
	H2H		1	2D8+4	2	–	Reach	–	–	–	–	–
Virai Ripclaws		–/DXVI	1	2D10+2	1	2	Contact	–	–	–	–	Breaching, Co-Ordinate

Armour

Unless stated, a complete suit of armour (plus appropriate shield for primitive armour) can be obtained for 1 Build Point (BP).

Primitive Armour	TL	¢CEU/BP	HL	Sink	Field	Shell	Bonuses/Restrictions/Notes
Leather	P0	25	–	–	–	3	Min St 3+
Padded	P1	35	–	–	–	4	Min St 3+; Ag-1/Max 8
Mail/Scale	P2	300	–	–	–	6	Min St 4+; Ag-1, no Sprint
Banded	P1	250	–	–	–	6	Min St 5+; Ag-2/Max 6, no Sprint
Plate	P2	750	–	–	–	7	Min St 5+; Ag-1/Max 6; no Sprint
Artisanal Plate	P3	1500/3BP	–	–	–	8	Min St 4+; Ag-1/Max 7; no Sprint. No shield
Small Shield	P0	15	–	–	–	+1	Min St 2+, Ag 3+; d5 in attack
Medium Shield/Heater	P1	40	–	–	–	+2	Min St 3+; Ag-1; D5+1 in attack
Large Shield/Pavise	P1	80	–	–	–	+3	Min St 4+; Ag-2; No Sprint; No check

Mid-Tech Armour	TL	¢CEU/BP	HL	Sink	Field	Shell	Bonuses/Restrictions/Notes
Ballistic	D1	250/0.5BP	–	–	–	4	Min St 2+
Heavy Ballistic	D2	600	–	–	–	6	Min St 4+; Ag-1/Max 8
Spill Combat Suit	D3	1500	–	–	–	6	Min St 4+;
Heavy Field Armour	M3-D0	1500	–	–	–	8	Min St 5+; Ag-1/Max 7; No Sprint

Vacuum/Zero-G	TL	¢CEU/BP	HL	Sink	Field	Shell	Bonuses/Restrictions/Notes
Space suits	D1-N0RS	Var	–	–	–	2	Min St 4+; Max Ag 5, No Sprint. Cost varies from 3000(D1) to 300(N0RS)
Decompression Suits	N1+	250/0.5BP	–	–	–	3	–

Reflex-field Armour	TL	¢CEU/BP	HL	Sink	Field	Shell	Bonuses/Restrictions/Notes
Iso-suits/Enviro-suit	N1	500	–	+8[ISO]	–	3	[ISO] Iso-suit only
Advanced Spill Reflex (ASR) Armour	N2AS/N3V	1200/2	–	+8	–	6	Min St 4+; Ag-1; +1 shooting
AI Armour	N2AP	NA	–	+8	–	9	Max Ag 8; +1 assist to St checks; +1
Algoryn SD Hazard Armour	N2AP	NA	–	+8+8+8	–	10	Max Ag 5, Mv 4; +3 assist to St checks; +1 shooting
Boromite Reflex Plates	N1B	300	–	+10	–	–	Min St 6+, Max Ag 8
Embedded Reflex Plates	N2+	300	–	+8	–	–	Min St 5+, Max Ag 9
Freeborn Composite Shell	N3V	200/0.5	–	–	–	6	Min St 3+; Ag-1
Freeborn Reflex Nodes	N2AS/N3V	350/0.5	–	+9	–	–	–
Impact web/cloak	N2AS/N3V	250/0.5	–	+6 in 3m	–	–	(only for attacks originating within 3m)

Hyperlight Armour	TL	¢CEU/BP	HL	Sink	Field	Shell	Bonuses/Restrictions/Notes
C3 Hyperlight Armour	IPHC	NA	+8[EFR]	+10	–	8	[EFR] +8 HL to Sphere/blasts or attacks >= 10m; +2 St assist; +2 shooting (inclusive of IMTel); range bands all increased by +20%
Isorian Phase Armour	IIS	NA	+8*	+10*	–	10	* OR Phasing; +2 St assist; +2 shooting (inclusive of IMTel); range bands +20%
Resharded Hyperlight	N3V only	3500/3	+8	+9	–	8	+1 St assist; +1 shooting; range bands +20%

Ghar Armour	TL	¢CEU/BP	HL	Sink	Field	Shell	Bonuses/Restrictions/Notes (all Ghar only)
Ghar Vac Suits	DXGE	NA	–	–	–	4	Max Ag 5; No Sprint
Ghar Flight Suits	DXGE	NA/1BP*	–	–	–	3	* Costs 1BP to serving Ghar
Ghar Battlesuit	DXGE	NA	–	–	+5	12	Structural 20; DP15:15:20; Spinal control; Vehicle; Mv 4; Ag bonus for Movement=-2, shooting=+0; St bonus for H2H attacks = +5; St 15

Probes/Buddies/Drones

PROBE/BUDDY	TL	¢CEU/BP	HL	Armour Sink	Shell	DP	Bonuses/Restrictions/Notes
Medi-buddy / -probe	D3+	1000/2	–	–	10	10	Various; +2 Medic checks in 3m
Medi-drone (civilian)	D3+	500/1	–	–	2	10	Various; +2 Medic checks in 3m
Scout Probe/ Spotter Buddy	D1+	400/1	–	–	4	10	+1 assist on direct fire shots within 5m
	N1+	400/1	–	+8	10	10	*(as D1 above)*
	N3+	400/1	+6	+8	10	10	*(as D1 above)*
Targeter Probes	D2+	400/1	–	–	4	10	+1 assist on direct fire shots on target within 5m
	N1+	400/1	–	+8	10	10	*(as D2 above)*
	N3+	400/1	+6	+8	10	10	*(as D2 above)*
µ-nano Buddy	N0+	Spec	–	–	4	10	Controlled & Free(NuHu); various - see text
	N2+	Spec	–	+8	4	10	*(as N0 above)*
µ-nano Combat Shell	N3+	Spec	+6	+8³ᵐ	10	10	³ᵐ extensible to 3m; see text
Batter Buddy	N1+	600/2	–	+8	10	10	Sink 10 in 5m quarter arc within 2.5m
	N3+	600/2	+6	+8	10	10	*(as N1 above)*
Camo-Buddy	N0+	1000/3	–	–	10	10	5m radius imago
	N1+	1000/3	–	+8	10	10	*(as N0 above)*
	N3+	1000/3	+6	+8	10	10	*(as N0 above)*
Compactor Buddy, civilian	N1+	100/0.5	–	–	4	10	Compactor storage up to 4m range
Compactor Buddy, combat	N3+	200/0.5	+6	+8	10	10	*(as N1 above)*
Gun Buddy	D1+	1200/2	–	–	4	10	Carries weapon available at designated TL
	N1+	1000/3	–	+8	10	10	*(as D1 above)*
	N3+	1000/3	+6	+8	10	10	*(as D1 above)*
Helper Buddy	D1+	300+	–	–	2	10	+1 assist on tasks; various – see text
	D3+	Var	–	–	4	10	*(as D1 above)*
Combat Helper Buddy	N1+	Var	–	+8	10	10	*(as D1 above)*
	N3+	Var	+6	+8	10	10	*(as D1 above)*
Infiltration Buddy	N2+	2000/4	–	+8	10	10	+2 on a range of infiltration checks
	N3+	Var	+6	+8	10	10	*(as N2 above)*

Augments

COGNITIVE & SENSORY IMPLANTS	TL	Cost	Vulnerability	Benefit
Enhanced Auditory Processing	D3+	1BP	-2	+1 assist to relevant Perception checks
Enhanced Vision	D3+	1BP	–	+1 Perception. Lo-light, UV/IR, ER/VR; range bands-1
Visual Sensors	N0+	2BP	+0	As enhanced vision with 100× vision /microscopic and extended EM bands, recording (not Algoryn or Boromite)
Reference(<Skill/Specialism>)	N0+	1BP	–	+1 In assist in single skill/specialism (see text)
Knowledgebase(<Skill/Skillset>)	N1+	2BP	–	+1 In assist to skillset or +2 to single skill/specialism (see text)
Stemsnap	N2+	1BP	–	On death, spinal chord & brain snapped to nearest stasis pod
Pheromonal Emitters(<species>)	D3+	1BP	–	+2 Presence vs targeted species
Pheromonal Emitters, Enhanced	N2+	3BP	–	As pheromonal emitters but for range of pre-loaded species
COMBAT AUGMENTS	TL	Cost	Vulnerability	Benefit
Combatant	D2+	1BP	–	+1 assist bonus to physical checks for a contiguous 5m, 1/day
Subdermal Armour +1/+3	D3+	1BP/2BP	–	Adds bonus as structural/intrinsic armour
Exoskeletal Armour +2/+4/+7	D3+	1-/2-/4BP	–	Adds bonus as shell armour
Whipcord 6/+1	D3+	2BP	Bodyboost	Min Ag 6 or +1 to Ag
Ripped 6/+1	D2+	2BP	Bodyboost	Min St 6 or +1 to St
Grit 6/+1	D2+	1BP	Bodyboost	Min En 6 or +1 to En
Hypereact 8/11	Spec	3BP	Bodyboost	Min Ag 8 if Ag is 5+ or Ag 11 if Ag is 8+; incompatible with Whipcord. Premature ageing: 2 bands. Restriction: AS, D3RS, Freeborn only – not available in IMTel systems, AP or Boromite
Skelemetal 8/11	Spec	3BP	Bodyboost	Min St 8 if St is 5+ or St 11 if St is 8+; Incompatible with Ripped. Premature ageing: as Hypereact. Restrictions: as Hypereact.
Maxtamina 8/11	Spec	3BP	Bodyboost	Min En 8 if En is 5+ or En 11 if En is 8+; Incompatible with Grit. Premature ageing: as Hypereact. Restrictions: as Hypereact.
ENVIRONMENTAL/SURVIVAL	TL	Cost	Combat?	Benefit
ESA(<clime>) 1	D3+	600/0.5BP	–	Rugged(<clime>+2)
ESA(<climes>) 2	N0+	1000/1BP	–	Rugged(<two compatible climes>+2) or Rugged(<clime>+4)
ESA(<climes>) 3	N1+	1500/2BP	–	Rugged(<one to three compatible climes> @+6 total bonus)
Hazardous Atmosphere (HAA)	D3+	500/1BP	–	Breathe tainted or poisonous atmospheres.
Rarefied Atmosphere (RAA)	D3+	500/1BP	–	Breathe thin atmosphere up to approximately 20% standard.
Revival	N0+	300/1BP	Yes	Rugged(disease+3, shock+3); +2 to Medic checks on char; +1 to daily recovery checks without a Medic; +1 DM to Serious Injury table.

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